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Updated, April 2012**



# **Durham Comprehensive Plan**

**Durham City-County Planning Department**



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# Durham Comprehensive Plan

## Chapter 1 Introduction and Administration Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 1, Introduction and Administration Element

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# Introduction



*What is a Comprehensive Plan?  
The Plan’s Vision  
How the Plan is Organized  
Current Conditions Report  
Preparing the Plan  
Adopting the Plan*

A plan represents a logical method for achieving a desired end. For Durham’s long range planning, the end is how its citizens want our community to be in the future—how it will look, how it will work and how it will preserve what is special, while accommodating the growth we anticipate. The logical method is the deliberate steps Durham takes today, tomorrow and the next day that will result in the future its citizens want. The key is to ensure that what we do in the short-term respects and supports how we want to be in the future.

## What is a Comprehensive Plan?

A Comprehensive Plan is the statement of local government and its citizens about how they want to grow and develop. The term “comprehensive” refers to two aspects of planning. First, it means that the plan covers all of the territory in the City’s and the County’s jurisdictions. Second, it means that the plan deals with all the physical aspects of the community’s growth and development. It guides how the City and County provide public facilities and services, and regulate new development. A comprehensive plan is long range in scope, focusing on the needs of the community in the future rather than the concerns of today.

In general, a rapidly growing community should review and update its long-range plans every five to seven years. The Durham 2020 Comprehensive Plan was adopted in late 1995, so an update now is appropriate. The Comprehensive Plan update provides an opportunity for citizens and elected officials to take stock and see if the growth and development policies in the Plan still make sense after several years of rapid change.

### The Plan’s Vision

Every plan needs a vision. The vision embodies the desires of citizens and elected officials to create a community in which people want to live and can fulfill their own dreams. The Durham Comprehensive Plan Vision describes how Durham will look and function in the future. The Plan’s goals, objectives, and policies that follow provide the means of implementing the Plan’s Vision.

### Durham Comprehensive Plan Vision

- Promote the creation, ~~and~~ enhancement and sustainability of a healthy, livable, safe and beautiful community for all Durham citizens.
- Promote a range of choices in transportation, education, housing and economic opportunities to effectively serve a diverse community.
- Promote the identity of our distinct neighborhoods by encouraging design elements and public facilities appropriate to the character of each area.
- Protect our historic heritage, open spaces and natural resources.
- Provide opportunities for high quality growth and development.

#### How the Plan is Organized

Following this Introduction are sixteen elements, or chapters, of the Durham Comprehensive Plan. The first element anticipates how the Comprehensive Plan will be administered after its adoption. The next six elements provide guidance on how the natural and built environment of Durham ought to grow and develop. These include the Land Use Element, the Housing Element, the Community Character and Design Element, the Historic Preservation Element, the Economic Development Element, and the Conservation and Environment Element.

The next seven elements provide guidance on how Durham should provide community services and facilities. These include the Transportation Element, the Water and Wastewater Element, the Parks and Recreation Element, the Schools Element, the Public Safety Element, the Solid Waste Element, and the Libraries Element.

The last two elements are critical. The Capital Improvements Element outlines the steps Durham will take to provide the community services and facilities needed to support future residents. The final chapter, the Intergovernmental Cooperation Element, commits the City and County to actively working with its neighboring communities to coordinate planning and service delivery. Following the Plan Elements are appendices that includes a glossary of planning terms, a list of commonly used acronyms and a list of references.

## Existing Conditions Report

Prior to the development of the Durham Comprehensive Plan, the City-County Planning Department prepared a report on current conditions in Durham. This report provided an overview of background information about the Durham community. Planning staff updated the Existing Conditions Report as part of the 2011-2012 Comprehensive Plan update.

Background information offers a base of understanding about the community that is crucial when looking toward the future. It provides a clear foundation on which to build the goals, objectives and policies to guide the community's decisions.

The Existing Conditions Report also highlights the critical issues that Durham is facing that should be addressed in the Comprehensive Plan. How these issues are addressed will directly affect Durham's success in moving into the future.

## Preparing the 2005 Durham Comprehensive Plan

Creating a long-range plan for a community involved numerous tasks and hundreds of people, including citizens, representatives of interests groups, City and County staff, members of appointed boards and commissions and members of the governing boards. Important steps in the process of preparing the Durham Comprehensive Plan are described below.

- The **Comprehensive Plan Steering Committee** was formed in May 2002 to provide citizen oversight to the entire planning process. The Steering Committee was composed of 20 citizens, representing a broad range of community interests and viewpoints. The group met over 30 times as the Plan was being prepared to review and adjust the appropriate language for the Plan Vision, goals, objectives and policies. The Steering Committee recommended the draft Durham Comprehensive Plan to the City and County governing boards at its last meeting on May 27, 2004.
- In May 2003, the City-County Planning Department conducted a series of four **Open House Meetings** for Durham citizens. The purpose was to hear from citizens about issues that they felt were of critical importance for Durham to address as it grows and develops in the future. The Open House Meetings were conducted at the Eno Valley Elementary School Media Center, the Southwest Elementary School Media Center, the Southern High School Media Center and the auditorium of the Downtown Branch of the Durham Public Library. Over 75 citizens attended to express their views on Durham's future. Citizen comments were used to prepare draft goals, objectives and policies for the Plan.
- Preparing the Durham Comprehensive Plan included a **Review of Small Area Plans' Objectives and Policies**. The Durham

Comprehensive Plan is an update and revision of previously adopted Small Area Plans. However, many of the Small Area Plans' objectives and policies were out-of-date or irrelevant to current conditions in the community. Others were valuable and still useful to guide public infrastructure and private development. The Planning Staff reviewed objectives and policies from the Small Area Plans to glean what was still applicable to Durham's future.

- In 2004, the City-County Planning Department prepared a **Current Conditions Report**. The report describes Durham's context in the Triangle Region, population, economy, land use, natural environment, and public infrastructure. It identifies issues in each of these areas that long range plans should address. An updated report is attached as Chapter 17 of the Plan.
- In May and June 2004, the City-County Planning Department conducted a second round of community **Open House Meetings** in the same four locations. The purpose of these meetings was to acquaint interested citizens with the public review draft of the Durham Comprehensive Plan and to solicit their comments. Citizen comments were summarized and presented to the governing boards to consider during their deliberations on the Comprehensive Plan.

### Adoption of the 2005 Plan

The Planning Committee of the Durham Planning Commission reviewed the Durham Comprehensive Plan and held a public hearing to receive comments on August 11, 2004. After consideration of citizens' comments and discussion, the Planning Committee voted on November 9, 2004 to recommend the Plan to the governing boards with several modifications. The Board of County Commissioners and the City Council considered the plan with a presentation and public comment on January 31, 2005. The Board of County Commissioners and the City Council adopted the Plan on February 28, 2005.

### Comprehensive Plan Update

Durham Planning staff began work on an update of the Comprehensive Plan in September 2010. A team of eight staff members, representing each section within the Planning Department, was selected to accomplish the task. Over the next several months, staff updated the 2004 Current Conditions Report and prepared updated projections for population, housing, employment and land use demand. Staff also contacted other county and city departments to solicit their help in updating the goals, objectives and policies of the Plan.

In Spring 2011, staff conducted three public open houses to inform citizens about the project and its schedule and gather initial public comments. Simultaneously, staff launched a webpage for the project and designed a series of on-line questionnaires for elected and

appointed boards and commissions as well as City and County departmental directors.

Based on comments received from elected and appointed boards and commissions, directors and staff in other departments, the Planning staff team drafted a Plan update during Summer 2011. The draft was forwarded to the Joint City-County Planning Committee in September 2011 for review and comment. Subsequently, a second series of public open houses were held for public review of the draft update in November 2011. The draft update was then submitted to the Durham Planning Commission for its consideration in February 2012.

### Amending the Plan

To be useful, plans must be regularly monitored and reviewed to ensure that they remain effective tools to help achieve the future that the community desires. Accordingly, this Plan requires that the Planning Department annually prepare an evaluation and assessment report for the governing bodies. This report updates baseline information, describes the activities that were called for in the Plan and completed in the previous year, as well as recommends revisions to the text of the Plan. The Evaluation and Assessment Report also includes a report on any Future Land Use Map Amendments (Plan Amendments) adopted by one governing body over the previous year so that the Future Land Use Maps of both the City and County can be rectified in order to maintain a common Comprehensive Plan for both jurisdictions.

In addition to the amendments recommended by the Planning Department through the Evaluation and Assessment Report, either governing body may initiate amendments to the Plan as it affects their jurisdiction at any time.

Citizens may also request amendments to the Plan through the Planning Department. These could be amendments to the text of the Plan or to the Plan maps, including the Future Land Use Map. Such amendments to the Future Land Use Map are required whenever a property is proposed for rezoning to a classification inconsistent with what is shown on the Future Land Use Map to ensure that area residents are apprised of the development potential of their communities. Applicants for amendments to the Plan shall provide a justification, which could include factors such as an error in the Plan, a level of detail not considered in the adoption of the Plan, or a change in circumstances since the adoption of the Plan, for the proposed change.

All plan amendments are presented to the Joint City-County Planning Committee to ensure that elected officials from both jurisdictions are apprised of proposed amendments. They also require review and recommendation by the Planning Department. Following that review, all proposed amendments (except those designed to rectify differences between the City and County versions of the Plan) reviewed

by the Planning Commission in a public hearing, at the conclusion of which a recommendation is made to the appropriate governing body. Following the hearing before the Planning Commission, the governing body holds a public hearing on the proposed amendment, considering the recommendations of the Planning Department and the Planning Commission, as well as any testimony given during the public hearing. At the conclusion of the public hearing, the governing body makes a final determination on the proposed amendment. Any amendments approved by the governing body are reflected in the Comprehensive Plan and considered as part of the adopted Comprehensive Plan.

## Administrative Element



### Goal 1.1, Using the Plan

Preparing and adopting the Comprehensive Plan is only the first step in charting Durham's future. The Plan needs to be systematically implemented through established and well-publicized procedures. Likewise, the Plan and its implementation needs to be regularly evaluated to ensure that it responds to changing conditions and continues to reflect the wants and desires of Durham citizens. The Administrative Element of the Durham Comprehensive Plan provides guidance on how to use the Plan to accomplish its goals, objectives and policies.

### Goal 1.1, Using the Plan

Use the Durham Comprehensive Plan in its entirety, including both text and maps, to guide public and private decision making about physical development and public infrastructure.

#### Objective 1.1.1. Plan Elements

Organize the Durham Comprehensive Plan by elements in order to present goals, objectives, and policies and the Future Land Use Map in a coherent and organized manner.

**Policy 1.1.1a. Plan Elements.** The Durham Comprehensive Plan consists of the following chapters, or elements:

- i. Introduction and Administration Element;
- ii. Land Use Element;
- iii. Housing Element;
- iv. Community Character and Design Element;
- v. Historic Preservation Element;
- vi. Economic Development Element;
- vii. Conservation and Environment Element;
- viii. Transportation Element;
- ix. Water and Wastewater Element;
- x. Parks and Recreation Element;
- xi. Schools Element;
- xii. Public Safety Element;

- xiii. Solid Waste Element;
- xiv. Libraries Element;
- xv. Capital Improvements Element; and
- xvi. Intergovernmental Coordination Element

In addition, there are three appendices. Appendix A, consisting of three parts, is the Existing Conditions Report. A glossary of terms and acronyms is included as Appendix B. Appendix C is the Subsidized Housing Location Policy, adopted by reference.

**Policy 1.1.1b. Future Land Use Map.** The Durham Comprehensive Plan shall also include a Future Land Use Map to graphically depict desired patterns of future land use. (See Policy 2.1.1a, Future Land Use Map.)

### Objective 1.1.2. Administration

Establish policies and procedures for administration of the Durham Comprehensive Plan that will result in its timely and effective implementation.

**Policy 1.1.2a. Responsibility.** Administratively, the Director of the City-County Planning Department shall be responsible for interpreting the provisions of the Durham Comprehensive Plan.

**Policy 1.1.2b. Enforcement of the Comprehensive Plan.** Ordinances, budgets, and procedures of the City Council and County Board of Commissioners shall be used to enforce the provisions of the Durham Comprehensive Plan.

**Policy 1.1.2c. Plan Consistency.** Applications for zoning map changes and Special Use Permits shall be reviewed for consistency with the Durham Comprehensive Plan. The City, the County, and Durham Public Schools shall consider the consistency of the proposals with the Durham Comprehensive Plan in making decisions regarding the extension and location of public infrastructure. Proposed changes to the Durham Comprehensive Plan shall be reviewed for compatibility with all of the policies of the Durham Comprehensive Plan.

### Objective 1.1.3. Plan Amendments

Provide an efficient and predictable process for proposing, considering and acting on amendments to the Durham Comprehensive Plan.

**Policy 1.1.3a. Amendment Procedures.** The City-County Planning Department shall initiate amendments to the Durham Comprehensive Plan, including but not limited to, the Future Land Use Map, when warranted as part of a Compact Neighborhood Plan (See Policy 2.2.4f, Compact Neighborhood Plans) or Land Use Update (See Policy 2.5.2b, Land Use Updates). In addition, the City-County Planning Department shall evaluate privately initiated

The **Appendices**, located at the end of the Plan, includes a glossary of planning terms and commonly used acronyms.

requests to amend the Durham Comprehensive Plan, including but not limited to, the Future Land Use Map (See Policy 2.5.2a, Amendments).

#### Objective 1.1.4. Plan Evaluation

Periodically evaluate the effectiveness in implementing the goals, objectives, and policies of the Durham Comprehensive Plan.

**Policy 1.1.4a. Evaluation and Assessment Report.** ~~The City-County Planning Department shall annually prepare and present to the City Council and County Board of Commissioners an Evaluation and Assessment Report describing progress on implementing the Durham Comprehensive Plan. The Evaluation and Assessment Report shall include, as appropriate:~~ The City-County Planning Department shall conduct an annual Evaluation and Assessment Report and present that report to the governing bodies for adoption. This report will address, at a minimum, the following:

- i. Rectification of City and County Future Land Use Map amendments;
- ii. An assessment of progress on Comprehensive Plan policies; ~~and~~
- iii. Proposed amendments (if any) to policies of the Comprehensive Plan; ~~and~~
- iv. An update to Table 2-4, the projected Demand for Land accommodated by the Future Land Use Map.

(See Policy 2.5.1b, Evaluation and Assessment Report.)

#### Objective 1.1.5. Citizen Participation

Provide opportunities for citizen involvement in public decisions related to planning, zoning and transportation. Increase efforts to bring diverse interests into these processes, and involve as many people and organizations as possible.

**Policy 1.1.5a. Planning Notification.** The City-County Planning Department shall notify individuals, community organizations and neighborhood associations that have registered for such notification about planning and zoning decisions.

**Policy 1.1.5b. ~~Citizen~~ Public Comment.** The City Council and the County Board of Commissioners shall provide ~~citizens~~ members of the public ~~the~~ opportunity to comment on public decisions involving planning, zoning and transportation.

**Policy 1.1.5c. Balanced Representation.** The City and County shall continue their ~~present~~ efforts to ensure balanced geographic representation on advisory boards and commissions.

**Policy 1.1.5d. Utilizing Citizen Participation.** The City and County

shall continue their ~~present~~ practices of utilizing citizen participation in developing, reviewing, implementing, and monitoring plans and programs.



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# Durham Comprehensive Plan

## Chapter 2 Land Use Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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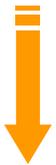
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# Land Use Element



**Summary of Issues**  
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Durham’s land is finite. How we use this land determines how an increasing population will be housed, how and where green space and agricultural land will be protected, the number of homes that will be constructed, and the amount of goods and services that will be available to residents Durham’s citizens, how successful Durham will be in attracting employment and where employment centers will be located, and how efficient and connected our transportation choices can be. Different strategies produce different results. This Plan proposes a flexible approach to the interaction of land uses but limits intensities and densities depending on location. The Plan balances the predicted demand for specific land uses with the need to protect our natural resources and to move towards a more efficient development pattern.

## Summary of Issues

- 1. Accommodating Future Growth.** Future increases in population and employment will increase demand for land development and redevelopment. Housing demand will be reflected in proposals for new subdivisions, apartment complexes and adaptive reuse of older structures. Businesses will need land and buildings for retail activities, offices, personal and professional services, research and manufacturing. How Durham plans for the changing uses of land to accommodate our expected growth will significantly influence our community’s future quality of life. Redevelopment opportunities in strategic locations should be encouraged.
- 2. Extent of Urban Growth.** Durham has used the Urban Growth Area (UGA) boundary as a tool to manage its physical growth. Watershed protection policies and adjacent jurisdictions represent real limits to Durham’s physical expansion. Some eCapacity for growth exists to expand in eastern and northwestern Durham County, but that may mean with trade-offs in the loss of some rural landscapes and agricultural lands to more suburban patterns of development, and potential costs of infrastructure, service delivery, and to the environment. with attendant increase in infrastructure and service delivery costs.

Balancing these growth issues will affect the lives of current and future residents.

- 3. Different Community Types.** ~~Durham may find that a more complex approach better serves its growth management needs. A hybrid of growth tiers and special growth areas is being evaluated through the Unified Development Ordinance to implement Durham's Smart Growth Audit completed in 2001. Durham could build its future plans around distinct community types, such as downtown, urban neighborhoods, suburban neighborhoods, rural areas and natural resource protection areas. Defining how this system can work for Durham, which community types work best and the specific objectives, policies and regulations that might apply to each should be a focus of the Durham Comprehensive Plan.~~ Market changes in recent years have revealed a demand for a variety of housing and development types. Durham utilizes a development Tier system to describe the character of development by location and provide context sensitive policy and regulation for each Tier. In order to accommodate demand for various types of communities, Durham should continue to build its future plans around distinct community types, such as downtown, urban neighborhoods, suburban neighborhoods, and rural areas. This Tier system should be refined and used to implement specific objectives, policies and regulations for each Tier as a way to best accommodate growth in Durham.
- 4. Aligning Land Use and ~~Alternative Transportation Modes.~~** ~~The Triangle Transit Authority is proceeding with plans to construct Phase I of the Regional Rail project. Compact Neighborhoods around regional transit stations would be characterized by higher intensity and mixed land uses, exceptional pedestrian and bicycle accessibility, interconnections with local transit services, a network of urban open spaces and community design appropriate to their intensity and location. How Durham responds to this new transportation mode will shape its future. The interaction of land use policy and regulation is key to the creation of a quality transportation system that improves the lives of all Durham residents. As traffic congestion grows, supplies of inexpensive energy dwindle, and pollution intensifies, Durham should align land use polices, where appropriate, with investments in alternatives to cars, including transit, biking and walking. Triangle Transit is proceeding with plans to construct a commuter rail project to connect Durham with Raleigh and Wake County, as well as a light rail project to connect Durham with Chapel Hill. These new transportation options will not be successful unless there is supportive land use policy and regulation. The Downtown and Compact Neighborhood Tiers, utilized around regional transit stations, are designed to require higher intensity and greater mix of land uses than traditional suburban patterns, exceptional~~

pedestrian and bicycle accessibility, interconnections with local transit services, a network of urban open spaces, and community design appropriate to their intensity and location. In addition, planning for Complete Streets, a context sensitive approach of designing streets for all uses, is one opportunity being explored by the NC Department of Transportation. Developing policies that acknowledge and support the connection between land use and transportation policy in other tiers is also key to successfully managed growth.

- ~~5. **Conflicting Land Use Plans.** Durham has in the past prepared and adopted various land use plans to guide local government decisions about new development. Some small area plans are significantly out of date, having been prepared and adopted almost 15 years ago. Other small area plans remain in conflict with the general directions of the Durham 2020 Comprehensive Plan and its designation of Compact Neighborhoods. Addressing this issue of relevancy and consistency should result in a new Comprehensive Plan that represents a clear, concise and unambiguous guide for future decisions about land use and development.~~
5. **The Comprehensive Plan and the Unified Development Ordinance.** A community's comprehensive plan lays out the overall goals, objectives and policies that guide the growth and development of the community. Development regulations are a significant tool (one of many) for achieving ~~aims~~ the goals of the Comprehensive Plan. ~~Durham is working to update and meld its zoning, subdivision and other development related ordinances into a Unified Development Ordinance (UDO). The UDO represents another step in improving Durham's development regulations, this time applying the principles of smart growth. Completion of the Unified Development Ordinance (UDO) in 2006 was another step in improving Durham's development regulations to reflect the principles of smart growth. In the five years since its adoption, Durham has continued to refine the Tier standards through the UDO to reflect the policy direction of the Comprehensive Plan. How the Comprehensive Plan and the UDO work together will be critical to crafting a future for Durham that is attractive, efficient and respectful of its natural environment.~~
6. **Plan Relevance.** In order for the Comprehensive Plan to serve the community for an extended period, it must be a living document that is able to adjust to changing conditions and trends. Durham's ability to keep its Comprehensive Plan current and relevant is paramount to its policies having a lasting effect on the growth of the community.

**Goal 2.1, Establish the Framework**

Accommodate and guide expected growth in a balanced manner through the use of the adopted Future Land Use Map.

**Objective 2.1.1 Future Land Use Map Established**

Establish the Future Land Use Map of the Durham Comprehensive Plan as the policy basis for the future land use pattern in Durham.

**Policy 2.1.1a. Future Land Use Map.** Use the Future Land Use Map of the Durham Comprehensive Plan in conjunction with the text to guide the location and character of development. The Future Land Use Map shall identify the locations of development tiers and the appropriate land use category for all parcels within the jurisdiction of the City and/or County of Durham.

**Objective 2.1.2 Development Tiers**

~~Establish a series of development Tiers to guide growth and development in distinctive parts of the Durham community. Promote new development and redevelopment activities appropriate to each Tier by~~ Support context sensitive policy and regulation for land use and development in Durham through a system of development Tiers on the Future Land Use Map. Through the Future Land Use Map and the Unified Development Ordinance, establishing policies and development regulations that recognize each Tier’s distinct character.

**Policy 2.1.2a. Tiers ~~Established~~.** ~~Establish the~~ The following development Tiers are delineated on the Future Land Use Map to reflect a diversity of patterns of development and ensure opportunities for choice in Durham (See Map 2-1, Tiers):

- i. Rural;
- ii. Suburban;
- iii. Urban;
- iv. Compact Neighborhood; and
- v. Downtown.

**Policy 2.1.2b. Rural Tier Defined.** The Rural Tier is established to preserve rural character, protect critical watersheds, preserve agricultural land uses, and allow low density residential development and limited supportive commercial and civic uses. Land located in the Rural Tier is generally outside of the Urban Growth Area, where City water and sewer services are not extended. Development in the Rural Tier should require large lots to minimize demands on infrastructure.

**Policy 2.1.2c. Suburban Tier Defined.** The Suburban Tier is established to provide land for low to medium density residential development, employment centers, and commercial and

The Future Land Use Map of the Durham Comprehensive Plan provides policy guidance for preferred development patterns.

**Unified Development Ordinance**  
The Unified Development Ordinance (UDO), initially adopted in 2006, is an effort to combine and integrate into a single development code the variety of different ordinances regulating development a legal instrument that codifies the regulations regarding development in Durham.

industrial activity. Land located in the Suburban Tier is expected to accommodate a large proportion of Durham’s growth through greenfield development, infill, and redevelopment. The Suburban Tier is within the Urban Growth Area and is expected to be provided with urban services at traditional suburban densities and patterns.

**Policy 2.1.2d. Urban Tier Defined.** The Urban Tier is established to describe land primarily developed prior to the 1960s with small lot sizes in traditional grid patterns and differing uses in proximity to one another. Land located in the Urban Tier has access to urban services and provides opportunities for infill and redevelopment.

**Policy 2.1.2e. Compact Neighborhood Tier Defined.** The Compact Neighborhood Tier consists of areas surrounding proposed fixed guideway transit stations. These are areas identified for high density and intensity infill, redevelopment, and new development that integrate a mix of uses through an urban fabric that includes enhanced bicycle and pedestrian facilities. The Compact Neighborhood Tier is expected to have an improved street level experience and discourage auto-oriented and low intensity uses.

**Policy 2.1.2f. Downtown Tier Defined.** The Downtown Tier is the historic downtown core and support areas where intense development and pedestrian activity is encouraged. The Downtown Tier should be transit and pedestrian oriented in order to enhance the street level experience and provide a mixture of goods and services near transit. Auto-oriented and low intensity uses are discouraged. The creation of a high quality public realm is encouraged to enhance Downtown Durham’s position as a commercial, cultural and entertainment hub of the region.

Land Use Categories are designations on the Future Land Use Map. Zoning districts that are accommodated within a particular Land Use Category may have a broad range of permitted uses under the regulations of the UDO.

### **Objective 2.1.3 Land Use Categories Established**

Establish a set of generalized land uses to encompass the distinct uses found throughout Durham. Guide the location and character of development through maintaining a generalized set of land use categories on the Future Land Use Map in conjunction with the text of the Comprehensive Plan.

**Policy 2.1.3a. Land Use Categories.** Establish the following Land Use Categories located on the Future Land Use Map:

- i. Natural Resource Areas Recreation and Open Space;
- ii. Agriculture;
- iii. Residential;
- iv. Commercial;

- v. Office;
- vi. Institutional;
- vii. Research and Research Applications;
- viii. Industrial; and
- ix. Design District.

**Policy 2.1.3b. Recreation and Open Space Defined.** Durham shall identify and protect Recreation and Open Space areas, including but not limited to (see Policy 7.2.2a, Recreation and Open Space Areas):

- i. Special Flood Hazard Areas, as defined by the Federal Emergency Management Agency;
- ii. US Army Corps of Engineers land;
- iii. North Carolina State park land or historic sites;
- iv. Duke Forest;
- v. NCSU Hill Forest;
- vi. Privately-owned conservation lands held by local land trusts;
- vii. City or County owned land identified on an adopted open space plan;
- viii. Public land around reservoirs;
- ix. City and County parks;
- x. Culturally or historically significant cemeteries; and
- xi. Abandoned or unused railroad corridors.

**Policy 2.1.3c. Agriculture Defined.** Primarily land used as farmland or forestry land protected for long-term agricultural use, including but not limited to land within a Voluntary Agricultural District. This land use category may be accommodated by the Rural Residential (RR) zoning classification.

**Policy 2.1.3d. Residential Defined.** Primarily land designated for a range of residential densities and uses. Table 2-1 displays the residential future land use categories that are allowed within each Tier. There is no category applicable to the Downtown Tier because residential density is not regulated Downtown (see Policy 2.2.5d, Downtown Density). Through the Unified Development Ordinance, maintain ~~established~~ density ~~ies~~ categories by Tier consistent with Table 2-1, Summary of Residential Densities. This land use category may be accommodated by any residential zoning district and the Mixed Use (MU) district with a density consistent with its future land use designation.

**Table 2-1, Summary of Residential Densities Categories**

Density		Tier					
		Rural	Suburban	Urban	Compact Neighborhood		Downtown
					Support	Core	
Rural	0.75 DU/Acre or Less	●					
Very Low	2 DU/Acre or Less	●	●				
Low	4 DU/Acre or Less		●				
Low-Medium	4-8 DU/Acre		●				
Medium	6-12 DU/Acre		●	●			
Medium-High	8-20 DU/Acre		●	●	●		
High	12-60 DU/Acre				●	●	(Unlimited)
Very High	42-150 DU/Acre						

Note: Achievement of these densities may require utilization of development plans and/or density bonuses for such things as provision of affordable housing or location on major transportation corridors, as further provided for in the Unified Development Ordinance.

In the Downtown Tier, regulations will focus on creating desirable development forms and appropriate interface with the streetscape. Therefore, residential densities will not be regulated.

Node Commercial Development is characterized by clustered and integrated design allowing access (vehicular and pedestrian) between individual uses, commercial nodes are located at key intersections and are designed to reduce traffic conflict and promote convenient pedestrian access (internal and external). Spacing of commercial nodes shall be measured from the outermost extent of one node to the outermost extent of another node.

**Policy 2.1.3e. Commercial Defined.** Primarily land designated for retail, entertainment, office, and service uses. These areas are intended to serve the commercial and service needs of neighborhoods, the City and County, and the greater region. Commercial land uses develop in three patterns: node, linear, and strip. This land use category may be accommodated by any commercial zoning district and the Mixed Use (MU) district.

**Policy 2.1.3f. Office Defined.** Land used primarily for office uses. This land use category may be accommodated by the Office and Institutional (OI) zoning district and the Mixed Use (MU) district.

**Policy 2.1.3g. Institutional Defined.** Land used primarily for institutional uses, including but not limited to educational facilities, government facilities, and civic uses. This land use category may be accommodated by the Office and Institutional (OI) zoning district, the University and College (UC) zoning districts, and the Mixed Use (MU) district.

**Policy 2.1.3h. Research and Research Applications Defined.** Land used primarily for business and scientific research and development and its support services. This land use category may be accommodated by the Science Research Park (SRP) zoning district and the Mixed Use (MU) district.

Strip Commercial Development is characterized as linear in arrangement, but associated with it are high volume traffic generating uses, separate vehicular entrances and exits for each use on the street, no defined pedestrian path, space onsite for parking and loading activities, and a cluttered appearance from an abundance of signs.

**Policy 2.1.3i. Industrial Defined.** Land used primarily for industrial uses, including but not limited to manufacturing, processing, warehousing and distribution, resource extraction, research and development, flex space and service uses. This land use category may be accommodated by any industrial zoning district.

**Policy 2.1.3j. Design District Defined.** Design Districts are intended to encourage intense development and transit and pedestrian oriented activity. Regulations focus on form of the private and public realm rather than use and intensity. Design Districts are intended to encompass the Downtown and Compact Neighborhood Tiers, and are accommodated by the Downtown Design (DD-) and Compact Design (CD-) zoning districts.

## Goal 2.2, Accommodate Growth

Prescribe a set of land use policies by Tier that include existing and future development, and recognize the variety of development patterns throughout Durham. Promote context sensitive policies that guide regulation to achieve the highest possible development standards, enhance the environment, protect public health, and support a vital mix of land uses. Create a set of policies that provide for sufficient land for each land use type.

Linear Commercial Development Commercial development in a linear pattern is integrated with and visually enhances adjacent neighborhoods in a way that is pedestrian oriented. Buildings are typically built to the street, with on-street parking or parking in the rear. Examples include Ninth Street and West Chapel Hill Street.

### Objective 2.2.1 Rural Tier Development

Provide sufficient land on the Future Land Use Map to preserve rural character and promote agricultural land uses, as well as rural residential, civic, small-scale commercial and industrial purposes in the Rural Tier appropriately zoned for agricultural, rural residential, small-scale commercial and industrial purposes. The Rural Tier shall include land in the Durham Planning Area outside the Urban Growth Area.

**Policy 2.2.1a. Rural Tier Development Focus.** Ensure that new development promotes agricultural uses and single-family residential development on large lots to minimize demands for public infrastructure. Commercial areas shall be small scale and neighborhood oriented.

**Policy 2.2.1b. Rural Tier Land Uses.** Land uses that shall be allowed in the Rural Tier include:

- i. ~~Natural Resource Areas~~ Recreation and Open Space;
- ii. Agriculture;
- iii. Rural Residential, single-family development;
- iv. Institutional;
- v. Commercial, limited to neighborhood oriented uses; and

vi. Industrial, limited to resource extraction.

**Policy 2.2.1c. Rural Tier Agricultural Activities.** Through the Unified Development Ordinance, ensure that land use regulations allow agricultural activities by right within the Rural Tier. (See Policy 7.2.3g. Rural Tier Agricultural Activities.)

**Policy 2.2.1d. Rural Tier Compatibility of Uses.** Through the Unified Development Ordinance, require greater buffers between active agriculture and other uses to minimize the impact of odors and dust and ensure the compatibility of any proposed development in the vicinity of Voluntary Agricultural Districts of land designated for Agriculture with those agricultural uses.

**Policy 2.2.1e. Rural Villages.** Durham shall maintain and support the rural villages of Bahama and Rougemont through the following policies and actions:-

- i. Maximum Residential densities in Rural Villages shall be Residential, Very Low (2 units per acre or less);
- ii. ~~Encourage compatible infill in both Rural Villages~~ Develop village design guidelines to protect the character of Durham's rural villages, Bahama and Rougemont, by encouraging appropriate and compatible infill and development design;
- iii. ~~Modify Durham's watershed protection provisions through the Unified Development Ordinance to allow for limited growth through the use of a transfer of impervious surface credit to permit more impervious surface intensities in Rural Villages;~~
- iv. Develop land use plans to ensure ~~promote~~ the continued and sustainable economic viability of Bahama and Rougemont; ~~and~~
- v. Locate community-oriented facilities and services within Rural Villages in order to enhance their vitality ~~of Rural Villages.~~; ~~and~~
- vi. Investigate the feasibility of the establishment of a local historic district and/or National Register Historic District.

(See Policies 2.5.3e, Rural Village Plans, 4.3.1a, Rural Village Design Guidelines, and 5.1.2d, Historic Rural Villages.)

**Policy 2.2.1f. Rural Tier Subdivisions.** Through the Unified Development Ordinance, ~~establish and apply~~ promote the use of conservation subdivision provisions, such as conservation-by-design methods, to protect environmentally sensitive lands, preserve historic and archeological sites, protect scenic views, and conserve prime agricultural lands while encouraging more efficient use of the land and permitting up to a one-third increase in the density for projects that utilize these provisions.

**Policy 2.2.1g. Rural Service Centers.** Establish Rural Service Centers in the Rural Tier to provide locations for small-scale

commercial uses and community services. Standards for Rural Service Centers include:

- i. Located at intersections of Major and/or Minor Thoroughfares, separated by a distance of at least one-and-one-half (1 ½) miles;
- ii. Contain two or more neighborhood-oriented uses;
- iii. Maximum of 20,000 square feet of nonresidential uses per areacenter;
- iv. Maximum size for any single establishment of 10,000 square feet; and
- v. New, isolated, mid-block commercial uses shall be discouraged.

### **Objective 2.2.2 Suburban Tier Development**

Provide sufficient land in the Suburban Tier appropriately zoned for residential, commercial, institutional, office, research/research applications, and industrial purposes. The Suburban Tier shall include all land within the Urban Growth Area that is not included in the Urban, Compact Neighborhood or Downtown Tiers.

**Policy 2.2.2a. Suburban Tier Development Focus.** Through the Future Land Use Map, ensure that the Suburban Tier has sufficient land to accommodate anticipated population growth and its attendant demands for housing, employment, and goods and services, including opportunities for affordable housing and recreation.

**Policy 2.2.2b. Suburban Tier Land Uses.** Land uses that shall be allowed in the Suburban Tier include:

- i. ~~Natural Resource Areas~~Recreation and Open Space;
- ii. Agricultural;
- iii. Residential;
- iv. Institutional;
- v. Commercial;
- vi. Office;
- vii. Research/Research Application; and
- viii. Industrial.

**Policy 2.2.2c. Suburban Tier Conservation Subdivisions.** Through the Unified Development Ordinance, promote the use of conservation subdivision provisions in the Suburban Tier, especially where conservation-by-design methods would protect environmentally sensitive lands, preserve historic and archeological sites, protect scenic views, and conserve prime agricultural lands while encouraging more efficient use of the land and permitting up to a one-third increase in the density for projects that utilize these provisions.

**Policy 2.2.2d. Suburban Tier Mixed Use.** Through the Unified Development Ordinance, establish and utilize a planned zoning district that encourages elements of traditional neighborhood design, including a pedestrian-oriented focal node of activity, an appropriate mix of land uses that are physically and functionally integrated, and development patterns and intensities that are supportive of a wide range of housing options, employment opportunities, community functions, and transportation choices. ~~This policy shall be used in conjunction with Policy 2.3.1h Mixed Use Location. encourage mixed uses by allowing mixed use developments where one of the uses is shown on the Future Land Use Map, except that industrial uses shall not be allowed in mixed use developments. Where the use shown on the Future Land Use Map is Residential, the requested density in a proposed mixed-use project shall be within the range allowed in the Residential Future Land Use Map designation for the site. Projects qualifying as mixed use shall incorporate significant vertical integration of residential and nonresidential uses in order to achieve true mixed use, rather than the multiple use projects that typically result from only horizontal integration. Though the Unified Development Ordinance, establish standards for the amount for the amount of vertical integration required for mixed use projects.~~

**Policy 2.2.2e. Suburban Tier Commercial Development.** Discourage auto-oriented commercial “strip” development and instead encourage commercial “nodes” with appropriately designed internal connections at key locations along major transportation corridors. (See Policy 4.2.3a, Commercial Development Design).

**Policy 2.2.2f. Suburban Tier Spacing of Commercial Nodes.** The City-County Planning Department shall use the following standards when evaluating requests for new commercial development in the Suburban Tier:

- i. Separate distinct nodes of commercial development by a distance of at least one-half mile, measured from the outermost edge of the node;
- ii. Cluster commercial uses at intersections of thoroughfares major streets; and
- iii. Restrict new, isolated, mid-block commercial uses.

**Policy 2.2.2g. Special Redevelopment Areas.** When multiple existing lots are proposed for new development or redevelopment as part of an area-wide change in land use, and where significant development has changed the character of the surrounding area, the development should be configured in such a way so as to:

- i. Ensure that the tracts which are not included in the development are of sufficient size, shape, and location to be subsequently developed to compatible standards and use;
- ii. Employ unifying design elements, roadways, and buffers; and
- iii. Incorporate vehicular, pedestrian, and bicycle access as required by the UDO in a way to serve the development as well as other adjacent parcels not proposed for development.

**Policy 2.2.2h. Suburban Tier Density Evaluation.** Evaluate allowed Suburban Tier residential densities (see Table 2-1, Summary of Residential Density Categories) in consideration of policies to encourage higher density development in the Downtown and Compact Neighborhood Tiers and Suburban Transit Support Areas.

### Objective 2.2.3 Urban Tier Development

Provide sufficient land in the Urban Tier appropriately zoned for residential, commercial, institutional, office and industrial purposes. The Urban Tier shall include land surrounding Downtown and the Compact Neighborhoods Tiers.

**Policy 2.2.3a. Urban Tier Development Focus.** Ensure that new development enhances the street level experience by requiring that development within the Urban Tier have an urban form with small lot sizes and proximity of uses.

**Policy 2.2.3b. Urban Tier Land Uses.** Land uses that shall be allowed in the Urban Tier include:

- i. ~~Natural Resource Areas~~Recreation and Open Space;
- ii. Residential;
- iii. Institutional;
- iv. Commercial;
- v. Office; and
- vi. Industrial.

**Policy 2.2.3c. Urban Tier Mixed Use.** Through the Unified Development Ordinance, establish and utilize zoning tools that encourage an appropriate mix of uses that are vertically and functionally integrated to create vibrant places that are pedestrian oriented and transit supportive. This policy shall be used in conjunction with Policy 2.3.1h Mixed Use Location. Encourage Mixed Use zoning to create more “24-hour” places by permitting such developments regardless of the land use designation shown on the FLUM so as long as one of the proposed uses is designated on the FLUM. Provide incentives for vertical integration of residential and nonresidential uses in order

~~to achieve true mixed-use projects rather than the multiple-use projects that typically result from only horizontal integration.~~

**Policy 2.2.3d. Urban Tier Commercial Development.** Discourage auto-oriented commercial “strip” development and instead encourage pedestrian-oriented “nodes” and, where appropriate, pedestrian friendly “linear” corridors (see inset on page 2-8) of commercial development and infill. (See Policy 4.2.3a, Commercial Development Design).

**Policy 2.2.3e. Urban Tier Spacing of Commercial Nodes.** The City-County Planning Department shall use the following standards when evaluating requests for new commercial development in the Urban Tier:

- i. Separate distinct nodes of commercial development by a distance of at least one-half (1/2) mile;
- ii. Cluster commercial uses at intersections of thoroughfares; and
- iii. Restrict new, isolated, mid-block commercial uses, unless compatible with surrounding uses.

**Policy 2.2.3f. Urban Tier Commercial Infill.** Through the Unified Development Ordinance, provide opportunities for neighborhood-scale commercial node and linear development, intended to be directly accessible from surrounding residential neighborhoods.

**Policy 2.2.3g. Roxboro Road Zoning Changes.** The City-County Planning Department shall recommend denial of commercial and industrial zoning changes along Roxboro Road between West Club Boulevard and Maynard Avenue in order to prevent strip development and to protect the character of the surrounding neighborhood.

#### **Objective 2.2.4 Compact Neighborhood Tier Development**

Provide sufficient land in the Compact Neighborhood Tier appropriately zoned for ~~residential, commercial, institutional, office and industrial purposes~~ mixed use, transit-oriented development. The Compact Neighborhood Tier shall include land surrounding the designated regional transit stations.

**Policy 2.2.4a. Compact Neighborhood Development Focus.** Ensure that the Station Area Plans enhance the street level experience and provide a mixture of goods and services near transit stations by requiring that development within the Compact Neighborhood Tier be transit-, bicycle- and pedestrian-oriented. Auto-oriented and low intensity uses shall be discouraged.

**Policy 2.2.4b. Compact Neighborhood Tier Land Uses.** Utilize a Design District for all Compact Neighborhoods through the

Compact Neighborhood Plan process (see Policy 2.2.4e, Compact Neighborhood Plans) in order to make use of form-based code principles, create alternatives to automobile use, and create more “24-hour” places. For those Compact Neighborhoods for which a Compact Neighborhood Plan has not been implemented, Land uses that shall be allowed in the Compact Neighborhood Tier include:

- i. ~~Natural Resource Areas~~ Recreation and Open Space;
- ii. Residential;
- iii. Institutional;
- iv. Commercial;
- v. Office; and
- vi. Industrial, limited to Light Industrial uses.

~~**Policy 2.2.4c. Compact Neighborhood Tier Mixed Use.** Encourage Mixed Use zoning regardless of the underlying land use within the Core Areas in order to create alternatives to driving and create more “24 hour” places. Provide incentives for vertical integration of residential and nonresidential uses in order to achieve true mixed-use projects rather than the multiple use projects that typically result from only horizontal integration.~~

**Policy 2.2.4c. Core Area.** The Core Area, the land immediately surrounding the transit station, may extend approximately one-quarter mile from the station as indicated on the Future Land Use Map, unless otherwise indicated on an adopted Compact Neighborhood or Station Area plan.

**Policy 2.2.4d. Support Area.** The Support Area shall be the land in the Compact Neighborhood Tier outside of the Core Area, as indicated on the Future Land Use Map, unless otherwise indicated on an adopted Compact Neighborhood or Station Area plan.

~~**Policy 2.2.4e. Station Area**~~ **Compact Neighborhood Plans.** The City-County Planning Department, in conjunction with ~~the Triangle Transit Authority~~ and other interested parties, shall develop or participate in the development of Station Area Compact Neighborhood Plans, which shall apply the Compact Design zoning district, and its sub-districts, to all Compact Neighborhoods.

**Policy 2.2.4f. Compact Neighborhood Tier Passenger Terminals.** Through the Unified Development Ordinance, Ensure that passenger terminals are a permitted use in the zoning districts in the Compact Neighborhood Tier.

**Policy 2.2.4g. Compact Neighborhood Commercial Infill.** Through the Unified Development Ordinance, for those Compact Neighborhoods for which a Compact Design zoning district has not been implemented, provide opportunities for neighborhood-

scale commercial and mixed use nodes, intended to be directly accessible from surrounding residential neighborhoods.

### **Objective 2.2.5 Downtown Tier Development**

Provide sufficient land in the Downtown Tier for a mix of uses including residential, commercial, institutional, light industrial and office. The Downtown Tier shall include land surrounding the designated Downtown regional transit station.

**Policy 2.2.5a. Downtown Tier Development Focus.** Ensure that ~~the Downtown Plan~~ downtown development enhances the street level experience and provides a mix of goods and services near transit stations by requiring that development within the Downtown Tier be transit and pedestrian oriented. Auto-oriented and low intensity uses shall be discouraged.

**Policy 2.2.5b. Downtown Tier Land Uses.** Utilize a Design District for all land within the Downtown Tier. ~~Land uses that shall be allowed in the Downtown Tier include:~~

- ~~i. Natural Resource Areas and Open Space;~~
- ~~ii. Residential;~~
- ~~iii. Institutional;~~
- ~~iv. Commercial;~~
- ~~v. Office.~~

**Policy 2.2.5c. Downtown Development Areas.** The Downtown Tier shall ~~be subdivided into three development areas~~ utilize the Downtown Design zoning district and its sub-districts to provide for areas of high intensity development and a transition of uses between Downtown and nearby neighborhoods.

**Policy 2.2.5d. Downtown Density.** In the Downtown Tier, regulations will focus on creating desirable development forms and appropriate interface with the streetscape. Therefore, residential densities will not be regulated.

**Policy 2.2.5e. Downtown Tier Passenger Terminals.** Ensure that passenger terminals are a permitted use in the Zoning Districts in the Downtown Tier.

**Policy 2.2.5f. Downtown Tier and the Central Business District.** The central business district of Durham shall be defined to be coterminous with the Downtown Tier for purposes of NCGS 160A.458.3.

## **Goal 2.3, Promote Sustainable Use of Land and Resources**

Promote the sustainable use of land and resources to meet the needs of today without jeopardizing the ability to

efficiently and effectively provide land and resources in the future.

### **Objective 2.3.1 Growth Management**

Create policies and regulations to direct new development to areas that will support the efficient provision of public services and transportation networks, and protect environmentally sensitive lands.

**Policy 2.3.1a. Urban Growth Area.** Use the Urban Growth Area boundary to delineate the boundary between the Suburban and Rural Tiers. The Urban Growth Area shall also delineate the boundary where water and wastewater services shall be provided.

**Policy 2.3.1b. Contiguous Development.** Support orderly development patterns that take advantage of existing urban services, and avoid, insofar as possible, patterns of leapfrog, noncontiguous, scattered development within the Urban Growth Area.

**Policy 2.3.1c. Efficient Provision of Services through Annexation.** The City Manager's Office, in conjunction with City Budget and Management Services, shall devise and implement a strategy to annex into the City areas under County jurisdiction that are completely surrounded by areas of City jurisdiction in order to efficiently and effectively provide public services, including public safety and solid waste collection.

**Policy 2.3.1d. Farmland Preservation.** In order to help prevent the loss of rural landscapes and agricultural lands, and to better direct development to locations where urban services can be provided more efficiently, the Board of County Commissioners shall employ conservation easements to assist in the preservation of farmland.

- i. The Farmland Protection Board shall review all requests for conservation easements to determine if the property is prime farmland; and
- ii. Any property identified as prime farmland by the Farmland Preservation Board that is purchased by a Governing Body or is included in a Voluntary Agricultural District shall be designated Agriculture on the Future Land Use Map with a maximum development potential as a farmstead.

**Policy 2.3.1e. Office Uses as Transition.** Through the Future Land Use Map, utilize office space as a complement to commercial space, providing a transition between commercial and residential areas in the Urban and Suburban Tiers.

**Policy 2.3.1f. Expansion of Commercial Nodes.** Through the Unified Development Ordinance, and in evaluating requests for expansions to existing commercial nodes, require that the proposed development be designed to be integrated with the rest

of the existing node to promote pedestrian and vehicular circulation. (See Policy 4.2.3a, Commercial Development Design).

**Policy 2.3.1g. Retrofit Strip Development.** Through the Unified Development Ordinance, develop incentives to encourage the retrofitting of strip development and aging and vacant shopping centers into pedestrian-friendly mixed use centers as appropriate. (See Policy 4.3.3c, Retrofit Strip Development).

**Policy 2.3.1h. Mixed Use Project Location.** Using the Future Land Use Map, and Map 2-3, Mixed Use Suitability Analysis, as a reference, direct and support the use of zoning tools that encourage mixed use in locations that avoid environmentally sensitive or hazardous environments, are well-connected by multiple modes of transportation, and are efficiently served by community infrastructure and services. Mixed Use development may be compatible with any Future Land Use designation in the corresponding Tier (with the exception of the Rural Tier); however, where the use shown on the Future Land Use Map is residential, the requested residential density in a proposed mixed use project shall be within the range allowed in the Residential Future Land Use Map designation for the site.

### **Objective 2.3.2 Infrastructure Capacity**

Ensure the pace of urbanized growth does not exceed the ability to provide essential services.

**Policy 2.3.2a. Infrastructure Capacity.** ~~In designating land on the Future Land Use Map~~ In evaluating changes to the Future Land Use Map and Zoning Atlas, the Governing Boards and the City-County Planning Department shall consider impacts to the existing capacities of the transportation, water, and sewer systems, and other public facilities and services. In order to assess the impact on infrastructure and services of changes to the Future Land Use and Zoning Maps, the City-County Planning Department shall measure from the potential maximum impact of current policy or regulation to the potential maximum impact of the proposed change in policy or regulation.

**Policy 2.3.2b. Fiscal Impact Assessment.** The City-County Planning Department, in conjunction with other City and County service providers, shall create a mechanism with which to measure fiscal and economic impacts of proposed changes to the Future Land Use Map and/or Zoning Atlas.

### **Objective 2.3.3 Environmental Sustainability**

Provide sufficient land to protect critical watersheds, protect open space, and allow low impact development.

**Policy 2.3.3a. Watershed Critical Areas and Land Use.** Through the Unified Development Ordinance, the City-County Planning

Department shall discourage industrial land uses and maintain zoning that permits only low-intensity land uses in the Watershed Critical Areas, the most sensitive land near water supply reservoirs.

**Policy 2.3.3b. Impervious Surface Credit Transfer.** Through the Unified Development Ordinance, ~~allow and establish~~ maintain procedures for the transfer of impervious surface credit from a donor parcel to a receiver parcel, provided that:

- i. The donor parcel and the receiver parcel shall be within the same water supply watershed;
- ii. The impervious surface credit transfer shall not be from a donor parcel in the Protected Area to ~~the~~ a receiver parcel in the Critical Area; and
- iii. The portion of the donor parcel which is restricted from development shall remain in a vegetated or natural state and shall be placed in a permanent conservation easement granted to the City or County, or a land trust or similar conservation-oriented nonprofit organization.

Use of this tool should allow a project to increase its impervious surface above the limits that would otherwise be required, but would not reduce the requirements to provide engineered stormwater systems for the receiver sites. (See Policy 9.1.4c. Impervious Surface Credit Transfer.)

**Policy 2.3.3c. Provision of Open Space.** Through the Unified Development Ordinance, require that new residential developments include useable open space which uses Crime Prevention Through Environmental Design (CPTED) principles, is appropriate to the size and nature of the development, and:

- i. In the Suburban Tier, is accessible from the street and within a ½ mile walking distance from the majority of homes within the development;
- ii. In the Urban Tier, is accessible from the street and within a ¼ mile walking distance from the majority of homes within a neighborhood;
- iii. In the Compact Neighborhood and Downtown Tiers, establish alternative standards for open space to ensure public space in a defined setting with plazas and urban public places, as well as green spaces. (See Policies 7.2.2f, Urban Open Space Plan, and 10.1.4e, Urban Open Space Plan)

### **Objective 2.3.4 Contextual Development**

Develop standards for development that are appropriate to the context of the existing surrounding or desired development pattern.

**Policy 2.3.4a. Infill Development Standards.** Through the Unified Development Ordinance, encourage and promote compatible

residential and nonresidential infill on vacant or under utilized property within developed portions of the community to reinforce the existing character. Include provisions for contextual design of both residential and nonresidential infill projects in establish standards for infill development within the Urban, and Compact Neighborhood, and Downtown Tiers, to ensure that new development occurs in the context of the area, considering site and building design, factors such as lot dimensions, building dimensions, building location and orientation, parking, landscaping, and historic character (where applicable) Encourage adaptive reuse of existing buildings in these tiers as well. (see Policy 4.3.2a, Infill Development Standards)

**Policy 2.3.4b. Neighborhood Protection Overlay.** Through the Unified Development Ordinance, create and implement maintain a Neighborhood Protection Overlay to limit the flexibility of underlying zoning within existing established neighborhoods to more effectively match the design, density, intensity, and/or established character of these developed areas.

**Policy 2.3.4c. Transitions to Nonresidential Uses.** Ensure the maintenance protection of established neighborhoods in areas beginning to transition to nonresidential uses by protecting their residential design and character in architectural details as well as the location of parking.

## **Goal 2.4, Align Land Use and Transportation**

Promote the integration of land use, transportation and infrastructure planning to efficiently conserve resources and support economic growth.

### **Objective 2.4.1 Transit Oriented Development**

Create land use policies that encourage development that is compatible with transit, pedestrian, and bicycle transportation, and decreases dependence on automobiles. Promote and support future transit opportunities.

**Policy 2.4.1a. Downtown and Compact Neighborhood Tiers for Transit Support.** Plan for and reinforce the Downtown and Compact Neighborhood Tiers as supportive of multi-modal transportation through increased density, reduced parking requirements, high quality pedestrian and bicycle facilities, and supportive infrastructure and design requirements. (See Policy 8.1.6a.)

**Policy 2.4.1b. Regional Transit Plan.** The City and County shall support planning for and protection of the transit corridors

identified in the most recently adopted version of the Regional Transit Plan. (See Policy 8.1.3d, Regional Transit Plan).

**Policy 2.4.1c. Development Review and Regional Rail.** The City-County Planning Department and the City Department of Transportation shall review development proposals in relation to the adopted Regional Transit Plan, and shall seek dedication or reservation of right-of-way along designated transit corridors in conformance with that Plan. (See Policy 8.1.3e, Development Review and Regional Rail).

**Policy 2.4.1d. Suburban Transit Areas.** Through the Unified Development Ordinance, ~~the City and County Planning Department shall allow develop the application of the Compact Neighborhood Support Area standards, as defined in the Durham Comprehensive Plan and the Unified Development Ordinance, in for~~ Suburban Transit Areas shown on the Future Land Use Map to encourage development supportive of transit.

**Policy 2.4.1e. Newly Designated Transit Areas.** Existing Suburban Transit Areas shall be re-designated to the Compact Neighborhood Tier as the locations of transit stations are established. Additional Suburban Transit Areas shall be designated as further transit studies, in conjunction with Triangle Transit, are completed and approved with appropriate locations identified.

**Policy 2.4.2f. Station Area Infrastructure.** Develop a strategy to prioritize, finance, and build infrastructure that will improve the safety and efficiency of accessing fixed guideway transit routes.

## **Objective 2.4.2 Roadway Accommodations**

Ensure that the road network in Durham includes multi-modal facilities to accommodate automobiles, pedestrians, bicycles, and rubber tire transit (such as buses and Bus Rapid Transit), and that land uses are located on appropriate road types.

**Policy 2.4.2a. Complete Streets.** The City Department of Transportation, in consultation with North Carolina Department of Transportation and the City-County Planning Department, shall designate and implement Complete Street design standards that provide mobility for all types of transportation modes and complement the desired land use pattern and urban fabric. (See Policy 8.1.1d, Complete Streets).

**Policy 2.4.2b. Connectivity.** Through the Unified Development Ordinance, encourage that new development and redevelopment provide internal and external pedestrian and vehicular connectivity within and between individual development sites to provide alternative means of access.

**Policy 2.4.2c. Location of Industrial Uses.** Through the Future Land Use Map, ensure that new industrial uses have direct access

to Major Thoroughfares, Minor Thoroughfares, or Collector Streets to protect the character of neighborhoods.

## Goal 2.5, Comprehensive Plan Relevancy

### Objective 2.5.1 Comprehensive Plan Updates

Update the Durham Comprehensive Plan on a regular basis in order to maintain its relevancy and appropriateness.

**Policy 2.5.1a. Updates.** The City-County Planning Department shall ensure that the Durham Comprehensive Plan is updated approximately every five years in order to reflect the best available information and changing conditions.

**Policy 2.5.1b. Evaluation and Assessment Report.** The City-County Planning Department shall conduct an annual Evaluation and Assessment Report and present that report to the Governing Bodies for adoption. This report will address, at a minimum, the following:

- i. Rectification of City and County Future Land Use Map amendments;
- ii. An assessment of progress on Comprehensive Plan policies;
- iii. Proposed amendments (if any) to policies of the Comprehensive Plan; and
- iv. An update to Table 2-4, the projected Demand for Land accommodated by the Future Land Use Map.

(See Policy 1.1.4a, Evaluation and Assessment Report.)

### Objective 2.5.2 Future Land Use Map Updates

Update the Future Land Use Map as needed to maintain its relevancy as a guide to the location and character of development.

**Policy 2.5.2a. Amendments.** The City-County Planning Department shall initiate amendments to the Durham Comprehensive Plan, including but not limited to the Future Land Use Map, when warranted as part of a Compact Neighborhood Plan (See Policy 2.2.4e, Compact Neighborhood Plans) or Land Use Update (See Policy 2.5.2b, Land Use Updates). In addition, the City-County Planning Department shall evaluate requests to amend the Durham Comprehensive Plan, including but not limited to, the Future Land Use Map (See Policy 1.1.3a, Amendment Procedures).

**Policy 2.5.2b. Land Use Plan Updates.** The City-County Planning Department shall prepare detailed land use plan updates for the following areas, considering the capacity of infrastructure and the demand for specific land uses:

- i. ~~The area bounded by the Wake County line~~ Durham Urban Growth Area boundary, US-70, South Miami Boulevard, F.W. Alexander Parkway, and I-40;
- ii. The area bounded by the Durham Urban Growth Area boundary, Olive Branch Road, Lick Creek, and US-70;
- iii. ~~The area bounded by NC 147, Ellis Road, the~~ around the proposed East End Connector and the railroad;
- iv. ~~The area along Junction Road between US 70 and Ferrell Road;~~
- v. ~~The intersection of NC 54 and NC 751 between New Hope and Third Fork Creeks;~~
- vi. ~~The area around North Carolina Central University;~~
- vii. ~~The area around Duke University; and~~
- viii. ~~The area around Durham Technical Community College; and~~
- ix. The area around Research Triangle Park; and
  - x. The area bounded by Burdens Creek, NC 55 and South Alston Avenue.
- xi. ~~The Arrowhead area.~~
- xii. ~~—~~

**Policy 2.5.2c. Recreation and Open Space Updates.** Through the Unified Development Ordinance, allow for any land as defined in Policy 2.1.3b, Recreation and Open Space Defined, to be designated as Recreation and Open Space on the Future Land Use Map through the Evaluation and Assessment Report process.

**Policy 2.5.2d. Voluntary Agricultural District Updates.** Through the Unified Development Ordinance, allow for any land accepted as a Voluntary Agricultural District by the Farmland Preservation Board (Cooperative Extension, or whomever) to be designated as Agricultural on the Future Land Use Map through the Evaluation and Assessment Report process.

**Policy 2.5.2e. Demand for Land Uses.** In evaluating changes to the Future Land Use Map, the Governing Boards, the City-County Planning Commission, and the City-County Planning Department shall consider the projected need for the requested land use in the future, in accordance with Table 2-4, as may be updated from time to time.

**Policy 2.5.2f. Neighborhood Involvement.** Through the Unified Development Ordinance, establish-maintain procedures to ensure that neighborhoods and community groups are advised of and provided opportunities to be involved in development decisions at the earliest stages of planning and throughout the approval process.

**Objective 2.5.3 Future Initiatives**

Identify initiatives to be undertaken by the City-County Planning Department not previously addressed, in conjunction with other departments and outside agencies.

**Policy 2.5.3a. Study of Industrial Land.** The City-County Planning Department, in conjunction with the City of Durham Office of Economic and Workforce Development and the Durham Chamber of Commerce, shall conduct a study to determine the appropriate location, size, and qualities of industrial land in Durham. (See Policy 6.1.5c, Land Use Location and Availability).

**Policy 2.5.3b. Local Historic District Land Use Analysis.** The City-County Planning Department shall prepare detailed land use plan updates for all Local Historic Districts to ensure that land use policy and regulations for the district are consistent with historic patterns and district goals.

**Policy 2.5.3c. Rural Village Plans.** The City-County Planning Department shall develop land use plans and design guidelines to promote the continued and sustainable economic viability, as well as protect the character of, the rural villages of Bahama and Rougemont (see Policies 2.2.1e, Rural Villages, and 4.3.1a, Rural Village Design Guidelines, and 5.1.2d, Historic Rural Villages).

**Policy 2.5.3d. Research Triangle Park Master Plan.** The City-County Planning Department shall work in conjunction with the Research Triangle Foundation on implementation of an updated Research Triangle Park Master Plan.

**Policy 2.5.3e. Agricultural Zoning.** The City-County Planning Department shall perform an analysis of a potential agricultural zoning district for the Rural Tier.

<b>Table 2-2, Land Demand and the Future Land Use Map</b>		
Sector	Projected Demand, 2035	Accommodated by the Future Land Use Map
Residential	189,000 Dwelling Units	225,000 Dwelling Units
Institutional/Government	1,710 Acres	3,500 Acres
Office	2,830 Acres	2,900 Acres
Commercial	4,650 Acres	6,700 Acres
Industrial	10,500 Acres	16,200 Acres
Note: Source is Durham City-County Planning Department, July 2011		

## Land Demand Projections and the Future Land Use Map

An important Smart Growth principle embraced by the Durham Comprehensive Plan is to provide sufficient land for future needs. Future demand for residential units is based on projected size of the population and an estimate of the number of persons per household. Future demand for commercial land is based on the projected size of the population and an estimate of needed square feet per person. Future demand for office and industrial land is based on projected employment in those sectors and an estimate of needed square feet per employee. (Warehouse and non-warehouse demand is projected separately.) Projected demand for these land uses and the amount of land accommodated by the Comprehensive Plan's Future Land Use Map is shown in Table 2-2. The Map provides sufficient land for the anticipated needs.



# Map 2-2, Future Land Use Map

**Urban Growth Area**  
See Policy 2.3.1e. Urban Growth Area

**Rural Villages**  
See Policy 2.3.1j. Rural Villages

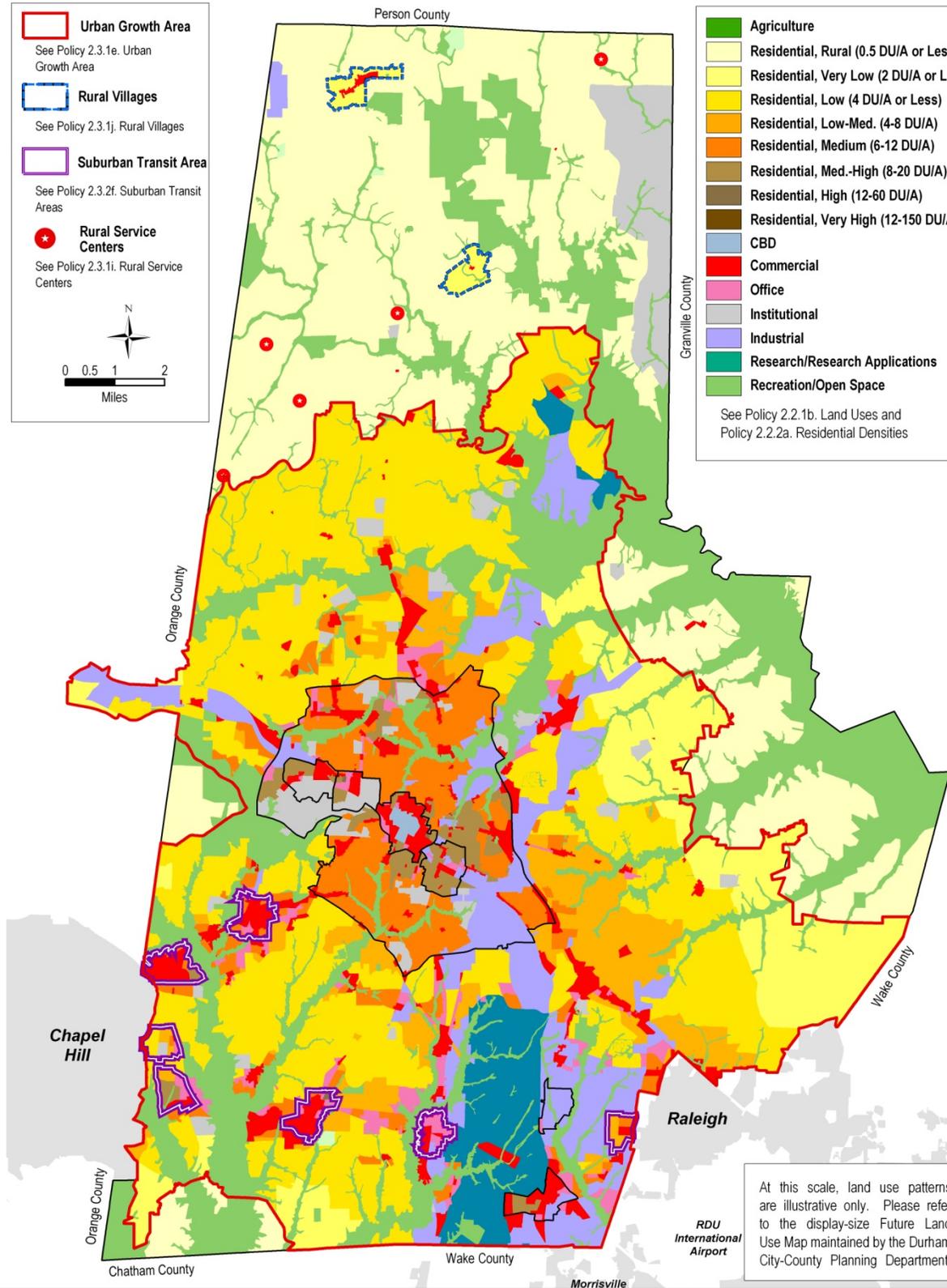
**Suburban Transit Area**  
See Policy 2.3.2f. Suburban Transit Areas

**Rural Service Centers**  
See Policy 2.3.1i. Rural Service Centers



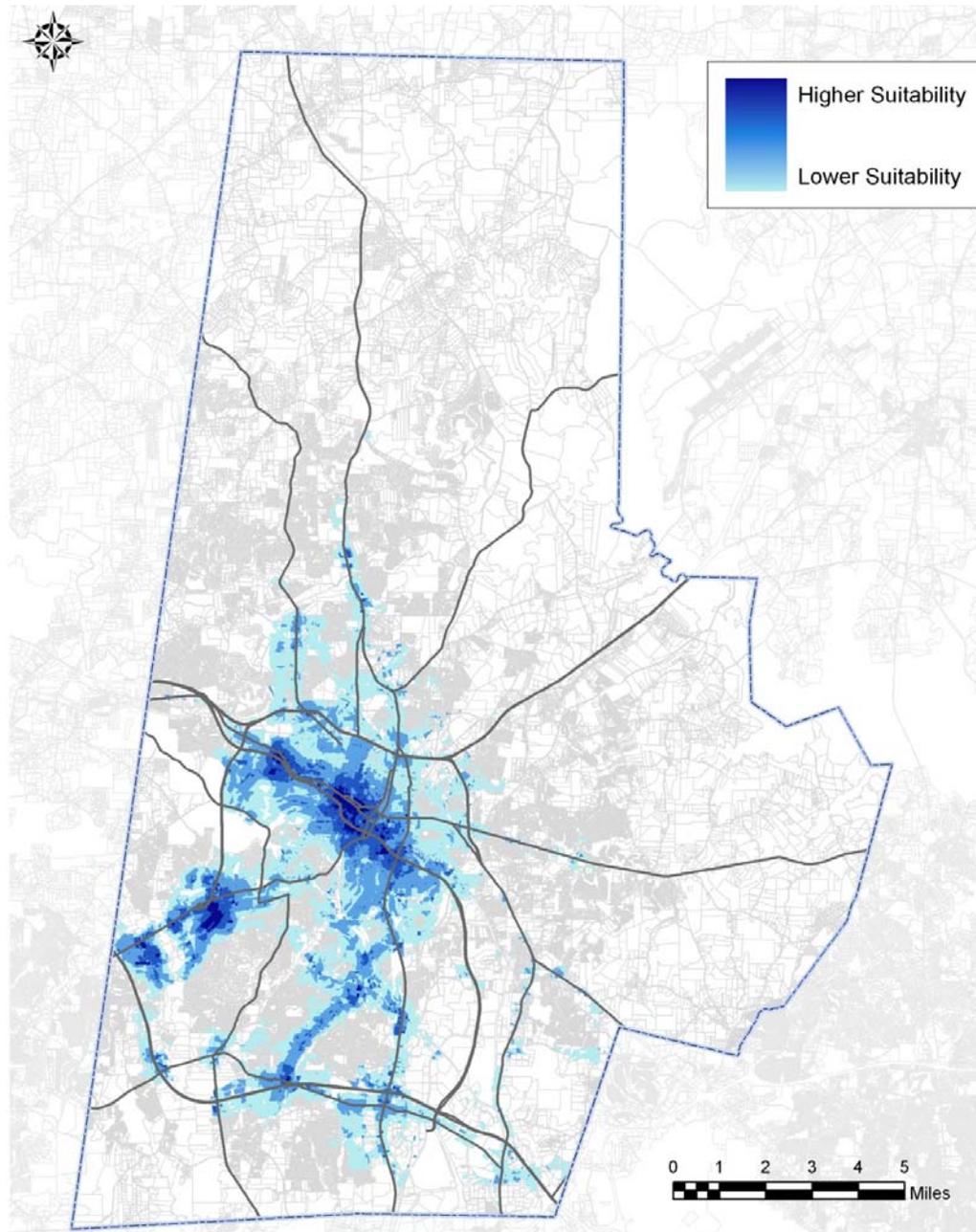
<span style="color: green;">■</span>	Agriculture
<span style="color: #ffffcc;">■</span>	Residential, Rural (0.5 DU/A or Less)
<span style="color: #ffff99;">■</span>	Residential, Very Low (2 DU/A or Less)
<span style="color: #ffff66;">■</span>	Residential, Low (4 DU/A or Less)
<span style="color: #ffcc99;">■</span>	Residential, Low-Med. (4-8 DU/A)
<span style="color: #ff9966;">■</span>	Residential, Medium (6-12 DU/A)
<span style="color: #ff6633;">■</span>	Residential, Med.-High (8-20 DU/A)
<span style="color: #ff3300;">■</span>	Residential, High (12-60 DU/A)
<span style="color: #ff0000;">■</span>	Residential, Very High (12-150 DU/A)
<span style="color: #cccccc;">■</span>	CBD
<span style="color: #ff0000;">■</span>	Commercial
<span style="color: #ff99cc;">■</span>	Office
<span style="color: #ccccff;">■</span>	Institutional
<span style="color: #99ccff;">■</span>	Industrial
<span style="color: #00cccc;">■</span>	Research/Research Applications
<span style="color: #99cc99;">■</span>	Recreation/Open Space

See Policy 2.2.1b. Land Uses and Policy 2.2.2a. Residential Densities



At this scale, land use patterns are illustrative only. Please refer to the display-size Future Land Use Map maintained by the Durham City-County Planning Department.

### Map 2-3, Mixed Use Location Suitability



**Note: This map was generated for illustrative purposes only. It is intended to be used as a reference, but the locations identified on the map do not reflect adopted policy.** Using Geographic Information Systems (GIS), Planning Department staff worked with a stakeholder focus group to perform a quantitative and spatial analysis to determine the most appropriate areas to encourage mixed use development. The result is a suitability map showing areas with the highest convergence of qualities considered to be attractive for mixed use projects. These factors included, but were not limited to: proximity to bus stops; proximity to proposed light rail/commuter rail stations; a connected roadway network; a connected system of sidewalks; off-road bike and pedestrian trails; underdeveloped land or vacant commercial land; proximity to schools; proximity to recreational open spaces; and ridgelines (area of higher elevation). Because many of the identified features can change over time (locations of bus stops, for instance), this map should be regarded as a description of conditions at a particular moment in time.

DELETED POLICIES

**Policy 2.2.5a. Commercial Node Spacing.** In designating land for commercial uses and evaluating Plan Amendments, the Governing Boards and the City-County Planning Department shall consider commercial spacing requirements consistent with Table 2-2. Commercial Node Spacing.

Table 2-1, Commercial Node		
Type	Urban Tier	Suburban Tier
Neighborhood Node	1½ Miles	3 Miles
Community Node	3 Miles	5 Mile

**Policy 2.3.1k. Cost of Community Services Study.** The County Engineering Department and the Soil and Water Conservation District shall prepare a cost-of-community-services study to examine the economic benefits of retaining active farming.

**Policy 2.3.1l. Incompatible Zoning in the Rural Tier.** The Board of County Commissioners shall initiate rezoning procedures on any property in the Rural Tier with incompatible zoning to bring those properties into compliance with the Durham Comprehensive Plan.

**Policy 2.3.2g. Suburban Transit Area Phasing.** Development in Suburban Transit Areas shall not be permitted to utilize the residential designations shown on the Future Land Use Map unless they utilize phasing provisions, which shall be incorporated into the Unified Development Ordinance to ensure that, at build-out, minimum required densities in a transit-supportive form shall be achieved. Phases shall be limited to the development permitted by the adequacy of the available infrastructure. Development that cannot comply with these phasing requirements shall be restricted to the residential land use designation immediately less dense than shown on the Map (i.e., medium density residential becomes low medium density residential) with the Planning Department processing corresponding amendments to the Future Land Use Map as part of the annual Evaluation and Assessment Report.

**Policy 2.3.2m & Policy 2.3.3k Amortization of Nonconforming Uses.** Through the Unified Development Ordinance, establish and enforce amortization periods for nonconforming uses that contribute to visual blight and inhibit redevelopment of areas within the Suburban and Urban Tiers.

**Policy 2.3.2n. Suburban Tier Traditional Neighborhood Development District.** The City-County Planning Department shall propose amendments to the Unified Development Ordinance to establish a Traditional Neighborhood Development District.

**Policy 2.3.3f. Urban Tier Build-To Lines.** Establish and apply “build to” lines rather than setbacks to bring projects close to the street and encourage walkability.

**Policy 2.3.4i. Compact Neighborhood Build-To Lines.** Establish and apply “build-to” lines rather than setbacks to bring projects close to the street and encourage walkability.

**Policy 2.3.5f. Downtown Station Area Plan.** The City-County Planning Department, in conjunction with the Triangle Transit Authority and other interested parties, shall develop or participate in the development of a station area plan to direct growth and redevelopment for the Downtown regional

transit station that enhances Downtown’s characteristics, reflects its focus, and fosters distinctive and attractive places.

**Policy 2.3.5g. Downtown Tier Build-To Lines.** Through the Unified Development Ordinance, establish and apply “build to” lines rather than setbacks to bring projects closer to the street and encourage walkability.

**Policy 2.3.5i. Downtown Tier City-Initiated Zoning Changes.** The City shall consider initiating zoning changes in the downtown area to ensure consistency between zoning designations and the land use pattern shown on Map 2-2, Future Land Use Map.

**Policy 2.3.6b. Corridor Plans.** The City-County Planning Department, in conjunction with the Appearance Commission, shall prepare corridor plans to improve the function and appearance of major roadways into and through Durham. Corridor plans shall recommend appropriate land uses, design standards, development controls, landscaping, signage regulation, access management strategies, public facilities capital improvements, underground utilities and/or other measures. The highest priority shall be given to the following roadway corridors.

- xiii. Duke Street, from I-85 to Roxboro Road;
- xiv. Guess Road, from Club Boulevard to the Eno River;
- xv. Hillsborough Road, from Fulton Street to Cole Mill Road;
- xvi. Roxboro Road, from Duke Street to Milton Road;
- xvii. NC 98, from US 70 Bypass to Lynn Road;
- xviii. US 70, from NC 98 to the Wake County line;
- xix. Martin Luther King, Jr. Parkway, from University Drive to NC 55;
- xx. NC 54, from the Orange County line to the Wake County line;
- xxi. NC 55, from the NC 147 to the Wake County line;
- xxii. Fayetteville Street from NC 147 to Renaissance Parkway; and
- xxiii. US 15-501, from Orange County to University Blvd.

(See Chapter 4, Community Character and Design Element, Policy 4.4.1a. Corridor Plans.)

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Adopted, February 28, 2005  
Updated, April 2012

# Durham Comprehensive Plan

## Chapter 3 Housing Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 3, Housing Element

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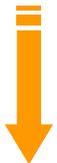
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# Housing Element

The Housing Element identifies strategies for provision of an adequate supply of affordable, safe and attractive housing designed to meet the needs of Durham’s diverse population. Residential growth cannot be considered without touching on other planning issues, including transportation and other public infrastructure, urban design and character, and preservation of open space. Therefore, many of the policies included within the Housing Element deal with how housing affects, and is affected by these other planning issues.



- Summary of Issues*
- Goal 1, Affordability*
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- Goal 6, Housing Standards*
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## Summary of Issues

- 1. Affordability.** Housing costs have risen faster than income over the past decade, resulting in shrinkage of housing options for very low-, low- and moderate-income households. The decline in housing options for these income groups has also contributed to the additional issues: overcrowded housing in some Durham neighborhoods; a high percentage of rental housing for the community as a whole; and concentration of substandard and inadequate housing in some neighborhoods, with continued disinvestments in those neighborhoods.
- 2. Subsidized Housing.** Cost pressures, explosive growth and local regulations geared toward provision of suburban housing development have limited provision of affordable housing for low- and very low-income households. Simultaneously, over-concentration of subsidized housing has had the effect of concentrating poverty and has, in some cases, promoted disinvestment in neighborhoods. ~~How shall Durham address the need for an adequate supply of safe and attractive housing for Durham’s low- and very low income households while ensuring that subsidized housing is equitably distributed?~~
- 3. Special Needs Populations.** The factors that have limited provision of adequate housing for low- and very low-income households have also limited provision of affordable housing for

families and individuals with special needs. ~~What incentives can Durham provide for provision of more special needs housing?~~

4. **Homelessness.** The number of homeless individuals and persons in families continues to increase in Durham. The number of homeless persons counted during the annual point-in-time survey has increased from ~~343 in 1999 to 529 persons in 2004~~ 535 in 2005 to 652 persons in 2011, a 5422 percent increase. ~~Over one year, more than 2,100 persons were homeless in Durham. Durham should employ the necessary~~ What strategies and resources are required to reduce homelessness in Durham.?
5. **Central City Neighborhood Revitalization.** Sustaining safe, attractive and thriving central city neighborhoods supports the ongoing redevelopment and revitalization of Durham's central city. Revitalized central city neighborhoods also provide opportunities for alternative modes of transportation, and can provide rental and homeownership opportunities for all income and age groups.
6. **Proactive/Sustainable Communities.** Proactive, sustainable communities can be supported through education, effective communication of community needs, and encouragement and facilitation of stakeholder alliances. By promoting proactive communities and citizen neighborhood involvement, the quality and appearance of housing stock will be directly and positively impacted.
7. **Substandard Housing.** Some of Durham's older neighborhoods exhibit concentrations of poorly maintained, abandoned and blighted residential structures. ~~The 2000 Census revealed that Durham also had a surprisingly large number of residences with incomplete plumbing. How can the City of Durham should look to use policies and procedures that will more efficiently administer its Minimum Housing Code and address problems of blight in its older neighborhoods.?~~ How can the County address problems with substandard housing?
8. **Fair Housing.** ~~How can Durham should identify and rectify barriers to fair housing, including policy-related issues, market dynamics, and discrimination so that all its citizens have access to quality housing opportunities.?~~
9. **Housing Choice.** ~~Suburban residential development has accounted for a high percentage of the housing built in Durham over the past two decades. How can Durham promote a greater range of housing options, particularly within its urban area?~~

## Goal 3.1, Affordability

Ensure an adequate supply of affordable housing to meet the needs of all Durham County residents.

### Objective 3.1.1. Affordable Housing Enhancements

Facilitate the provision of affordable housing by regulatory and incentive-based means.—~~Increase the number of households assisted annually by homeownership programs from 65 to 1,000 by 2015.~~

**Policy 3.1.1a. Density Bonus.** ~~In the Unified Development Ordinance, provide workable density bonuses as an incentive for provision of affordable housing units. Evaluate the density bonus allowed in the Unified Development Ordinance for enhancements or modifications to encourage greater utilization of this affordable housing tool in order to provide a workable density bonus as an incentive for provision of affordable housing units.~~

**Policy 3.1.1b. Inclusionary Zoning.** The City and County, working with key stakeholders, shall seek legal authority to require that new residential development provide an affordable housing component in return for a usable density bonus, with provision for additional incentives within transit corridors station areas.

**Policy 3.1.1c. Public-Private Partnerships for Affordable Housing.** ~~The City's Department of Housing and Community Development Department shall continue to encourage participation of the private sector (lenders, developers and builders) in government funded or operated housing programs that increase affordable housing production.~~

~~**Policy 3.1.1d. Affordable Housing Pattern Book.** The City-County Planning Department shall develop a pattern book based on experience in other communities on how to best integrate affordable housing into the overall community design.~~

**Policy 3.1.1d. Energy Efficient Housing.** ~~The City's Department of Community Development and the City-County Office of Sustainability Department and the County Manager's Office, in partnership with local non-profit organizations, shall develop residential energy efficiency programs for low and moderate-income households shall continue to require minimum energy-efficiency standards in all newly constructed housing developed with assistance from the City and shall continue to promote energy efficiency improvements to the existing housing stock. All gut rehabilitation or new construction of residential buildings up to three stories must be designed to meet the standard for Energy Star Qualified New Homes. All gut rehabilitation or new~~

construction of mid- or high-rise multifamily housing must be designed to meet ASHREA Standard 90.1-2004, Appendix G plus 20 percent.

### Objective 3.1.2. Home Ownership

Assist in expanding homeownership opportunities for low- and moderate-income households. ~~Increase the number of low- and moderate-income homeowners by at least 2,500 by 2030. Provide direct homebuyer assistance to qualifying households.~~

**Policy 3.1.2a. First-Time Homebuyers.** ~~The City Housing and Department of Community Development Department shall continue to provide assistance for the acquisition, rehabilitation and new construction of housing for very low- and low-income first-time homebuyers through the HOME Investments Partnership and CDBG Programs.~~

~~**Credit Counseling.** The City Housing and Community Development Department shall continue to provide credit counseling and homebuyer education for potential homeowners.~~

**Policy 3.1.2b. Assistance to Homebuyers.** ~~The City Department of Housing and Community Development Department shall continue to provide down payment and closing cost assistance through the First-Time Homebuyers Assistance Program.~~

**Policy 3.1.2c. Housing Rehabilitation Assistance.** ~~The City Housing and Department of Community Development Department shall continue to provide rehabilitation and redevelopment assistance for vacant, substandard housing in order to encourage home-ownership in neighborhoods suffering abandonment problems and to provide financial assistance to nonprofit organizations and other developers who purchase, rehabilitate and resell existing homes and/or redevelop vacant property.~~

**Policy 3.1.2d. Housing Education and Counseling.** ~~The City Housing and Department of Community Development Department shall continue to support housing education and counseling programs that provide both pre- and post-purchase education and counseling services.~~

**Policy 3.1.2e. Asset and Wealth Building Programs.** ~~The City Department of Community development shall continue to promote asset and wealth building programs through Earned Income Tax Credit (EITC), Individual Development Accounts (IDA), Foreclosure Intervention and prevention and other housing related programs.~~

~~**Policy 3.1.2e Housing Assistance for Local Government Employees.** The City Housing and Community Development Department shall continue to provide homebuyer programs to~~

~~encourage police officers and teachers to buy homes within selected areas.~~

~~**Policy 3.1.2f. Employer Assisted Housing.** The City Housing and Community Development Department shall work with the Greater Durham Chamber of Commerce and other entities to encourage large employers to create employer-assisted housing (EAH) programs.~~

### Objective 3.1.3. Rental Housing

~~Expand affordable rental opportunities through new construction and preservation of existing rental units. Increase the supply of housing affordable to extremely low-income households by 100 dwelling units by 2015.~~

~~**Policy 3.1.3a. Loans for Rental Housing Rehabilitation.** The City Housing and Department of Community Development Department shall continue to provide direct loans to community-based groups and nonprofit and for-profit developers to rehabilitate smaller rental developments that are affordable to low-income renters.~~

~~**Policy 3.1.3b. Leveraging of Available Funds for Affordable Housing.** The City Housing and Department of Community Development Department shall continue to encourage the use of resources such as Federal or State low-income housing tax credits, historic credits, and other State and Federal resources to increase the leveraging of funds for the provision of affordable housing.~~

~~**Policy 3.1.3c Incentives for Affordable Rental Housing.** The City Housing and Community Development Department shall provide incentives for developers to target at least 15 percent of all new rental units for low-income households.~~

~~**Policy 3.1.3c. Affordable Rental Housing Location Policy.** The City Housing and Department of Community Development Department and the City-County Planning Department shall work with other key community stakeholders to identify shortages of affordable rental housing, set goals, and identify appropriate locations for affordable rental housing in proximity to employment opportunities, service centers and transit corridors.~~

~~**Policy 3.1.3d. Subsidized Housing Location.** The City Department of Community Development, in conjunction with the City-County Planning Department, shall enforce the Subsidized Housing Location Policy, as adopted by the Durham City Council in 2001, as periodically amended (See Appendix D.)~~

~~**Policy 3.1.3e. Policy 3.3.1e Future Subsidized Housing Location.** The City Housing and Community Development Department and~~

~~the City County Planning Department shall identify appropriate locations for future subsidized housing in proximity to employment opportunities, service centers and transit corridors, with particular focus surplus publicly-owned properties.~~

#### Objective 3.1.4. Rental Assistance

Provide rental assistance (vouchers) to very low-income and special needs persons.

**Policy 3.1.4a. Rental Housing Assistance.** ~~The Durham Housing Authority and the County Department of Social Services shall provide rental assistance to very low-income and special needs persons through the voucher system. The Durham Center shall continue to provide rental assistance to persons with disabilities.~~

#### Objective 3.1.5. Durham Housing Authority

Support the Durham Housing Authority's efforts to create mixed-income rental and homeownership communities that promote self-sufficiency and further Durham's fair housing goals.

~~**Policy 3.3.3a. Rental Housing Acquisition and Rehabilitation.** The City Housing and Community Development Department shall continue to assist in identifying local funding sources for the acquisition, rehabilitation and new construction of rental housing for low income persons.~~

**Policy 3.1.5a. Mixed-Income Rental Communities.** The City's Department of Community Development and the Durham Housing Authority shall discourage further concentrations of very low income families by promoting and facilitating mixed income communities developed under the Low Income Housing Tax Credit (LIHTC) program. ~~New LIHTC family developments should generally serve income levels as follows: Very low income (below 40% AMI) – one third of the total, Low income (40%-60% AMI) – one third of the total and Moderate Income/Market Rate (above 60% AMI) – one third of the total.~~

### Goal 3.2, ~~Goal 3.4~~ Special Needs Housing

~~Ensure that special needs populations have access to affordable, safe and sanitary housing that is appropriate to their special needs. Encourage the development of special needs housing for underserved populations, particularly permanent and transitional housing.~~

### Objective 3.2.1. ~~3.4.1~~ Special Needs Housing

Ensure that special needs populations have access to affordable, safe and sanitary housing that is appropriate to their special needs.

**Policy 3.2.1a. ~~3.4.1a~~ Supportive Services for Special Needs Populations.** The City and County shall encourage the development of additional supportive or service-enriched housing for specific special needs populations using Federal, State, and local housing programs, including:

- i. Supportive services for persons with a disability (Section 811);
- ii. The HUD “Supportive Housing Program (SHP) for Homeless Persons with a Disability;” and
- iii. The North Carolina Housing Finance Agency’s (NC HFA) “Supportive Housing Development” program.

## ~~Goal 3.3, Subsidized Housing~~

~~Provide opportunities for housing affordable to very low and low income households throughout Durham.~~

### ~~Objective 3.3.1. Distribution of Subsidized Housing~~

~~Prevent concentrations of subsidized housing, and locate subsidized housing in proximity to employment opportunities, service centers and transit corridors.~~

~~**Policy 3.3.1a. Subsidized Housing Location.** Opportunities for affordable housing should be available to residents throughout the City and County. The City and County shall utilize criteria designed to evaluate the dispersal of conditions of poverty as well as of subsidized housing throughout the City and County in the review of proposals for locating subsidized housing. While the application of this Policy is intended to be advisory to the governing bodies, with the governing bodies reserving the prerogative to consider each proposal for subsidized housing on its merits, as a general rule the City and County will not support proposals for subsidized housing that are inconsistent with the location criteria established herein.~~

~~**Policy 3.3.1b. Review Procedures.** The City Housing and Community Development Department and the City-County Planning Department shall be jointly responsible for the review of subsidized housing proposals, including proposals for the renovation, rehabilitation or replacement of existing subsidized housing, and shall follow the procedures and criteria defined herein. Proposals for subsidized housing seeking City and/or County support that are submitted to the Housing and Community Development Department shall be forwarded to the~~

Planning Department for a review of compliance with this Goal, employing the methodology identified below. The Planning Department shall provide the Housing and Community Development Department with a report of its findings regarding consistency with the criteria established herein for the Housing and Community Development Department's use in preparing any documents related to City and/or County support for the proposed subsidized housing project.

**Policy 3.3.1c. Review Criteria.** A multi-step process shall be employed in determining if subsidized housing projects are consistent with this Policy. As part of this process, the Planning Department shall maintain a database and corresponding map identifying the location of all subsidized housing developments in the City and County. This process first shall consider whether the proposed subsidized housing project is exempt from this Policy as a result of complying with the established exemptions. Any project determined not to be exempt from the application of this Policy will initially be evaluated to ensure that there is not a concentration of either poverty or subsidized housing in the census-designated block group where the development is proposed to be located. Concentrations of poverty are based upon statistical analysis considering the countywide concentration of poverty and identifying those areas of the City and County where the concentration is greater than would be anticipated if poverty was dispersed throughout the City and County. If the most recent census indicates that the concentration of poverty within any block group exceeds 40 percent, the proposed subsidized housing development shall be determined to be in violation of this Policy. Concentrations of subsidized housing are determined by the ratio of subsidized housing units to the total number of housing units, based on the database of subsidized housing units maintained by the Planning Department. If the concentration of housing units in subsidized developments in any block group exceeds 20 percent in the Urban Core or Central City, or 25 percent in the Outer City, the proposed subsidized housing development shall be determined to be in violation of this Policy. Map 3-1, Concentrations of Subsidized Housing or Poverty, indicates all census block groups that have either a concentration of poverty or of subsidized housing units, where the City and County should not support additional subsidized developments. Map 3-2, Evaluation Areas, defines the boundaries of the Urban Core, Central City and Outer City. Any project that passes this review shall be subject to a final review, considering the concentration of subsidized housing in a broader area than the immediate block group where the project is proposed to be located. In this final review, the Planning Department shall employ the Evaluation Areas shown on Map 3-2,

Evaluation Areas. The Evaluation Areas represent three distinct areas of the City (as defined by census block groups) where different parameters for evaluating concentrations of subsidized housing shall be applied. The following criteria shall be applied within each Evaluation Area:

- iv. **Outer City:** Areas that are continuing to experience growth in population and housing units; generally in a suburban pattern in relatively close proximity to retail and office development. Within this area, the maximum concentration of subsidized housing units, determined by the number existing and proposed subsidized housing within a 0.50 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 25 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation.
- v. **Central City:** Areas that meet some of the criteria of the outer city, but may lack suitable parcels for new housing developments. Within this area, the maximum concentration of subsidized housing units, determined by the number existing and proposed subsidized housing within a 0.50 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 20 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation.
- vi. **Urban Core:** Areas with significantly higher concentrations of existing subsidized housing developments/units; or a lack of suitable parcels for new housing developments. Within this area, the maximum concentration of subsidized housing units, determined by the number existing and proposed subsidized housing within a 0.25 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 20 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation.

Table 3-1, Summary of Evaluation Criteria, summarizes the criteria to be applied within each Evaluation Area. Unless expressly exempted below, new federally subsidized (public housing agency) multi-family developments should not exceed 50 units per site regardless of the evaluation area in which they are proposed to be located.

<b>Table 3-1. Summary of Evaluation Area Criteria</b>		
<b>Evaluation Area</b>	<b>Evaluation Radius</b>	<b>Maximum Concentration</b>
Outer-City	0.50 miles	25 percent
Central City	0.50 miles	20 percent
Urban-Core	0.25 miles	20 percent

**Policy 3.3.1d. Exemptions to the Subsidized Housing Location Policy.** Proposed Subsidized Housing that meet any of the following criteria shall be exempt from the location guidelines of the Subsidized Housing Location Policy:

- i. Rental housing proposals with four (4) or fewer units;
- ii. Home ownership proposals of fewer than 100 single-family detached housing units;
- iii. Home ownership proposals with 12 or fewer condominiums or other attached dwelling units;
- iv. Group homes, shelters, and homes for persons with special needs that have an occupant capacity of no more than 24 individuals;
- v. Elderly housing with 60 or fewer dwelling units;
- vi. Renovation, rehabilitation and/or replacement of existing dwellings. The total number of units in a replacement housing development shall not exceed the total number of units in the development prior to the replacement program. When replacement housing is being located on a different site the total number of subsidized units shall not exceed 50 units;
- vii. Housing assistance provided directly to owner-occupants or tenants, and is not reflected in rent, income or purchase price limits that are attached to the home or land, such as down payment assistance, second mortgages, mortgage tax credits, Section 8 or other rental assistance, or Temporary Assistance to Needy Families (TANF);
- viii. Dwellings to be built in compliance with a City-approved plan for a "Redevelopment Area" consistent with the provisions of the North Carolina Redevelopment Law (Article 22), a "Neighborhood Revitalization Area," or a City-approved application for the HOPE VI program. Development proposals in these Focus Areas must be implemented in accordance with the plan approved by the City Council for these areas (See Map 3-3, Focus Areas); and

- ix. ~~Housing in mixed income projects, where no more than 20 percent of the housing is subsidized.~~

### Goal 3.3, ~~Goal 3.7~~ Homelessness

Reduce the number of chronically homeless persons in Durham by developing strategies to prevent homelessness, increase supportive services, and increase affordable housing and permanent supportive housing for extremely low income persons. and increase the number of permanent housing units serving formerly homeless persons with special needs.

#### Objective 3.3.1. Durham Opening Doors Initiative

##### ~~Objective 3.7.1. Homelessness~~

~~Reduce the number of homeless persons in Durham by 2008.  
Support implementation of the Durham Opening Doors Initiative.~~

~~**Policy 3.7.1a. Council to End Homelessness in Durham.** The City Housing and Community Development Department and the City Office of Economic and Workforce Development shall designate a representative to participate in planning efforts, coordinated by the Council to End Homelessness (CEHD) to reduce homelessness, including:~~

- ~~i. Development of a ten year plan to end homelessness;~~
- ~~ii. Preparation of the annual Continuum of Care report for the US Department of Housing and Urban Development; and~~
- ~~iii. Participation in the Triangle Partnership to End Chronic Homelessness (Triangle United Way).~~

~~**Policy 3.7.1b. Housing and Community Development Funding.** The City Housing and Community Development Department shall prepare recommendations for City Council review concerning a match or set aside of Community Development Block Grant (CDBG) or HOME Investment Partnership Funds for services and housing that target the homeless population in Durham.~~

**Policy 3.3.1a. Priority for Permanent Housing.** The City Department of Community Development and the Continuum of Care shall give priority to the development of permanent housing for formerly homeless persons.

**Policy 3.3.1b. Economic Sustainability.** The City Department of Community Development and the Continuum of Care shall give priority to permanent housing proposals that are structured such that the need for on-going operating subsidies is minimized.

**Policy 3.3.1c. Mainstreaming.** The City Department of Community Development and the Continuum of Care shall encourage developers of Low Income Housing Tax Credit Projects to designate formerly homeless persons as the special needs population to be served in order to reduce social isolation.

**Policy 3.3.1d. Prevention.** Members of the Continuum of Care shall continue to further develop systems of care to enable formerly homeless persons to live independently with appropriate supportive services and to prevent persons at risk from becoming homeless.

### **Goal 3.4, Urban, Compact Neighborhood, and Downtown Tier Revitalization**

Support thriving, safe and attractive urban and downtown neighborhoods providing rental and homeownership opportunities for all income and age groups.

#### **Objective 3.4.1. Strategic Neighborhood Revitalization Plans**

Create or update revitalization plans for targeted central city neighborhoods, defined as those identified neighborhoods within the Urban, Compact Neighborhood, or Downtown Tiers.

**Policy 3.4.1a. Target Area Designations.** The City Department of Community Development shall partner with other City Departments, the Durham Housing Authority and other community groups and institutions to identify priority central city neighborhoods for revitalization efforts.

**Policy 3.4.1b. Evaluate Existing Plans.** The City Department of Community Development shall partner with other City departments and community groups and institutions to evaluate existing neighborhood revitalization plans in terms of specific actions to be accomplished and their associated costs and status. Where such actions are absent or vaguely defined, the Department of Community Development shall refine plans so that implementation of plans can be tracked and reported.

**Policy 3.4.1c. Develop Plans for Newly Designated Target Areas.** The City Department of Community Development shall partner with other City departments and community groups and institutions to periodically evaluate areas that meet “target area” status. For these newly designated target areas, the City Department of Community Development and others shall assess existing conditions and prepare plans which establish goals,

objectives and actions to address identified issues. Cost estimates for actions shall be provided where appropriate and recommended priorities and phasing shall be identified.

**Policy 3.4.1d. Establish Priorities and Funding Plan.** The City Department of Community Development, in partnership with other City departments and community groups and institutions shall coordinate proposed actions in targeted areas to projected and/or required resources and establish priorities and phasing of proposed actions.

### **Objective 3.4.2. Incorporate Appropriate Revitalization Principles**

Ensure that revitalization plans in targeted areas incorporate best practices in design and development principles.

**Policy 3.4.2a. Mixed Income.** The City Department of Community Development, in partnership with the City-County Planning Department and community groups and institutions, shall guide the development of revitalization plans to ensure that they provide for a broad range of rental and homeownership opportunities for all age and income groups.

**Policy 3.4.2b. Mix of Uses.** The City Department of Community Development, in partnership with the City-County Planning Department and community groups and institutions, shall guide the development of revitalization plans to ensure that they provide for commercial uses as appropriate to encourage pedestrian activity, reduce automobile dependence and provide opportunities for Durham residents to live in close proximity to their work.

**Policy 3.4.2c. Density.** The City Department of Community Development, in partnership with the City-County Planning Department and community groups and institutions, shall guide the development of revitalization plans to ensure that, where appropriate, they provide for appropriate densities to maximize utilization of existing infrastructure and the utilization and efficiency of existing or proposed transit systems.

**Policy 3.4.2d. Design Standards.** The City Department of Community Development shall establish design standards to guide new construction and rehabilitation of existing structures within targeted areas. The standards shall require that affordable housing be indistinguishable from market rate in design and quality and that minimum energy efficiency and green building requirements are met in any publicly assisted housing development.

**Policy 3.4.2e. Public/Private Partnership.** The City Department of Community Development shall establish partnerships with

non-profit and for profit entities that have proven track records of success in order to ensure maximum leveraging of public investment.

**Policy 3.4.2f. Catalytic Components.** The City Department of Community Development and its partners shall undertake activities in a coordinated and targeted manner in order to maximize their catalytic effect.

**Policy 3.4.2g. Walkability, Connectivity, and Sustainability.** The City Department of Community Development and the City-County Planning Department shall encourage and promote design elements that are pedestrian friendly, connect new development with the surrounding community and ensure ongoing economic and environmental sustainability.

### **Goal 3.5, Engaged/Sustainable Communities**

By promoting engaged communities and citizen neighborhood involvement, the quality and appearance of housing stock will be directly and positively impacted. Advance education, communicate community needs and develop resources through promoting, encouraging and facilitating stakeholder alliances.

#### **Objective 3.5.1. Partnerships**

Ensure that communities and stakeholders have effective methods for communicating needs, opportunities and services to assist in revitalization and stabilization of communities.

**Policy 3.5.1a. Neighborhood Communication.** The City Neighborhood Improvement Services Department shall provide a forum for stakeholders to explore strategies and resources to support neighborhood development, preservation, and neighborhood projects to enhance the Durham's housing stock.

**Policy 3.5.1b. Support City Relationships with Partners Against Crime (PAC).** The City Department of Neighborhood Improvement Services shall continue to assist PAC leaders in programs and projects in the five PAC districts.

**Policy 3.5.1c. Support Neighborhood Associations.** The City Neighborhood Improvement Services Department will support neighborhoods to build alliances within their communities.

### Objective 3.5.2. Education and Outreach

Work directly with citizens, community leaders, and government agencies in the community, providing education on City services, City policies and community resources to promote strong and empowered communities.

#### **Policy 3.5.2a. Comprehensive Community Engagement Model.**

The City Department of Neighborhood Improvement Services shall design a citywide comprehensive community engagement model intended to draw upon the full diversity of our community, strengthen community capacity, and increase community impact on housing and neighborhood improvement and stabilization.

#### **Policy 3.5.2b. Landlord Training Workshop.**

The City Department of Neighborhood Improvement Services, along with its partner agencies, shall conduct Landlord Training Workshops designed to assist property owners and managers of rental housing. The purpose of the Landlord Training Program is to: (1) Encourage effective property management that will significantly contribute to safe and decent housing, improving the health of the community and (2) Provide education on lawful techniques to halt illegal activity on rental property.

## **Goal 3.6, ~~Goal 3.2~~ Substandard Housing Standards**

Ensure safe, attractive and well-maintained residential environments, reduce the number of vacant dwellings, and eliminate by the elimination of substandard housing through enforcement of the Housing Code and neighborhood revitalization.

### Objective 3.6.1. Enforcement of the Housing and Unsafe Buildings Codes ~~Abandoned and Substandard Housing~~

Ensure the renovation, rehabilitation or replacement of abandoned and substandard housing, as defined by Durham City Code Section 6-150, including residential units with incomplete plumbing facilities. Eliminate 300 identified substandard housing units in Durham by 2010. Enforce the City Housing Code and the Unsafe Buildings Code to serve the revitalization of neighborhoods.

#### **Policy 3.6.1a. ~~3.2.1a~~ Evaluation and Update of the Minimum Housing Code. Substandard and Abandoned Housing Concentrations.**

The City Housing and Community Development Department shall identify concentrations of substandard and abandoned housing units, and develop and maintain databases on substandard and abandoned housing. These databases shall be used to identify potential revitalization and redevelopment

~~areas.~~ In acknowledgement of the need for the Housing Code to be a dynamic and fluid document in order to remain responsive to the needs of Durham residents for safe, decent housing and vital community environments, the City Department of Neighborhood Improvement Services shall periodically review the Minimum Housing Code and take necessary steps to revise it as needed.

**Policy 3.6.1b. ~~3.2.1b~~ City Minimum Housing Code Enforcement.** The City Housing and Community Development Department of Neighborhood Improvement Services shall enforce the City's of Durham's Minimum Housing Code, and work with property owners and tenants to ensure timely, effective, good quality, code-adherent results.

**Policy 3.6.1c. ~~3.2.1c~~ Neighborhood Environments. City Minimum Housing Code Re-Evaluation.** The City Housing and Community Development Department shall re-evaluate the Minimum Housing Code to ensure that it meets the needs of Durham residents for safe and decent housing. In addition to the Housing and Unsafe Building Codes, the City Department of Neighborhood Improvement Services shall continue to enforce City ordinances concerning accumulation of trash, junk, weeds and overgrowth, and junked and abandoned vehicles on properties in order to ensure the safety and well-being of residents.

**Policy 3.6.1d. Housing Appeals Board.** The City Department of Neighborhood Improvement Services shall present requests from the Housing Code Administrator to authorize repair or demolition of deteriorated dwellings to the City Housing Appeals Board for its consideration. The Housing Appeals Board shall issue an Ordinance for remediation of such deteriorated dwelling(s). The Housing Code Administrator or designee shall enforce the Housing Appeals Board's Ordinances.

**Policy 3.6.1e. ~~3.2.1e~~ Elimination of Substandard Housing Eradication.** The City Housing and Community Development Department shall work to eradicate substandard housing in the City of Durham by 2010. The City Department of Neighborhood Improvement Services shall work to eliminate all substandard housing in the City through the enforcement of the City's Minimum Housing Code and the North Carolina State Unsafe Building Statute. The department shall utilize education and training of property owners and managers, and outreach and engagement of community stakeholders and citizens in a proactive effort to improve the quality of housing stock.

**Policy 3.6.1f. ~~3.2.1f~~ County Minimum Housing Code.** The County shall consider adopting and enforcing a housing code to ensure that all housing in the County jurisdiction meets a

~~minimum standard.~~ Durham County shall adopt and enforce a County housing code to ensure that all housing in the County jurisdiction meets a minimum standard.

**Policy 3.6.1g. Interdepartmental Coordination on Historic Structures.** The City Neighborhood Improvement Services Department shall consult the City-County Planning Department regarding any potential Minimum Housing Code enforcement actions where the subject property is located within a Local Historic District, National Register Historic District, and/or is designated as a Local Historic Landmark. (See Policy 5.1.1f, Interdepartmental Coordination on Historic Structures).

**Policy 3.6.1h. ~~3.2.1f~~ Demolition Site Reuse and Lien Forgiveness.** Where demolition of substandard housing is necessary, ~~the City Housing and Community Development Department shall create a list of incentives for revitalization and eventual reuse of the property,~~ the City Manager may reduce or cancel demolition liens on property to promote affordable housing, economic development and welfare needs of persons of low and moderate income. The City Department of Neighborhood Improvement Services shall continue to develop other incentives for revitalization and reuse of such properties.

### Objective 3.6.2. Vacant Substandard Properties

Identify concentrations of vacant housing that foster neighborhood blight and utilize local ordinances to discourage neglect and abandonment of residential properties.

**Policy 3.6.2a. Concentrations of Vacant, Boarded and Deteriorated Housing.** The City Department of Neighborhood Improvement Services shall identify concentrated areas of vacant, boarded and deteriorated housing and shall undertake measures to end the cycle of neglect and monitor vacant properties that contribute to blight and deterioration in communities. The Department shall enforce all City ordinances related to property maintenance of vacant properties.

**Policy 3.6.2b. Vacant Housing Stock.** The City Department of Neighborhood Improvement Services shall monitor the City's housing stock to identify neglected vacant housing and shall maintain a database listing those properties. The database shall be used to prioritize code enforcement actions.

**Policy 3.6.2c. Neighborhood Target Areas.** The City Department of Neighborhood Improvement Services shall commit to work to prioritize and eliminate all boarded properties and respond to all citizen concerns within targeted areas.

### **Objective 3.6.3. Collaborative Code Enforcement Activities**

Collaborate with citizens to encourage neighborhood investment and be responsive to citizen concerns, and work with other City and County departments to address concentrations of ordinance violations.

**Policy 3.6.3a. Code Enforcement Abatement Team (CENAT).** The City Department of Neighborhood Improvement Services shall coordinate the joint CENAT to identify violations of City and County ordinances in neighborhoods and enforce those ordinances to eliminate blight and deterioration.

**Policy 3.6.3b. Neighborhood Environmental Tracking.** The City Department of Neighborhood Improvement Services shall engage citizens in the identification and prioritization of street-level concerns in citizens' neighborhoods.

### **Objective 3.6.4. ~~3.2.2~~ Lead Abatement**

Reduce the exposure of Durham residents to hazards associated lead from sources related to housing by focusing lead abatement efforts on the 5,900 properties identified as 1<sup>st</sup> priority by the Duke University Children's Environmental Health Initiative with lead based paint.

**Policy 3.6.4a. Education.** The City Department of Community Development and other partners shall continue to provide and disseminate educational materials on the hazards of lead based paint and abatement/mitigation methods.

**Policy 3.6.4b. ~~3.2.2a~~ Lead Abatement Funding.** The City Housing and Department of Community Development shall continue to identify and utilize funding for the Lead-Based Paint Abatement program partner with the North Carolina Department of Environmental and Natural Resources to obtain and utilize federal funding for abatement of lead hazards.

**Policy ~~3.2.2b~~ Lead Abatement Training.** The City Housing and Community Development Department shall continue to train public housing and local government staff in the identification and removal of lead based paint and other environmental hazards.

**Policy ~~3.2.2c~~ Identifying Concentrations of Lead Contamination.** The City Housing and Community Development Department, along with key community stakeholders, shall identify concentrations of housing with lead based paint in order to prioritize abatement efforts.

**Policy ~~3.2.2d~~ Lead Abatement.** The City Housing and Community Development Department, along with key community stakeholders, shall develop new techniques to identify houses with lead paint and abate lead contamination.

## Goal 3.7, ~~Goal 3.5~~ Fair Housing

~~Eliminate discrimination in housing.~~

Ensure that all citizens have access to a full range of housing opportunities by providing fair housing education, outreach and training and by enforcing the City of Durham Fair Housing Ordinance.

### Objective 3.7.1. ~~3.5.1~~ Housing Discrimination

Ensure that all citizens have access to a full range of housing opportunities.

**Policy 3.7.1a. ~~3.5.1a~~ Fair Housing Training.** ~~The City Housing and Community Development Department and the City's Human Relations Department of Neighborhood Improvement Services shall provide fair housing training for new real estate professional, property managers, landlords and tenants.~~ property managers, landlords, tenants, real estate professionals and the Durham community in general.

**Policy 3.7.1b. ~~3.5.1b~~ Housing Discrimination Testing.** ~~The City Housing and Community Development Department and the Human Relations of Neighborhood Improvement Services Department shall support-~~ administer periodic testing of rental, home sales and lending markets to determine if discrimination is occurring.

**Policy 3.7.1c. ~~3.5.1c~~ Fair Housing Plan.** ~~The City Housing and Community Development Department and the City Human Relations Department of Neighborhood Improvement Services and Department of Community Development shall be jointly responsible for periodically updating the City of Durham's Fair Housing Plan to reflect new information, changing conditions, and the evolving strategies to affirmatively further fair housing within the City of Durham. The Fair Housing Plan shall evaluate the need for a Fair Housing Ordinance.~~ The Fair Housing Plan shall be used to analyze the impediments to fair housing choice in Durham, to identify actions to eliminate the identified impediments.

## ~~Goal 3.8, Housing Choice~~

~~Increase the range of housing choice available to Durham residents.~~

### ~~Objective 3.8.1. Accessory Dwellings~~

~~Allow accessory dwellings and other housing options in the Compact Neighborhood, Urban and Suburban Tiers.~~

~~**Policy 3.8.1a. Above First Story and Accessory Dwellings.** Through the Unified Development Ordinance, allow for “multi-family above first story”.~~

~~**Policy 3.8.1b. Accessory Dwellings.** Through the Unified Development Ordinance, allow accessory units as secondary dwelling co-located on the same lot as single family residences as a use by right in residential zoning districts. Allow only one accessory dwelling unit associated with each primary dwelling.~~

## DELETED POLICIES

**Policy 3.1.1d. Affordable Housing Pattern Book.** The City-County Planning Department shall develop a pattern book based on experience in other communities on how to best integrate affordable housing into the overall community design

**Policy 3.1.2e. Housing Assistance for Local Government Employees.** The City Housing and Community Development Department shall continue to provide homebuyer programs to encourage police officers and teachers to buy homes within selected areas.

**Policy 3.1.2f. Employer-Assisted Housing.** The City Housing and Community Development Department shall work with the Greater Durham Chamber of Commerce and other entities to encourage large employers to create employer-assisted housing (EAH) programs.

**Policy 3.1.3c. Incentives for Affordable Rental Housing.** The City Housing and Community Development Department shall provide incentives for developers to target at least 15 percent of all new rental units for low-income households.

**Policy 3.1.3e. Future Subsidized Housing Location.** The City Housing and Community Development Department and the City-County Planning Department shall identify appropriate locations for future subsidized housing in proximity to employment opportunities, service centers and transit corridors, with particular focus surplus publicly-owned properties.

[Please note that policies formerly under **Goal 3.3, Subsidized Housing**, have been moved to an appendix of the *Durham Comprehensive Plan* and entitled *Subsidized Housing Location Policy*.]

**Policy 3.2.1a. Evaluation and Update of the Minimum Housing Code. Substandard and Abandoned Housing Concentrations.** The City Housing and Community Development Department shall identify concentrations of substandard and abandoned housing units, and develop and maintain databases on substandard and abandoned housing. These databases shall be used to identify potential revitalization and redevelopment areas.

[Please note that **Policy 3.2.1a** has been replaced by **Policy 3.6.1a, Evaluation and Update of the Minimum Housing Code**.]

**Policy 3.2.1c. City Minimum Housing Code Re-Evaluation.** The City Housing and Community Development Department shall re-evaluate the Minimum Housing Code to ensure that it meets the needs of Durham residents for safe and decent housing.

[Please note that **Policy 3.2.1c** has been replaced by **Policy 3.6.1c, Neighborhood Environments**]

**Policy 3.2.2b. Lead Abatement Training.** The City Housing and Community Development Department shall continue to train public housing and local government staff in the identification and removal of lead-based paint and other environmental hazards.

**Policy 3.2.2c. Identifying Concentrations of Lead Contamination.** The City Housing and Community Development Department, along with key community stakeholders, shall identify concentrations of housing with lead-based paint in order to prioritize abatement efforts.

**Policy 3.2.2d. Lead Abatement.** The City Housing and Community Development Department, along with key community stakeholders, shall develop new techniques to identify houses with lead paint and abate lead contamination.

**Policy 3.3.3a. Rental Housing Acquisition and Rehabilitation.** The City Housing and Community Development Department shall continue to assist in identifying local funding sources for the acquisition, rehabilitation and new construction of rental housing for low-income persons.

**Policy 3.7.1a. Council to End Homelessness in Durham.** The City Housing and Community Development Department and the City Office of Economic and Workforce Development shall designate a representative to participate in planning efforts, coordinated by the Council to End Homelessness (CEHD) to reduce homelessness, including:

- i. Development of a ten year plan to end homelessness;
- ii. Preparation of the annual Continuum of Care report for the US Department of Housing and Urban Development; and
- iii. Participation in the Triangle Partnership to End Chronic Homelessness (Triangle United Way).

**Policy 3.7.1b. Housing and Community Development Funding.** The City Housing and Community Development Department shall prepare recommendations for City Council review concerning a match or set aside of Community Development Block Grant (CDBG) or HOME Investment Partnership Funds for services and housing that target the homeless population in Durham.

**Policy 3.8.1a. Above-First-Story and Accessory Dwellings.** Through the Unified Development Ordinance, allow for “multi-family above first story”.

**Policy 3.8.1b. Accessory Dwellings.** Through the Unified Development Ordinance, allow accessory units as secondary dwelling co-located on the same lot as single-family residences as a use by right in residential zoning districts. Allow only one accessory dwelling unit associated with each primary dwelling.



Adopted, February 28, 2005  
Updated, April 2012

## Durham Comprehensive Plan

# Chapter 4 Community Character and Design Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 4, Community Character and Design Element

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# Community Character and Design Element

Durham’s character is unique and diverse, including picturesque farmlands, turn of the century urban neighborhoods, modern suburban developments, historic downtown warehouses, and scenic natural areas. As Durham continues to evolve, it is important to preserve the positive aspects of the community and enhance existing development. A vision for community character and design should guide future development, creating functional, aesthetically appealing, and people-oriented places.



*Summary of Issues*  
*Goal 4.1, Community Design Guidance*  
*Goal 4.2, Design Quality*  
*Goal 4.3, Contextual Design*  
*Goal 4.4, Roadway Image*  
*Goal 4.6, Compact Neighborhoods*

## Summary of Issues

- Approaches to Community Design.** Durham’s suburban-g geared development standards require amendments to produce more attractive new development that is appropriate to its context. In addition, Durham should create regulations that require and incent design characteristics that improve the urban fabric and function of new development and redevelopment. ~~How should Durham regulate new development in order to secure attractive and functional built environments? How do tailored development standards for specific areas keep the overall eclectic community feel? How does Durham ensure that government facilities meet the standards set for private development?~~
- Community Maintenance.** While the appearance of new development is a central focus of community design and character, the on-going maintenance of Durham’s built environment makes a greater visual impression. ~~How can Durham best should encourage private property owners to maintain their buildings and land, as well as ? How can the require the City and County to maintain their public rights-of-way, buildings and grounds to enhance the visual appearance of the community.?~~
- Protecting Rural Character.** Citizens are concerned that Durham’s rural areas are threatened by encroaching urban and suburban development. ~~Which Durham should protect aspects of its rural character should Durham preserve and where should~~

preservation activities be focused? How can Durham preserve its some of its valuable rural character in an increasingly urban County?

4. **Improving EntrywaysGateways.** City and County leaders have expressed interest in improving the appearance of major entryways gateways into the Durham community. What steps can Durham should take steps to improve the appearance of road corridors and entrygateways into Durham?
5. **Tree Protection.** Community leaders have expressed concerns that current regulatory requirements are not achieving the objective of securing new development with greater tree coverage. How can Durham increase its incentives or decrease its disincentives for developers to preserve natural vegetation and existing tree canopy on new development sites?
6. **Site Design and Safety.** Crime prevention through environmental design involves site design with safety in mind. How can Durham best integrate Crime Prevention Through Environmental Design (CPTED) principles in the design of new development? What regulatory provisions should be established to ensure that safety is appropriately considered in development design?
5. **Form Based Zoning/Design District.** In more urban areas, design districts utilizing form based zoning concepts should be applied to create a more urban form, a pedestrian and bicycle friendly character, and to support future potential transit.
6. **Infill Development.** Both urban and suburban infill development become more important as the population of Durham continues to grow. Infill development, including residential, non-residential, and mixed use, are an important aspect of smart growth and will help support transportation alternatives and alleviate congestion related issues.
7. **Urban Tree CanopyStreet Tree Replacement.** Durham's existing street trees are a pleasant and attractive amenity for many of its older neighborhoods. Yet many of Durham's majestic street trees may reach the end of their natural life over the next two decades. How should Durham should address this potential loss of street tree canopy through appropriate development regulation and streetscape standards.?
8. **Parking Lot Landscaping.** Citizens have expressed concerns over the barren appearance of older commercial parking lots, suggesting a retrofit of extensive landscaping. How can Durham enhance these facilities?
8. **Underground Utility Lines.** The issue of buried utility lines has been a ~~hot~~ much discussed topic in Durham for many years, both with the elected officials and the general public. Durham should

~~continue to look at ways~~ ~~What can Durham do~~ to promote the burial of utility lines.?

9. **Facade Variety.** A growing concern in the ~~suburban~~ Durham community is that of facade monotony in new housing developments. ~~How can Durham should develop regulations that encourage facade variety? How is~~ balance consistency balanced with variety.?
10. **Public Spaces.** The incorporation of a variety of public spaces is an amenity frequently sought after by both citizens and public officials. ~~What kinds of incentives can Durham should look at~~ policies that encourage, incentivize, and/or require offer for the provision of public spaces.?
11. **Transit Stops.** As transit becomes a more feasible and convenient option, transit stops will likely become more prominent in the community. ~~How can~~ Durham should ensure attractive designs for transit stops.?
12. **Sustainability.** Sustainable communities are increasingly desired and necessary. Durham needs to devise ways to promote sustainability through renewable energy, energy conservation, water conservation, enhanced water quality, food security and other measures in a way that maintains or enhances community aesthetics and quality of life.

## Goal 4.1, Community Design Guidance

Provide guidance in the design and development of the community to ensure a visually appealing, ~~and functional,~~ and sustainable built environment.

### Objective 4.1.1. Design Guidelines and Standards

Develop guidelines and standards for the design of new development that promote quality design.

**Policy 4.1.1a. Tier ~~Design-Specific Standards.~~** Through the Unified Development Ordinance, develop design standards tailored to each development Tier to maintain each area's unique character. Tier specific standards should include parking provisions and street cross-sections.

**Policy 4.1.1b. Design Districts and Overlays.** Through the Unified Development Ordinance, ~~maintain~~ establish design ~~overlay~~ districts, such as ~~a the~~ Downtown Design ~~Overlay~~ District, Compact Design Districts, and Neighborhood Protection Overlay Districts. Develop design ~~review guidelines standards~~ for application within each of these design ~~overlay~~ districts.

**Policy 4.1.1c. Building Arrangement.** Through the Unified Development Ordinance, establish Tier-appropriate standards for building placement in relation to the street. Use build-to lines in the Downtown, Urban and Compact Neighborhood Tiers. Use minimum setbacks in the Suburban and Rural Tier and maximum setbacks in the Urban Tier.

**Policy 4.1.1d. Building Coverage.** Through the Unified Development Ordinance, establish standards for building coverage by uses and/or tiers.

**Policy 4.1.1e. Height.** Through the Unified Development Ordinance, establish standards for building heights by uses and/or tiers.

**Policy 4.1.1f. Housing, Building, and Frontage Types.** Through the Unified Development Ordinance, establish and maintain housing, building, and/or frontage types by tier:

- i. In the Suburban Tier, provide for a broad variety of housing and building types, lot sizes and design elements to encourage diversity within communities and achieve efficient use of infrastructure;
- ii. In the Urban Tier, provide for a variety of housing and building types with varying setback requirements to encourage a more urban form and efficient use of infrastructure;
- iii. In the Compact Neighborhood and Downtown Tiers, provide for a variety of building and frontage types to encourage density and diversity within communities, achieve efficient use of infrastructure, and generate a foundation of support for neighborhood centers and transit.

**Policy 4.1.1g. Project Boundary Buffer Requirements.** Through the Unified Development Ordinance, maintain standards for project boundary buffers that:

- i. In the Rural and Suburban Tiers, minimize potential adverse impacts associated with differing uses by focusing on opacity and physical separation of uses;
- ii. In the Urban Tier, focus on issues, such as opacity rather than physical separation of uses, respecting the urban form in these areas; and
- iii. In the Compact Neighborhood and Downtown Tiers are not required unless they abut residential development in the Suburban or Urban Tier.

**Policy 4.1.1h. Landscaping Requirements.** Through the Unified Development Ordinance, maintain standards for landscaping that:

- i. In the Suburban Tier, emphasize preservation of tree cover and both natural and manicured visual appearance, encourage the use of native species and water-wise

landscaping to minimize the impacts of drought events on the suburban landscape, and require measures to ensure the long-term stability and survival of required landscape materials;

- ii. In the Urban Tier, provide standards for landscaping that result in a more formal and manicured visual appearance, and focus on the visual appearance of the community from the streets; and
- iii. In the Compact Neighborhood and Downtown Tiers, require that plantings be compact and adopted to urban growing conditions, allowing non-traditional vegetation such as green walls, screens, and roofs in addition to planters and other streetscape landscaping.

**Policy 4.1.1i. Parking Standards.** Through the Unified Development Ordinance, establish parking standards for all motorized and non-motorized vehicles that incorporate *Crime Prevention Through Environmental Design* (CPTED) principles, parking ratios appropriate to each Tier, utilize landscaping guidelines that consider environmental issues such as heat, glare, and aesthetics, and:

- i. In the Suburban Tier, require parking spaces to meet but not exceed the needs of the development, and provide for alternative parking arrangements where appropriate because of transit services or unique site conditions;
- ii. In the Urban Tier, allow alternate parking standards and direct new surface lots to the side and rear of buildings rather than to street yards to avoid creating expanses of surface parking and encourage more walkable communities; and
- iii. In the Compact Neighborhood and Downtown Tiers, apply maximum parking provisions, allow alternate parking standards, and encourage structured and shared parking, and allow on-street parking where road rights-of-way can accommodate on-street parking to avoid creating expanses of surface parking and encourage more walkable communities.

**Policy 4.1.1j. Crime Prevention Through Environmental Design.** ~~Ensure~~ ~~Continue~~ ~~the~~ ~~consideration~~ of *Crime Prevention Through Environmental Design* (CPTED) strategies in site design through integration of CPTED principles in the Unified Development Ordinance and design guidelines. (See Policy 12.3.2b, Crime Prevention Through Environmental Design.)

**Policy 4.1.1k ~~Appearance Commission Review of Design Standards for Government Projects.~~** In order to enhance their design and appearance, the Durham ~~Appearance Commission~~ City-County Planning Department shall review and

~~comment on~~ establish architectural and streetscape standards for all proposed major public development projects that do not otherwise require review by the ~~Design District Review Team or the~~ Historic Preservation Commission, including buildings, Durham-funded parking projects, public signage programs, and significant state projects, excluding university or college projects within an Internal Campus, including and NC DOT projects within Durham County.

**Policy 4.1.1I Sustainable Design.** The City-County Planning and City-County Inspections departments shall research and propose regulations that, to the maximum lawful extent, require or allow sustainable design features and that provide incentives for sustainable design through tax credits, density bonuses, fee reductions, streamlined processing or other means.

## Goal 4.2, Design Quality

Encourage quality at all levels of design. Design quality impacts the actual function, sustainability and appearance of a place as well as the perceptual feel of that place.

### Objective 4.2.1. Design Features

Encourage ~~designs~~ high quality, well-designed developments that create desirable community spaces, use resources efficiently, maximize site amenities, and preserve important features.

**Policy 4.2.1a. Unique Site Features.** Through the Unified Development Ordinance, continue to encourage or require the retention and incorporation of unique site features into required open space. Unique site features include rock outcroppings, wetlands, streams, steep slopes, cemeteries, and Durham Inventory Sites.

**Policy 4.2.1b. Historic Resources in New Development.** Through the Unified Development Ordinance, ~~require~~ encourage the preservation and/or incorporation of historic resources in the design of new development.

**Policy 4.2.1c. Open Space in New Development.** Through the Unified Development Ordinance, continue to require new developments to provide and maintain open space. Create standards for the amount and character of open space for each Tier. Open space requirements shall range from a small amount in the Downtown Tier to a significant amount in the Rural Tier. Mixed use districts should provide specific open space parameters.

**Policy 4.2.1d. Specimen Trees Preservation.** Through the Unified Development Ordinance, require the preservation of

perimeter specimen trees in required project boundary buffers and incentivize the preservation of specimen trees in other areas~~other desirable trees in the buffers in the Suburban and Rural Tiers by allowing variable buffer widths.~~

**Policy 4.2.1e. Public Art.** ~~The Appearance Commission and the City County Planning Department~~ Durham Cultural Arts Board shall explore how to encourage the incorporation of public art in new development projects, particularly in the Downtown and Compact Neighborhood Tiers.

**Policy 4.2.1f Mixed Use Development Design Criteria.** ~~Through the Unified Development Ordinance,~~ shall provide design establish criteria for Mixed Use Development in order to provide more visual appeal, to ensure integration of uses, and to ensure a compatible design theme throughout the development.

**Policy 4.2.1f. Sustainability.** Through the Unified Development Ordinance, encourage development to incorporate best practices in sustainability features to ensure quality design.

#### Objective 4.2.2. Attractive Residential Development

Encourage attractive and varied residential development throughout the community.

**Policy 4.2.2a. Varied Housing in New Development.** Through the Unified Development Ordinance, continue to provide variability of lot size and allow a variety of housing types and styles in new residential developments to avoid monotony.

**Policy 4.2.2b. Garage Placement.** Through the Unified Development Ordinance, continue to provide opportunities to vary the location, setback, and orientation of residential garages to avoid prominent and repetitious garage placement.

#### Objective 4.2.3. Attractive Nonresidential Development

Incorporate attractive nonresidential development into the existing community character, ensuring that it is made an integral and appealing part of the built environment.

**Policy 4.2.3a. ~~Strip-Commercial Development Design.~~** Through the Unified Development Ordinance, ~~prohibit discourage auto-oriented strip commercial development in the Downtown, Urban, and Compact Neighborhood Tiers and instead encourage commercial “nodes” with appropriately designed internal connections.~~ Develop design standards to limit expansive parking lots in front of strip commercial development ~~in the Suburban Tier.~~ (See Policies 2.2.2e, Suburban Tier Commercial Development and 2.2.3d, Urban Tier Commercial Development.)

**Hardscape** Hardscape is all non-landscaped areas, usually treated with materials such as stone, brick, concrete or asphalt.

**Policy 4.2.3b. Nonresidential Signage.** Through the Unified Development Ordinance, develop different design standards for attractive nonresidential signage appropriate to each development Tier. Signs within projects in the Suburban and Rural Tiers shall be compatible in appearance, while signs in the Downtown, Urban, and Compact Neighborhood Tiers shall be allowed greater variety and flexibility in their design.

**Policy 4.2.3c. City and County Government Facility Standards.** Require all City, and County, and Durham Public Schools government facilities to meet the design standards set for private development. ~~This includes Durham Public School facilities except when such standards conflict with State requirements.~~

**Policy 4.2.3d. Nonresidential Maintenance Standards.** The Governing Bodies shall establish a “nonresidential code” to set maintenance standards for nonresidential development, which at a minimum cover buildings, parking lot surfacing, landscaping, and lighting.

**Objective 4.2.4. Attractive and Efficient Parking**

Encourage the design of attractive and efficient parking solutions, which are visually appealing, safe, and easy to use by both pedestrians and motorists.

**Policy 4.2.4a. Parking Design Standards.** The City-County Planning Department, in conjunction with the City Transportation Department, shall review, revise, and continue to enforce design standards in order to encourage the provision of well designed, efficient, and attractive parking facilities in connection with new development projects. Explore limiting street frontages, increasing landscaping, requiring pedestrian walkways throughout parking areas, and encouraging that large lots be designed as a series of smaller lots.

**Policy 4.2.4b. Parking Requirements.** Through the Unified Development Ordinance, redefine parking standards in all Tiers ~~and eliminate compact car parking requirements.~~ Explore opportunities for shared parking.

**Policy 4.2.4c. On-Street Parking.** Through the Unified Development Ordinance, provide for on-street parking to count toward required minimum parking requirements in the Suburban, ~~Downtown,~~ Urban, and Compact Neighborhood Tiers, and encourage the provision of on-street parking in the Downtown Tier, in order to minimize the size of lots and garages, maximize access, and provide additional street activity. Attractive on-street parking can be achieved through landscaped

or hardscape bump-outs that break up lengthy street parking, shade trees and decorative lighting along the street, and decorative paving for the parking lanes.

**Policy 4.2.4d. Structured Parking Design.** Through the Unified Development Ordinance, require street front parking structures to be architecturally compatible with the surrounding area's character. Require that parking structures be designed to include present or future street level retail or office space.

**Policy 4.2.4e. Structured Parking Incentives.** The City Office of Economic and Workforce Development and the City-County Planning Department shall work with various entities, including the private sector, to explore options for incentives to encourage parking in structures rather than surface lots in the Downtown, Urban, and Compact Neighborhood Tiers.

**Policy 4.2.4f. Alternative Vehicle Program Incentives.** Through the Unified Development Ordinance, the City-County Planning Department, in conjunction with the City Department of Transportation, shall develop an incentive program for developments that establish car-sharing programs utilizing hybrid or electric vehicles and which incorporate electric car charging stations.

~~**Policy 4.2.4e. Retroactive Parking Lot Landscaping.** The Durham City-County Appearance Commission shall explore opportunities to retrofit existing commercial parking lots with additional landscaping.~~

#### Objective 4.2.5. High Performance Design

Encourage new construction that uses high performance design, including energy and water efficient design, minimizing construction waste; and use of renewable, recycled or reused building materials.

**Policy 4.2.5a. Design of Public Buildings.** In the design of public buildings, the City and County shall require the incorporation of environmentally responsible building practices through compliance with *LEED™ (Leadership in Energy and Environmental Design)* or the Triangle J Council of Governments' (TJCOG) *High Performance Guidelines*.

**Policy 4.2.5b. Recognition of Private Sector Efforts.** The Environmental Affairs Board shall identify and encourage recognition of private sector examples of high performance design by publicizing compliance with *LEED™ (Leadership in Energy and Environmental Design)* or ~~the Triangle J Council of Governments' (TJCOG) High Performance Guidelines~~ other high-performance guidelines.

**Policy 4.2.5c. Daylighting in Schools.** In order to maximize student performance, designs for new schools and major school

renovations shall incorporate daylighting techniques daylight 75% of classrooms and core learning spaces. (see Policy 11.2.3c, Daylighting.)

**Policy 4.2.5d. Health and Environment.** Through the Unified Development Ordinance, encourage or incentivize design features that increase the use of solar power or wind power, reduce energy consumption, improve air or water quality, increase food security through local agriculture, or otherwise enhance the health of citizens and the environment.

### Goal 4.3, Contextual Design

Encourage development that is designed to be conscious of and sensitive to its surroundings. Contextual design considers the setting as much as the project itself, is applicable in a variety of areas and situations, and should guide any development.

#### Objective 4.3.1. Protecting Rural Character

Identify, protect, and reinforce the character of Durham's rural areas, and recognize and protect the unique aesthetic qualities of scenic roadways and rural vistas.

**Policy 4.3.1a. Rural Village Design Guidelines.** ~~By 2005, the~~ City-County Planning Department shall ~~establish~~ develop village design guidelines to protect the character of Durham's rural villages, Bahama and Rougemont, by encouraging appropriate and compatible infill and development design. (See Policies 2.2.1e, Rural Villages, 2.5.3c, Rural Village Plans, and 5.1.2d, Historic Rural Villages.)

**Policy 4.3.1b. Clustered Development.** Through the Unified Development Ordinance and site design guidelines, provide opportunities for clustered development in order to preserve farmland, open spaces, historic resources, views and vistas, and other elements of Durham's rural character.

**Policy 4.3.1c. Scenic Roads Identification.** The City-County Planning Department, in conjunction with the ~~Appearance~~ Durham Open Space and Trails Commission, shall identify scenic rural roads that are not currently designated as NC Scenic Byways, and develop proposals to preserve native and natural vegetation and discourage invasive species along those roads.

**Policy 4.3.1d. Scenic Vista Preservation.** Through the Unified Development Ordinance, protect scenic vistas through viewshed protection measures, such as expanded rural frontage setback requirements.

**A Viewshed** The viewshed is the portion of the landscape that is visible from the roadway or a certain point.

**Infill** ~~Infill~~ is development of vacant land, usually individual lots or leftover properties, within areas that are already largely developed.

**Policy 4.3.1e. NC Scenic Byways.** Through the Unified Development Ordinance, protect Durham’s Scenic Byways, through viewshed protection measures such as expanded rural frontage setback requirements. See Map 4-1, Scenic Byways.

### Objective 4.3.2. Compatible Infill

Preserve the character and integrity of existing viable neighborhoods by promoting compatible urban and suburban infill.

**Policy 4.3.2a. Infill Development Standards.** Through the Unified Development Ordinance, encourage and promote compatible residential and non-residential infill housing on vacant or under-utilized property within ~~residentially~~ developed portions of the community to reinforce the existing ~~residential~~ character. Include provisions for contextual design of both residential and nonresidential infill projects in the ~~Downtown,~~ Urban, and Compact Neighborhood Tiers. Encourage adaptive reuse of existing buildings. (see Policy 2.3.4d, Infill Development Standards)

**Policy 4.3.2b. Traditional Design Elements.** To protect the character of existing neighborhoods, the City-County Planning Department shall, through the Unified Development Ordinance, ~~maintain the ability to establish shall include provisions for a Neighborhood Protection Overlay Districts. The District shall require in new construction the use of site and building design elements that are common in existing development in the neighborhood.~~ These could include building materials, rooflines, scale, fenestration rhythm and architectural details.

### Objective 4.3.3. Appropriate ~~Nonresidential~~ Design

Ensure that the design of ~~nonresidential~~ development is appropriate and compatible with its surroundings, acting as a visual and functional asset to nearby residential areas, and reinforcing the existing community character.

**Policy 4.3.3a. Nonresidential Design Standards.** Through the Unified Development Ordinance, establish design standards for new nonresidential development in the Suburban Tier.

**Policy 4.3.3b. Standards for School Site Sizes.** The Durham Public Schools shall establish alternative standards for the size of elementary, middle and high school sites appropriate to each Tier. (See Policy 11.2.2e, Standards for School Site Sizes.)

**Policy 4.3.3c. Retrofit Strip Development.** Through the Unified Development Ordinance, develop incentives to encourage the retrofitting of strip development and aging and vacant shopping centers into pedestrian-friendly mixed use centers. (see Policy 2.3.1e, Retrofit Strip Development).

**Goal 4.4, Roadway Image**

Project an attractive community image along Durham’s roadways. Roadway appearance is a critical component of community character, unifying areas, acting as the foreground for developments, providing views, and even functioning as a series of outdoor rooms. Roadway image sets the scene for the community’s built environment.

**Objective 4.4.1. Streetscape Appearance**

Enhance the general appearance, street tree canopy coverage, and unique visual character of Durham’s streetscapes. Create an attractive visual image along major corridors and around prominent entryways. Design streets to be compatible with green infrastructure while maintaining the character of the area they serve and including a Complete Streets policy approach that integrates bicycle and pedestrian facilities.

~~**Policy 4.4.1a. Corridor Plans.** The Planning Department and the Appearance Commission shall prepare corridor plans to improve the function and appearance of major roadways into and through Durham. Corridor plans shall recommend appropriate land uses, design standards, development controls, landscaping, signage regulation, access management strategies, public facilities capital improvements, underground utilities and/or other measures. Consideration shall be given to the following roadway corridors, as shown on Map 4-2, Proposed Corridor Plans.~~

- ~~iv. Duke Street, from I-85 to Roxboro Road;~~
  - ~~v. Guess Road, from Club Boulevard to the Eno River;~~
  - ~~vi. Hillsborough Road, from Fulton Street to Cole Mill Road;~~
  - ~~vii. Roxboro Road, from Duke Street to Milton Road;~~
  - ~~viii. NC 98, from US 70 Bypass to Lynn Road;~~
  - ~~ix. US 70 from NC 98 to the Wake County line;~~
  - ~~x. Martin Luther King, Jr. Parkway, from University Drive to NC 55;~~
  - ~~xi. NC 54, from the Orange County line to the Wake County line;~~
  - ~~xii. NC 55, from the NC 147 to the Wake County line;~~
  - ~~xiii. Fayetteville Street from NC 147 to Renaissance Parkway; and~~
  - ~~xiv. US 15-501, from Orange County to University Blvd.~~
- ~~(See Policy 2.3.6b. Corridor Plans.)~~

**The Streetscape**  
Streetscape is the space in the public right-of-way between the buildings on either side of the street. It may include the sidewalk, streetlights, street trees, landscape strip, and street furniture.

**Policy 4.4.1a. Tier Specific Streetscape Standards.** The City-County Planning Department, in conjunction with the City Transportation Department, the Urban Forestry Division of the City General Services Department, and the City Public Works

~~Department, shall develop streetscape—several street section designs standards—for each Tier that set up or reinforce themes appropriate to those areas and ensure long-term viability of and maximum benefits from landscape material. Street tree locations that range from planting details that feature large tree lawn setbacks in the Rural Tier, medium tree lawn setbacks in the Suburban and Compact Neighborhood Tiers, and augmented soil volume details to small or no setbacks in the Downtown and Urban Tiers shall be a part of the standards.~~

**Policy 4.4.1b. Sidewalk Requirements.** Through the Unified Development Ordinance, maintain tier specific sidewalk requirements ~~sidewalks on both sides of all streets (public or private) in the Downtown, Urban, and Compact Neighborhood Tiers. In the Suburban Tier, require sidewalks on both sides of streets serving medium and high intensity development and on one side of all streets (public or private) serving low intensity development.~~ The Unified Development Ordinance shall and continue to allow alternative pedestrian networks.

~~**Policy 4.4.1c. Wide Sidewalks.** Through the Unified Development Ordinance, require a minimum of eight-foot wide sidewalks for all development in the Downtown Tier, and for nonresidential development in the Urban and Compact Neighborhood Tiers, with exceptions designated in the Unified Development Ordinance.~~

**Policy 4.4.1c. Pedestrian and Cyclist Mobility.** Through the Unified Development Ordinance, make walking easy by requiring internal pedestrian walkways on sites with multiple buildings, courtyards, or other exterior on-site shared spaces. The Unified Development Ordinance shall require bicycle and pedestrian lanes to connect cul-de-sacs and to provide access to open space areas.

**Policy 4.4.1d. Pedestrian Amenities.** Through the Unified Development Ordinance, require pedestrian amenities on streets and in open space in the Downtown, Urban and Compact Neighborhood Tiers, and in mixed-use developments in the Suburban Tier. Amenities may include seating, waste receptacles, information kiosks, shaded areas, water features and landscaping.

**Policy 4.4.1e. Buried Utility Lines.** The City-County Planning Department shall continue to require the underground burial of utility lines in new subdivisions, and ~~look for ways to retrofit them~~ encourage retrofitting in other areas.

~~**Policy 4.4.1f. Consolidated Utilities.** The City-County Planning Transportation Department and City Public Works Department shall explore opportunities to consolidate utilities and pole-~~

mounted elements to minimize the visual clutter along the street in the Downtown and Compact Neighborhood Tiers. ~~Durham shall seek legislative authority and investigate the possibility of establishing utility districts, to include key gateways, Historic Districts, and Neighborhood Protection Overlay Districts.~~

**Policy 4.4.1g. Major Transportation Corridor Overlay District.**

The City-County Planning Department shall ~~propose applying~~ continue to apply the Major Transportation Corridor (MTC) overlay district along specific segments of major roads, such as I-85, NC 147, East End Connector, US 15/501, and NC 54.

**Policy 4.4.1h. Gateway Plans.** The City-County Planning Department, ~~in conjunction with the Appearance Commission,~~ shall identify key gateways into and within the Durham community and shall prepare plans, including design guidelines, to create focal points and enhance their appearance. Consideration shall be given to the following gateway locations, ~~as shown on Map 4-3, Proposed Gateway Plans:~~

- i. I-85 and NC 147;
- ii. NC 147 and Briggs Avenue;
- iii. I-40 and US 15-501;
- iv. I-85 and Duke Street;
- v. ~~Chapel Hill Street and Pettigrew Street;~~
- vi. ~~v.~~ US 70 and Page Road;
- vii. ~~vi.~~ Old Five Points;
- viii. ~~vii.~~ Roxboro Road and Pettigrew Street;
- ix. ~~viii.~~ I-40 and I-540;
- x. ~~ix.~~ Gregson Street and Morgan Street; and
- xi. ~~x.~~ I-85 and Falls Lake.

**Policy 4.4.1i. Central Durham Gateway Plan.** The City General Services Department, in conjunction with the City Transportation Department and the City-County Planning Department, shall implement the adopted Central Durham Gateway Plan.

**Policy 4.4.1j. Urban Tree ~~Replacement~~ Canopy Establishment.** The Urban Forestry Division of the City General Services Roadway Appearance Division of the Public Works Department shall develop a comprehensive plan for ~~street~~ urban tree replacement canopy establishment in the Downtown, Compact Neighborhood, and Urban, and Suburban Tiers in order to reduce air pollution, improve water quality, improve the quality and reduce the quantity of stormwater runoff, ameliorate heat retention, and provide aesthetic benefits to Durham residents. (See Policy 7.1.4c, Tree Canopy)

**Policy 4.4.1k. Wayfinding.** The City General Services Department, in conjunction with other City and County

departments and agencies, shall develop a comprehensive wayfinding plan for Durham.

## Goal 4.5, Compact Neighborhood Design

In the Compact Neighborhood Tier, promote development and design that supports transit and its related uses and activities. Transit supportive design must coordinate the scale of development on the site and pedestrian amenities, and minimize auto dependence.

### Objective 4.5.1. Compact Neighborhood Plans

Plan for and reinforce the transit-oriented nature of development in the Compact Neighborhood Tier through appropriate site and building design.

**Policy 4.5.1a. Compact Neighborhood Plans.** The City-County Planning Department, in conjunction with Triangle Transit and other interested parties, shall develop or participate in the development of Compact Neighborhood Plans, which shall apply the Compact Design zoning district, and its sub-districts, to all Compact Neighborhoods. The City-County Planning Department shall prepare Compact Neighborhood Plans for the areas around regional transit stations. The Compact Neighborhood Plans shall:

- ~~i. Establish distinct design guidelines that recognize the unique characteristics of each area and require compatible development, both internally within the Tier and externally with surrounding development;~~
- ~~ii. Require the incorporation of necessary public facilities to support anticipated private development, possibly including parks, plazas, community use sites and other public facilities;~~
- ~~iii. Establish design standards for attractive transit stops; and~~
- ~~iv. Require the provision of pedestrian and bicycle amenities and the alignment of streets and pedestrian walkways so that the Core Area and transit station are directly accessible by pedestrians.~~

(See Policy 2.2.4e, Compact Neighborhood Plans.)

**Policy 4.5.1b. Compact Neighborhood Zoning.** Compact Neighborhood Plans shall allow each Compact Neighborhood to be assessed and planned as a whole. Once a Compact Neighborhood Plan and Tier-wide re-zoning has been completed, re-zoning of properties within that district should only occur if that property is at the edge of, and removed from, the Tier.

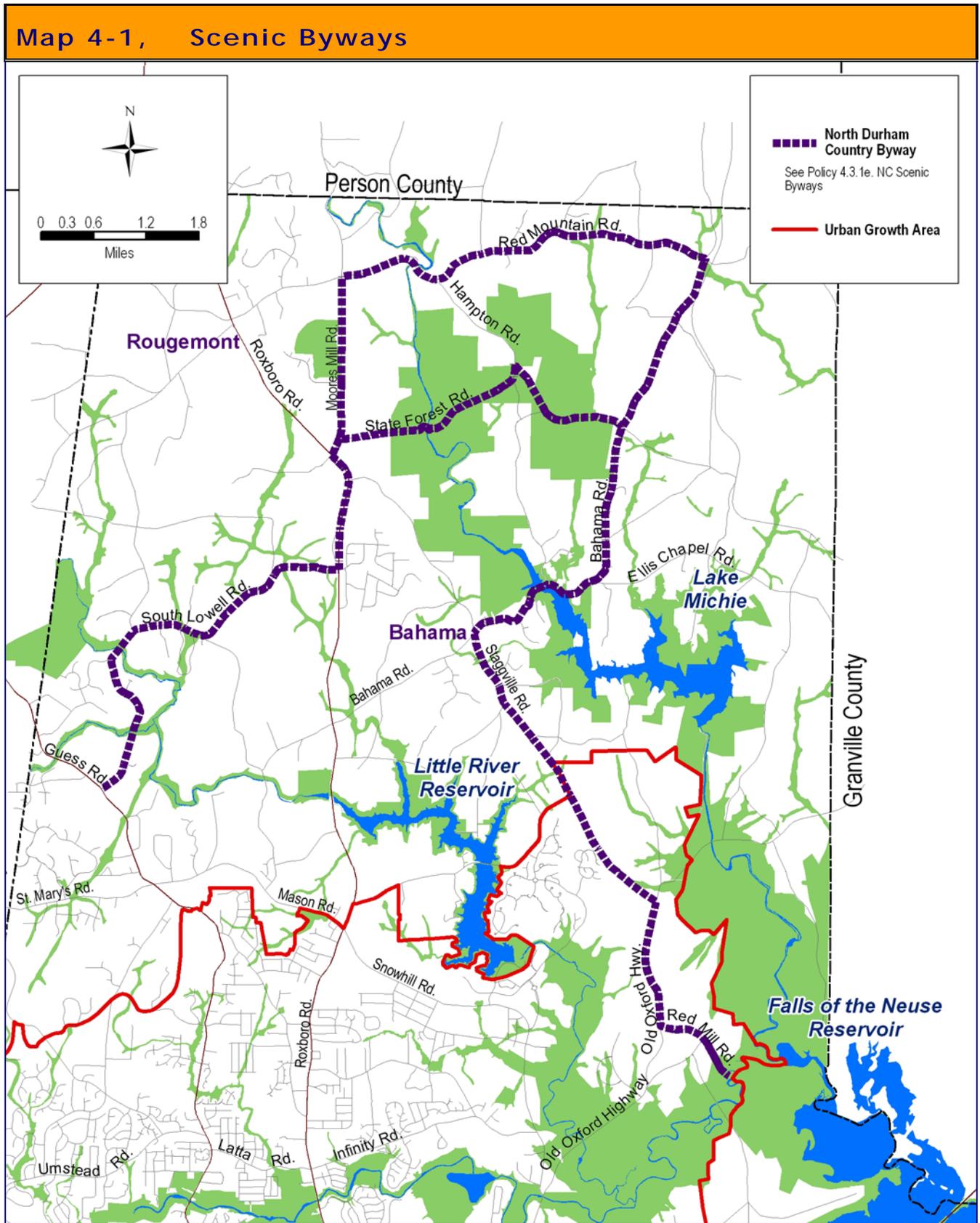
### Objective 4.5.2. Transit-Oriented Parking

Design parking areas in the Compact Neighborhood Tier to support transit-oriented development. De-emphasize private car usage and minimize the visual prominence of parking facilities.

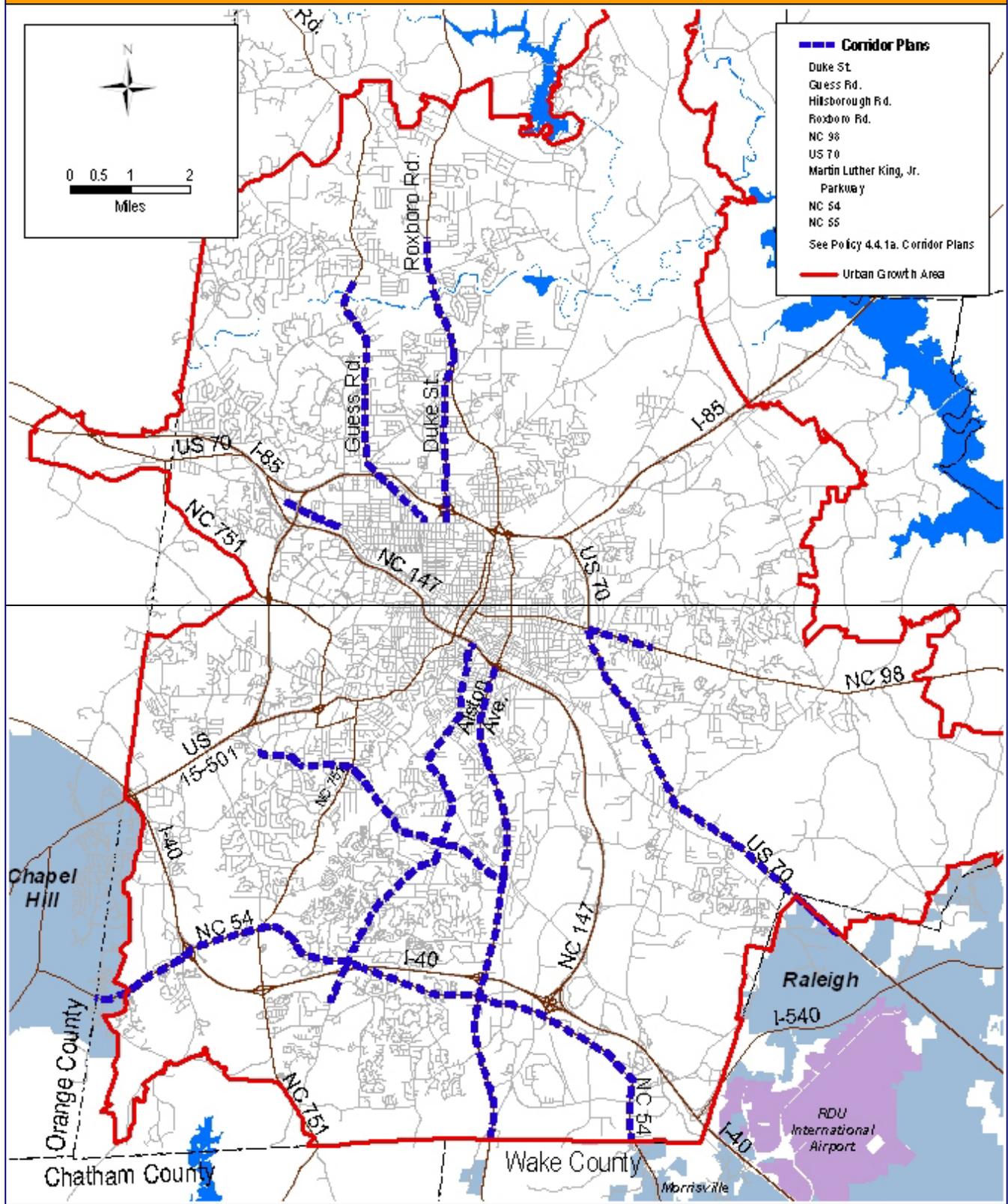
**Policy 4.5.2a. Surface Parking Lot Frontage.** Through the Unified Development Ordinance, require that nonresidential surface parking lots be located in the rear, away from the street, and limit parking lot street frontage to 65 feet in the Compact Neighborhood Tier. Require parking lot street frontages to meet standards to maintain the existing building facade lines of the block.

**Policy 4.5.2b. Compact Neighborhoods Surface Parking.** Through the Unified Development Ordinance, limit the contiguous surface area of parking lots in the Core Areas of Compact Neighborhoods, except for transit supportive park-and-ride lots. As an interim measure, restrict surface parking to locations that could become future building sites.

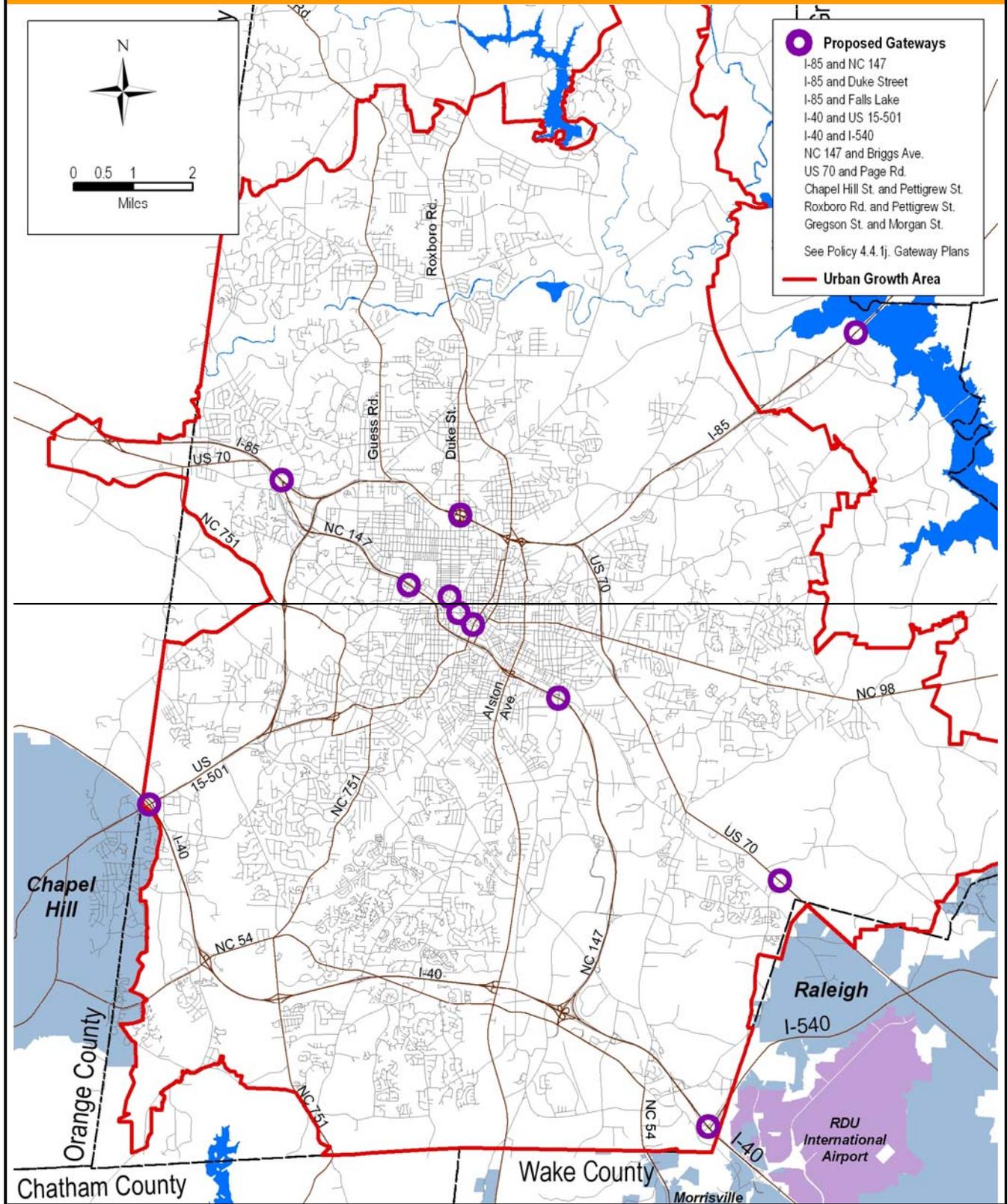
**Policy 4.5.2c. Compact Neighborhoods Core Area Parking.** In Core Areas of Compact Neighborhoods, the Board of Commissioners and the City Council shall provide for structured parking near transit stations. Provide opportunities for long-term parking close to the transit stations to encourage park-and-ride commuting, and offer limited short-term parking opportunities near retail establishments.



Map 4-2, Proposed Corridor Plans



Map 4-3, Proposed Gateway Plans



## DELETED POLICIES

**Policy 4.2.4e. Retroactive Parking Lot Landscaping.** The Durham City-County Appearance Commission shall explore opportunities to retrofit existing commercial parking lots with additional landscaping.

**Policy 4.4.1a. Corridor Plans.** The Planning Department and the Appearance Commission shall prepare corridor plans to improve the function and appearance of major roadways into and through Durham. Corridor plans shall recommend appropriate land uses, design standards, development controls, landscaping, signage regulation, access management strategies, public facilities capital improvements, underground utilities and/or other measures. Consideration shall be given to the following roadway corridors, as shown on Map 4-2, Proposed Corridor Plans.

- i. Duke Street, from I-85 to Roxboro Road;
- ii. Guess Road, from Club Boulevard to the Eno River;
- iii. Hillsborough Road, from Fulton Street to Cole Mill Road;
- iv. Roxboro Road, from Duke Street to Milton Road;
- v. NC 98, from US 70 Bypass to Lynn Road;
- vi. US 70 from NC 98 to the Wake County line;
- vii. Martin Luther King, Jr. Parkway, from University Drive to NC 55;
- viii. NC 54, from the Orange County line to the Wake County line;
- ix. NC 55, from the NC 147 to the Wake County line;
- x. Fayetteville Street from NC 147 to Renaissance Parkway; and
- xi. US 15-501, from Orange County to University Blvd.

(See Policy 2.3.6b. Corridor Plans.)

**Policy 4.4.1c. Wide Sidewalks.** Through the Unified Development Ordinance, require a minimum of eight-foot wide sidewalks for all development in the Downtown Tier, and for nonresidential development in the Urban and Compact Neighborhood Tiers, with exceptions designated in the Unified Development Ordinance.



Adopted, February 28, 2005  
Updated April 2012

## Durham Comprehensive Plan

# Chapter 5 Historic Preservation Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 5, Historic Preservation Element

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# Historic Preservation Element



*Summary of Issues  
Goal 5.1, Historic  
Preservation*

Durham is a community rich in history. Its heritage of tobacco processing is displayed in the progression of historic industrial buildings in the American Tobacco campus in downtown and the Duke Homestead State Historic Site. Durham’s antebellum history is presented in its older historic homes and the Stagville Preservation Center, another State Historic Site. The Indian Trading Path that traverses the County represents its colonial and pre-colonial history. Excellent examples of preserved downtown commercial buildings and homes in historic neighborhoods testify to Durham’s appreciation of its vernacular architecture.

In the late 1970s through the early 1990’s, the City and County undertook historic architectural inventories throughout their jurisdictions. As a result of the City inventory, *The Durham Architectural and Historic Inventory* was published, and the City initiated nomination to the National Register of Historic Places for thirteen districts and eighteen individual properties. ~~—Today there are eighteen National Register historic districts, representing thousands of historic structures in the City, and thirty-nine individual property listings throughout the City and County.~~

There are ~~over 425~~ numerous historically significant properties identified in the Durham County Architectural Inventory and many of these are potentially eligible National Register properties. The County also has two potential National Register Historic Districts, Bahama and Rougemont. Aside from historic architectural amenities, the State Historic Preservation Office has documented hundreds of archaeological sites in Durham’s jurisdiction; ~~and many of these~~ relate to the Indian Trading Path that traverses through Durham from the northeast and Granville County to Orange County in the west.

## Summary of Issues

- 1. Preservation of Rural Historic Resources.** Durham has a wealth of historic resources in its rural areas. Many historic properties are in particular jeopardy of being overtaken and significantly

altered or destroyed by the impacts of new development. ~~What steps should Durham~~ should take to protect the most vulnerable of its historic resources? ~~How can Durham~~ and marshal the fiscal resources necessary to initiate effective protection actions.?

2. **Urban Density and Historic Neighborhoods.** ~~The~~ Triangle Transit Authority is planning its Regional Rail transit services through the heart of Durham. ~~Four~~ Several of its rail stations ~~along the line~~ are located adjacent to ~~some of~~ historic Durham's most valued ~~historic~~ neighborhoods. Regional transit stations, especially the station in Downtown Durham, will be a major draw for new large-scale development, ~~and~~. How can help Durham attract valuable new higher density transit-oriented development. However, these transit-oriented developments must be appropriately and contextually designed without so that they do not adversely affecting the historic integrity of nearby neighborhoods.?  
~~How can the design of new development minimize its visual impact on surrounding historic and not so historic neighborhoods?~~
3. **Preservation of Archaeological Sites.** Each year across the State, hundreds of archaeological sites are lost due to rural development, construction projects and unscrupulous collectors. While State law protects cemetery sites, other types of archaeological sites are not as protected, especially those on private lands. ~~Which archaeological sites in Durham are the most important to preserve? How can the existence and Durham~~ should implement policies to appropriately integrate importance of archaeological resources ~~be appropriately integrated~~ into Durham's processes for reviewing new development.?
4. **Protecting Historic Travel Corridors.** Remnants of the Indian Trading Path in north Durham and other roadways represent pieces of the historic heritage of Native Americans and early settlers in North Carolina. ~~How can Durham~~ should best highlight the Path and other historic travel corridors, ~~and~~ their importance to the County's heritage, and? ~~What measures can Durham take to protect these travel corridors from the impacts of development and unauthorized disturbance.?~~
5. **Local Historic Landmarks.** The local historic landmark program is intended to identify, protect, and preserve the most noteworthy historic properties within Durham. Durham should identify and protect those resources that are important to the community as a whole and represent the most significant aspects of our history, culture, architecture, and persons.
6. **New Local Historic Districts.** Durham has a wealth of historic resources, many of which have been identified and designated on the National Register of Historic Places, but does not have any local protection in place to assist in the preservation of these

properties. Durham should systematically identify and designate those resources in greatest need of the protection.

## Goal 5.1, Historic Preservation

Provide for the identification, protection and promotion of historic resources as an integral component of quality growth in Durham.

### Objective 5.1.1. Protection of Historic Resources

Identify, record and protect the historically significant sites and areas of Durham County.

**Policy 5.1.1a. Historic Resource Inventories.** Continue to maintain and update inventories of Durham's historic resources.

**Policy 5.1.1b. Historic Resources and Compatible Development.** Promote new development that is compatible with significant historic resources by addressing impacts through the development review process.

**Policy 5.1.1c. Creative Partnerships for Historic Preservation.** The City-County Planning Department and the City Office of Economic and Workforce Development shall develop and use creative partnerships with ~~community organizations~~ private, public and nonprofit partners to preserve and protect historically significant properties.

**Policy 5.1.1d. Historic Property Assistance Programs.** Establish financial assistance programs through various City departments to aid in the restoration of locally protected historic properties, particularly properties that could qualify as demolition by neglect. (See Policy 5.1.5b, Financial Tools for Historic Preservation).

**Policy 5.1.1e. Historic Value of Surplus City and County Property.** The City Property and Facilities Management Department of General Services and the County Engineering Department shall review their inventories of surplus publicly owned properties to identify those with historic values and shall determine appropriate preservation strategies.

**Policy 5.1.1f. Interdepartmental Coordination on Historic Structures.** The City Department of Neighborhood Improvement Services shall consult the City-County Planning Department regarding any potential Minimum Housing Code enforcement actions where the subject property is located within a designated Local Historic District, National Register Historic District, and/or is designated as a Local Historic Landmark. (See Policy 3.6.1g, Interdepartmental Coordination on Historic Structures).

**Policy 5.1.1g. Preventing Demolition of Historic Resources.** Through the Unified Development Ordinance and/or local

legislation, the City-County Planning Department, in conjunction with the Historic Preservation Commission and local preservation stakeholders, shall establish a mechanism to discourage and/or prohibit demolition of significant historic resources in Durham.

**Objective 5.1.2. Historic Districts**

Identify and designate Historic Districts, and allow physical alterations that are consistent with the District’s historic significance.

**Policy 5.1.2a. Existing Local Historic Districts.** Maintain the designation of and continue to implement preservation plans for Durham’s historic districts.:

- i. ~~\_\_\_\_\_ Cleveland Street Historic District;~~
- ii. ~~\_\_\_\_\_ Holloway Street Historic District;~~
- iii. ~~\_\_\_\_\_ Downtown Historic District;~~
- iv. ~~\_\_\_\_\_ Trinity Heights Historic District;~~
- v. ~~\_\_\_\_\_ Fayetteville Street Historic District;~~
- vi. ~~\_\_\_\_\_ Morehead Hill Historic District; and~~
- vii. ~~\_\_\_\_\_ Watts Hillandale Historic District.~~

~~(See Map 5-1, Historic Districts.)~~

~~**Policy 5.1.2b. Historic District Appearance Changes.** The Historic Preservation Commission shall review any proposed changes to the exterior appearance of properties in Historic Districts, and approve the change only if appropriate to the historic character of the District.~~

**Policy 5.1.2b. Potential Historic Districts.** The City-County Planning Department shall continue to identify potential local and/or national historic districts areas of in Durham that are:

- i. Of special significance in terms of their prehistorical, historical, architectural or cultural importance; and
- ii. Possess integrity of design, setting, materials, feeling and association.

~~**Policy 5.1.2c. Designation of Historic Districts.** Upon Governing Body direction or by initiative of property owners, designate historic neighborhoods as Historic Districts. As part of the designation, the City-County Planning Department shall prepare an historic preservation plan tailored to the area. Include in the Plan the historic significance of the area, addressing a preservation strategy tailored to the individual needs of the specific area, and principles and design review criteria for reviewing changes to the exterior appearance of structures in the District.~~

**Policy 5.1.2c. Historic District Land Use Analysis.** The City-County Planning Department shall prepare detailed land use plan updates for all Local Historic Districts to ensure that land use

policy and regulations for the district are consistent with historic patterns and district goals. (See Policy 2.5.3b, Historic District Land Use Analysis.)

**Policy 5.1.2d. Historic Rural Villages.** Investigate the feasibility of the ~~E~~establishment of a local and/or National Register Historic Districts in the villages of Bahama and Rougemont. (See Policies 2.2.1e, Rural Villages and 4.3.1a, Rural Village Design Guidelines.)

**Policy 5.1.2e. Historic District Tree Canopy Preservation.** The City-County Planning Department shall Identify street segments within and between existing Historic Districts with a current or pre-existing canopy of large trees and develop a plan, in conjunction with the Urban Forestry Division of the City Department of General Services, for the systematic replacement of lost or declining trees with appropriately-scaled and urban tolerant tree species.

### Objective 5.1.3. Historic Landmarks

Identify and designate Historic Landmarks, and ~~allow physical review~~ alterations ~~that are~~ to ensure consistency with their historic significance.

**Policy 5.1.3a. ~~Local Existing~~ Historic Landmarks.** Continue to M~~m~~aintain Historic Landmark designations for the following existing Local Historic Landmarks, identify potential historic landmark properties, and designate new Local Historic Landmarks.:

- i. ~~Creighton Hall (Blooming Garden Inn);~~
- ii. ~~Kress Building;~~
- iii. ~~Snow Building;~~
- iv. ~~Clements Building;~~
- v. ~~1915 Commercial Building;~~
- vi. ~~Jourdan House;~~
- vii. ~~C. R. Harris House;~~
- viii. ~~Mangum Wilson Building;~~
- ix. ~~Kronheimer Building;~~
- x. ~~Whitted House;~~
- xi. ~~111 West Main Street Commercial Building;~~
- xii. ~~Hill Building (CCB Building);~~
- xiii. ~~Ephphatha Church Building;~~
- xiv. ~~Leary Coletta House;~~
- xv. ~~Bassett Brown House;~~
- xvi. ~~Dillard House;~~
- xvii. ~~Gamble House;~~
- xviii. ~~Former Fidelity Bank Building;~~
- xix. ~~Former Herald Sun complex;~~
- xx. ~~Old Hill Building;~~
- xxi. ~~Wilson Reinhardt Building;~~
- xxii. ~~Branson Umstead House;~~

- xxiii. — C. C. Thomas House;
- xxiv. — Cobb Toms House;
- xxv. — Percy Reade House;
- xxvi. — Teemark Building;
- xxvii. — B. L. Duke Warehouse;
- xxviii. — Mason Jones House;
- xxix. — Crowell House;
- xxx. — Golden Belt Manufacturing Company Complex;
- xxxi. — Former City Garage Yard and Fire Tower;
- xxxii. — Powe House and Irwin Cottage;
- xxxiii. — Hackney House;
- xxxiv. — Wright House Whitehall Terrace;
- xxxv. — Baldwin Building;
- xxxvi. — Former Durham Library Building;
- xxxvii. — West Village Complex;
- xxxviii. — Former Public Service Building;
- xxxix. — Massey's Chapel;
- xl. — Amed Tilley Farm;
- xli. — Hardscrabble;
- xl.ii. — J. S. Manning House;
- xl.iii. — William and Margaret Lynch House;
- xl.iiii. — Dr. Hickman and Ethel Ray House;
- xl.v. — Mable and G. Frank Warner House;
- xl.vi. — Temple Building;
- xl.vii. — First National Bank Building;
- xl.viii. — Brightleaf Square, Watts and Yuille Warehouses;
- xl.ix. — Former Wright's Machinery Building;
- l. — J. S. Bassett House;
- li. — Evans House;
- lii. — Bullington Warehouse;
- liii. — S. Parks Alexander House;
- liv. — Sessoms-Markham House;
- lv. — Oren Belvin House; and
- lvi. — Former Liggett and Meyers Tobacco Company Complex  
— West Village Expansion;
- lvii. — Plyler Raba House;
- lviii. — Former Palms Restaurant Building;
- lix. — Erwin Square Mill Building; and
- lx. — Grey Building.

(See Map 5-2, Cemeteries and Historic Landmarks.)

**Policy 5.1.3b. Historic Landmark Appearance Changes.** The Historic Preservation Commission shall review any proposed change to the appearance of Historic Landmarks, and approve the change only if appropriate to the historic character of the Landmark.

**Policy 5.1.3b. Tax Deferral for Historic Landmarks.** The Governing Bodies shall continue to provide a tax incentive for designation of Historic Landmarks by ~~considering applying the deferral of a portion of the property taxes on 50 percent of the property's tax value,~~ in accordance with State statutes.

~~**Policy 5.1.3c. Potential Historic Landmarks.** Identify potential historic landmarks as buildings, structures, sites, areas or objects that are:~~

- ~~i. Eligible for or are on the National Register of Historic Places;~~
- ~~ii. Of special significance in terms of prehistorical, historical archeological or cultural history; and~~
- ~~iii. Possess integrity of design setting, materials, feeling and association.~~

~~**Policy 5.1.3d Designation of Historic Landmarks.** Designate, with the owner's consent, identified buildings, structures, sites, areas or objects as historic landmarks. As part of the process, the City-County Planning Department shall identify specifically what elements of the property are included in the designation, such as a building's interior, its exterior, any specific or all outbuildings, other site elements or the entire site.~~

#### **Objective 5.1.4. Community Awareness**

Increase community awareness of, interest in and support for Durham's historic preservation efforts.

##### **Policy 5.1.4a. Historic Preservation Outreach and Education.**

Increase the proactive role of the Durham Historic Preservation Commission and the City-County Planning Department to reach out and educate the general public, developers and government officials about the importance of preservation by developing ordinances and regulations to protect historic resources. The City-County Planning Department shall seek and promote new ways to inform and educate the community about the preservation efforts in Durham, such as creating and updating a historic preservation web page and other publicity opportunities.

**Policy 5.1.4b. Financial Tools for Historic Preservation.** The City Office of Economic and Workforce Development shall create a database of financial tools available for historic preservation.

#### **Objective 5.1.5. Incentives and Funding**

Identify and utilize funding sources and financial incentives to promote historic preservation in Durham.

**Policy 5.1.5a. Certified Local Government Status.** The City-County Planning Department will continue to maintain the City and County status as Certified Local Governments.

**Policy 5.1.5b. Financial Assistance Sources.** The City-County Planning Department shall identify sources of financial assistance, including grants, and apply for financial assistance to assist in preserving and promoting Durham’s historic resources. (See Policy 5.1.1d, Historic Property Assistance Programs.)

**Policy 5.1.5c. Historic Preservation Commission and Funding.** The Historic Preservation Commission shall exercise its authority and expertise to raise funds for historic preservation activities.

### **Objective 5.1.6. Protection of Archaeological Resources**

Identify, record and protect Durham’s identified archaeological resources and cemeteries.

**Policy 5.1.6a. Archaeological Inventory.** The City-County Planning Department and the Historic Preservation Commission shall prepare and maintain an inventory of archeological resources that identifies sites of archeological significance. ~~Utilize with the assistance of the State Historic Preservation Office, the Durham Inventory Review Committee and other sources.~~

**Policy 5.1.6b. Preserving Archaeological Resources.** The City-County Planning Department and the Historic Preservation Commission shall assess the significance of archaeological resources and shall develop criteria and regulations for the protection of the significant archaeological resources. When new development is proposed that affects significant archeological resources, the Unified Development Ordinance shall require that the resources be protected and preserved.

**Policy 5.1.6c. Cemetery Protection.** The City-County Planning Department shall develop and maintain an inventory of cemetery sites in Durham. The City-County Planning Department, through the development review process, shall identify the potential impact of new development proposals on cemetery sites. Working with the Historic Preservation Commission, the City-County Planning Department shall identify appropriate mitigation strategies. (~~See Map 5-2, Cemeteries and Historic Landmarks.~~)

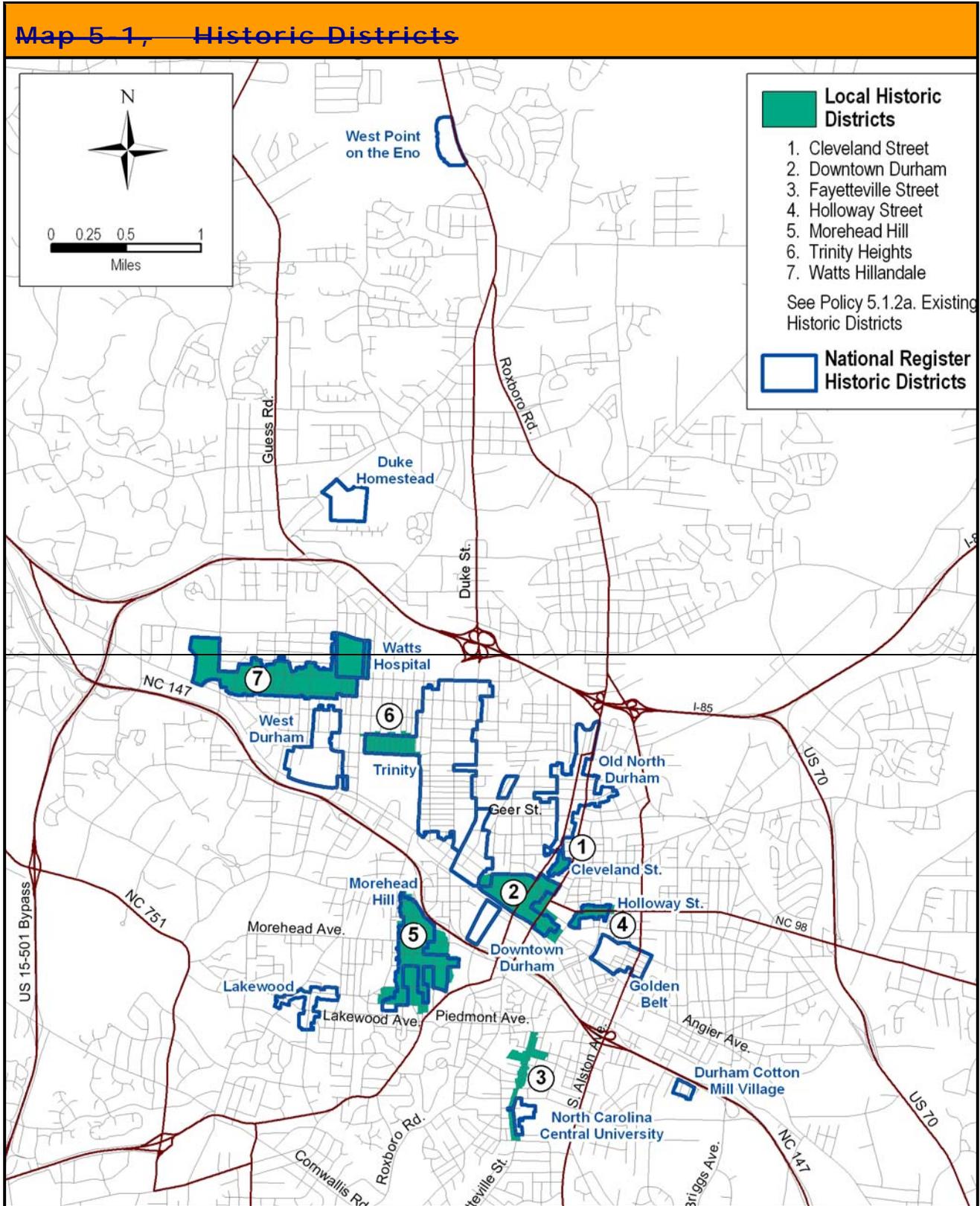
**Policy 5.1.6d. Archeological Resource Education.** The Historic Preservation Commission and City-County Planning Department shall educate public officials, staff and the general public about the importance of archeological sites and cemeteries in Durham, as well as laws regarding them.

### **Objective 5.1.7. Historic Travel Corridors**

Identify, assess and, if appropriate, protect historic travel corridors in Durham, including the Indian Trading Path and Fish Dam Road that traverse north Durham County.

**Policy 5.1.7a. Travel Corridors Resource Inventory and Assessment.** The City-County Planning Department shall conduct an inventory of segments of the Indian Trading Path, Fish Dam Road and other historic travel corridors in Durham to identify historic and archeological resources and assess their historic significance and integrity. As part of this inventory, the City-County Planning Department shall propose actions to protect and, if appropriate, interpret the most important corridors and sites.

**Policy 5.1.7b. Preserving Historic Travel Corridors.** When new development is proposed that affects significant resources in historic travel corridors, the Unified Development Ordinance shall require that the resources be protected and preserved.



## DELETED POLICIES

**Policy 5.1.2b. Historic District Appearance Changes.** The Historic Preservation Commission shall review any proposed changes to the exterior appearance of properties in Historic Districts, and approve the change only if appropriate to the historic character of the District.

**Policy 5.1.2c. Designation of Historic Districts.** Upon Governing Body direction or by initiative of property owners, designate historic neighborhoods as Historic Districts. As part of the designation, the City-County Planning Department shall prepare an historic preservation plan tailored to the area. Include in the Plan the historic significance of the area, addressing a preservation strategy tailored to the individual needs of the specific area, and principles and design review criteria for reviewing changes to the exterior appearance of structures in the District.

**Policy 5.1.3b. Historic Landmark Appearance Changes.** The Historic Preservation Commission shall review any proposed change to the appearance of Historic Landmarks, and approve the change only if appropriate to the historic character of the Landmark.

**Policy 5.1.3c. Potential Historic Landmarks.** Identify potential historic landmarks as buildings, structures, sites, areas or objects that are:

- i. Eligible for or are on the National Register of Historic Places;
- ii. Of special significance in terms of prehistorical, historical archeological or cultural history; and
- iii. Possess integrity of design setting, materials, feeling and association.

**Policy 5.1.3d. Designation of Historic Landmarks.** Designate, with the owner's consent, identified buildings, structures, sites, areas or objects as historic landmarks. As part of the process, the City-County Planning Department shall identify specifically what elements of the property are included in the designation, such as a building's interior, its exterior, any specific or all outbuildings, other site elements or the entire site.

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Adopted, February 28, 2005  
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# Durham Comprehensive Plan

## Chapter 6 Economic Development Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 6, Economic Development Element

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## Economic Development Element



*Summary of Issues  
Goal 1, Economic  
Development*

Durham's economic development goals, objectives and policies will help shape how the City and County will grow in the future. Economic development policies determine where governmental funds will be spent and where job growth will be encouraged, as well as provide avenues for employment and revenue generation for its residents and the creation of tax base for local government. Economic development choices must also be coordinated with Durham's education, transportation, and land use goals to retain a healthy economy, changing over time to keep pace with the changes in the national and global economy. Although many groups contribute to Durham's economic vitality, the lead City agency guiding Durham's economic policies is the Office of Economic and Workforce Development. This agency works in partnership with other public and private agencies to provide assistance to individuals and businesses, to monitor Durham's economic needs, and to coordinate economic development programs.

The Durham economic profile shows positive characteristics. Durham has outperformed the national economy in terms of income and job growth. Durham provides an employment base for the region in large part due to the location of educational institutions and Research Triangle Park within its borders. The employment base in Durham is also strengthened by the presence of burgeoning industries such as healthcare, information technology, biotechnology, and environmental/sustainability technology (green jobs). Despite this optimistic setting, a proactive economic development program is important in maintaining Durham's economic health.

### Summary of Issues

- 1. Coordinating Economic Development and Other Land Use Goals.** Economic growth enhances Durham's overall quality of life. Economic policy choices must be supportive of other adopted City and County goals. The benefits of a healthy economy accrue to Durham's citizens when the economic programs, among other things, revitalize neighborhoods, bring jobs closer to downtown, create jobs, and support transit use and walkable communities.

2. **Poverty Reduction and Job Growth.** While the Durham economy is strong by national standards, not all citizens share in the prosperity. Integrating community development activities with job training programs in Durham's lower income areas will assist in eradicating poverty, improving underdeveloped areas, and ensuring that all residents participate in the economic growth of the region.
3. **Community Vitality and Infrastructure.** Economic developers have found that companies prefer to locate in communities that provide a high quality living environment for their work force. Communities that are distinctive and attractive tend to retain their economic vitality over time. Local universities and distinctive neighborhoods enable Durham to enjoy high levels of technology related employment. This employment sector is knowledge based and typically demands first class educational facilities at all levels.

## Goal 6.1, Economic Development

Increase citizen access to high quality jobs and reduce poverty while increasing Durham's tax base.

### Objective 6.1.1. Balanced Economic Growth

Encourage new business location and existing business expansion that are compatible with Durham's land use plans and policies.

**Policy 6.1.1a. Business Development and Retention.** The Chamber of Commerce or other Durham County designated agent and the City Office of Economic and Workforce Development shall work with other agencies to actively develop and retain businesses for various areas of Durham consistent with land use and transportation plans and infrastructure availability.

**Policy 6.1.1b. Neighborhood and Environmental Impact.** In evaluating economic development proposals, the City and County shall consider the impacts on neighborhoods and environmental protection as well as job and tax base growth.

**Policy 6.1.1c. Economic Base Growth.** The City Office of Economic and Workforce Development and the Chamber of Commerce (or other Durham County designated agent) shall concentrate business development efforts on industries that enhance the existing economy and provide diversity to that economic base.

**Policy 6.1.1d. ~~Convention and Tourism Activities~~ Visitor-Related Economic Development.** The City and County shall support and encourage the efforts of the Convention and Visitors Bureau to expand convention and tourism activities.

**Policy 6.1.1e. Targeted Redevelopment.** The City Office of Economic and Workforce Development and the Chamber of Commerce (or other Durham County designated agent) shall promote and create financial and other incentives for the redevelopment of the Downtown and Compact Neighborhood Tiers, community development areas, and existing commercial areas, considering in particular opportunities for adaptive reuse and for small businesses on infill sites. See Map 6-1, Economic Development Target Areas.

**Policy 6.1.1f. Brownfields Development.** The City Office of Economic and Workforce Development shall assist groups in using and understanding the Brownfields Redevelopment Program to encourage redevelopment of areas with real and/or perceived environmental contamination.

**Policy 6.1.1g. Agricultural Preservation.** The Cooperative Extension Service, the Soil and Water Conservation District, and the Farmland Preservation Board shall work with neighboring jurisdictions to explore opportunities for agricultural preservation and niche farming.

**Policy 6.1.1h. Target Area Evaluation.** The City Office of Economic and Workforce Development and the City-County Planning Department shall reassess at least every five years the established community development target areas for purposes of targeting economic development incentives.

### **Objective 6.1.2. Support Minority- and Women-Owned Business Enterprises**

Increase support for minority- and women-owned businesses.

**Policy 6.1.2a. Plan to Nurture Minority- and Women-Owned Businesses.** The City Office of Economic and Workforce Development and the City Department of Equal Opportunity/Equity Assurance shall work with minority and women entrepreneurs to ensure that they are aware of economic development programs offered through the City by developing and implementing a plan to nurture minority and women business enterprises in the City.

### **Objective 6.1.3. Poverty Reduction**

Encourage capital investment, public improvements, and job training in low-income areas.

**Policy 6.1.3a. Financial Incentives.** The City, through the Office of Economic and Workforce Development, and Durham County shall continue economic investment activities that provide financial incentives for business expansion and development that creates livable wage jobs throughout Durham in low income neighborhoods and serve to significantly expand the city and

county tax base in order to provide for financial sustainability for both units of local government. (See Map 6-1, Community Development Areas.)

#### Objective 6.1.4. Education and Training

Work with local educational institutions to ensure that Durham has a well-educated work force available to meet the needs of a growing economy.

**Policy 6.1.4a. Vocational Education and Customized Training.**

The City and County shall work with Durham Technical Community College, four-year universities, private proprietary vocational training providers, and Durham Public Schools to provide appropriate vocational education and customized training to enable citizens to take advantage of opportunities for employment.

**Policy 6.1.4b. Local Employers Training Needs.** The Workforce Development Board and City Office of Economic and Workforce Development shall work with local employers to identify their needs and assist in the communication of those needs to educational institutions to ensure a better-prepared workforce.

**Policy 6.1.4c. Bilingual Education and Training.** The Workforce Development Board and City Office of Economic and Workforce Development shall encourage bilingual education and training in recognition of the increased influence of Durham's Hispanic and Latino community.

**Policy 6.1.4d. State of the Durham Economy.** The City Office of Economic and Workforce Development shall continue to work with economic development partners to plan and hold the annual ~~sponsor the Annual~~ State of the Durham Economy presentation to educate the citizens and the business community about Durham's economic development opportunities.

#### Objective 6.1.5. Planning for Economic Development

Provide land use plans and development review processes that maintain a quality community, and sustain economic growth.

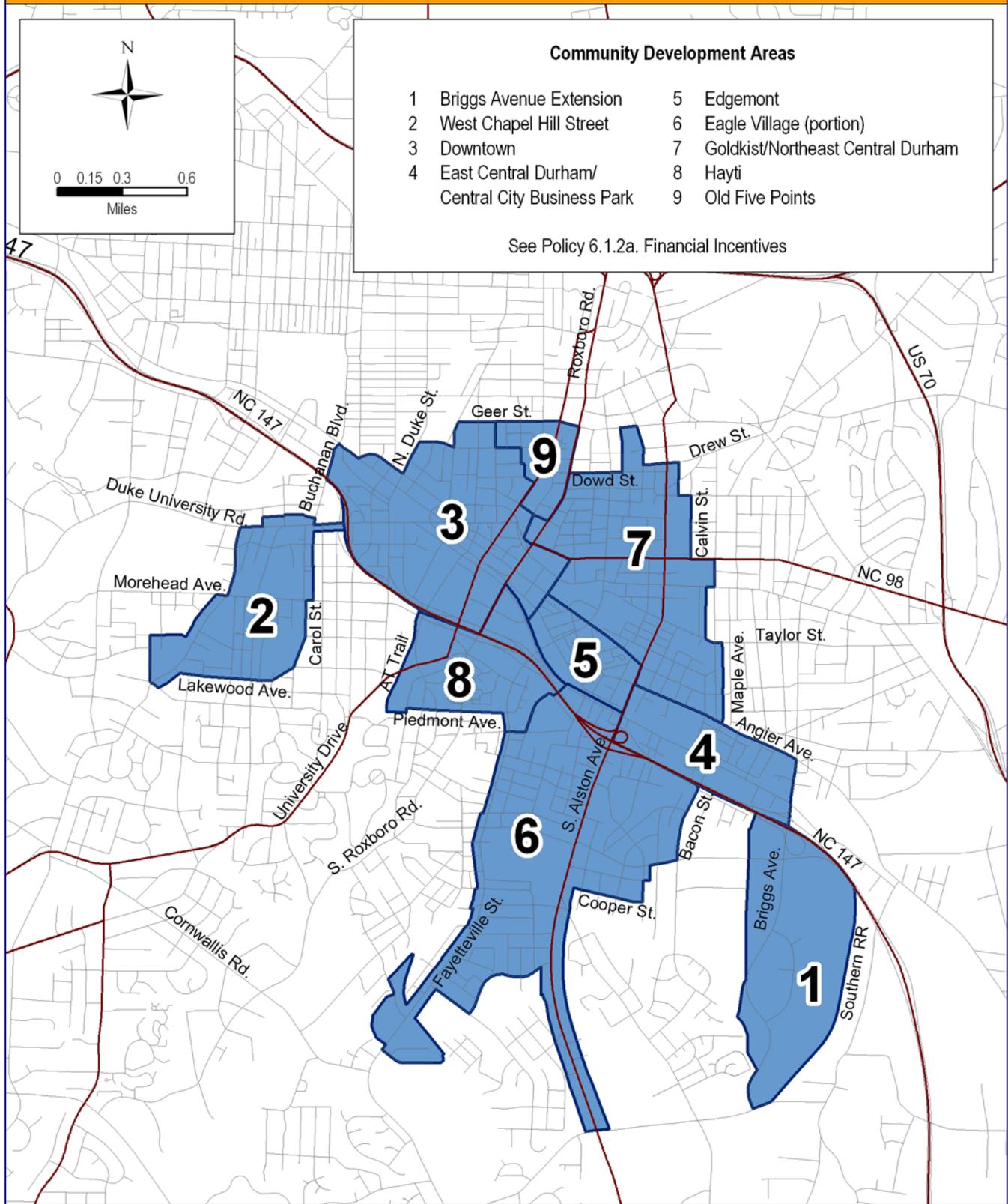
**Policy 6.1.5a. Infrastructure Maintenance and Expansion.** All appropriate City and County Departments shall program funding for the maintenance and expansion of infrastructure necessary for business attraction in all areas of the community. See Chapter 16, Capital Improvements Element.

**Policy 6.1.5b. Development Review Procedures.** The City-County Planning Department and all other development-related departments shall regularly evaluate development review procedures to ensure that they are efficient. Inefficient programs and procedures shall be modified consistent with Smart Growth

principles to provide certainty in the process with review and approval at the lowest possible level.

**Policy 6.1.5c. Land Use Location and Availability.** The City-County Planning Department, in conjunction with the City Office of Economic and Workforce Development and the Chamber of Commerce, shall regularly evaluate the demand for land designated for economic activity, and the availability and location of land suited for economic development activities, and opportunities for revitalization and reuse. (See Policy 2.5.3a, Study of Industrial Land.)

### Map 6-1, Community Development Areas





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## Durham Comprehensive Plan

# Chapter 7 Conservation and Environment Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 7, Conservation and Environment Element

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# Conservation and Environment Element



The conservation of natural resources and protection of valuable open spaces are important in maintaining and improving the high quality of life that Durham residents desire. The community’s natural resources and open spaces can be viewed as its “green infrastructure.” The purpose of the Conservation and Environment Element of the Durham Comprehensive Plan is to promote the responsible use, protection and restoration of Durham County’s green infrastructure. This Element contains goals, objectives and policies necessary for their long term maintenance and protection. They focus on water quality, air quality, floodplain protection, energy conservation, important habitats and rare species, open space planning, and farmland preservation.

## Summary of Issues

1. **Protection of Natural Features.** New development can significantly impact natural features, such as floodplains, streams, steep slope areas, wetlands and natural vegetation. Land use policies and regulations should try to strike a balance between achieving broader community objectives of environmental protection and protecting ecosystem integrity while recognizing the rights of private property owners. ~~Do present development regulations regarding the protection of environmentally sensitive areas strike the right balance for Durham?~~
2. **Protection of Natural Inventory Sites.** Typical of many communities, Durham faces the problem of how to accommodate new development while protecting its natural heritage. Many of the Natural Inventory sites are protected: at least partially in public or institutional ownership and managed as natural areas, forestlands or wildlife habitat. How can Durham should promote regulations that accommodate new development while protecting Inventory sites? ~~What are the best techniques for preserving Inventory sites? Should they be regulated or purchased, and if purchased, how much public access is appropriate?~~
3. **Water Supply and the Vulnerability of Aquatic Species.** Durham faces two potentially conflicting public objectives. The City needs

to develop a new and cost-effective raw water supply to address anticipated future needs. At the same time, Durham ~~may also~~ wants to take steps to prevent degradation of the habitat of these important aquatic species. ~~How can Durham develop water supplies and preserve these important wildlife habitat areas? Can other water supply options satisfy Durham's water demand with less impact on habitats?~~

4. **~~Future~~ Air Quality.** ~~Poor~~ Degraded air quality resulting from increases in ozone, particulate matter, and other pollutants can be anticipated due to increases in population, resulting in additional vehicle miles traveled. This can have an impact on Durham's quality of life for many residents who exercise or have sensitivity to air quality. Poor air quality can also affect Durham's ability to recruit new businesses. ~~How can Durham~~ must identify ways to best address the complicated air quality issues while not stifling economic growth and development. ~~resulting from increased auto emissions? Should Durham develop a coordinated policy to address urban heat islands and greenhouse gas emissions?~~
5. **Protection of Open Space.** Durham residents have consistently expressed a desire to protect valuable open spaces. ~~How can Durham should take steps to best-identify important open spaces to protect, both within and outside of the City? What actions can local governments and private property owners take to protect valuable open spaces from negative impacts of development? Perhaps as important, what sources of funds, both traditional and new, can be tapped to continue to and implement Durham's open space preservation programs? that preserve environmentally important green spaces and create valuable, multi-purpose open spaces.~~
6. **Farmland and Development Pressures.** The high value of suburban development ~~Farming~~ in Durham places great development pressure on existing farms ~~faces continued pressure due to the value of land for suburban development and the lowered economic returns for farming.~~ What steps should Durham take to protect farmland in the County? Where should farmland protection efforts be targeted? What techniques will prove to be the most effective for Durham to protect farmland? Durham should put in place policies that protect farmland to enhance diversity of land uses, preserve the rural landscape and lifestyle, and minimize costs for infrastructure extension.

### Goal 7.1, Natural Environment

Provide a high quality natural environment. Minimize undesirable effects from development on air quality, water

quality, and natural resources. Protect and preserve floodplains, natural inventory sites, and open space.

### Objective 7.1.1. Monitoring Environmental Quality

Monitor the quality of Durham's natural environment in order to identify trends in environmental quality, provide a basis for assessing possible actions to improve environmental quality, and publish the results on a regular basis in order to educate local officials and the general public about environmental issues.

**Policy 7.1.1a. Environmental Indicators.** The City-County Planning Department, City and County Storm Water Services, and the City Department of Water Management, in conjunction with other City and County Departments, shall identify and publish a set of environmental indicators as proposed by the ~~Environmental Affairs Board~~ City-County Sustainability Office to establish a baseline and regularly monitor and assess changes in the quality of Durham's natural environment.

### Objective 7.1.2. Water Quality

Minimize the impacts of development on water quality and enhance the present water quality in Durham's streams.

**Policy 7.1.2a. Sedimentation and Erosion Control.** The County Engineering and Environmental Services Department shall continue to regulate land-disturbing activity to control accelerated erosion and sedimentation in order to prevent the pollution of water and other damage to lakes, ~~rivers, streams~~ watercourses, and other public and private property. No person shall initiate any land-disturbing activity that uncovers more than ~~one acre~~ 20,000 square feet without having an erosion control plan approved by the Sedimentation and Erosion Control Office that:

- i. Identifies critical areas on the site subject to severe erosion and offsite areas vulnerable to damage;
- ii. Limits time of exposure;
- iii. Limits exposed areas;
- iv. Controls surface water originating upgrade of the exposed areas;
- v. Controls sedimentation; and
- vi. Manages stormwater runoff to control the velocity at the point of discharge to minimize accelerated erosion of the site and increased sedimentation of the stream.

(See Policy 9.4.4a, Sedimentation and Erosion Control.)

**Policy 7.1.2b. Sedimentation and Erosion Control and Rare Mussels Habitat.** The County Engineering and Environmental Services Department, ~~in conjunction with the Environmental Affairs Board~~, shall ~~research and propose changes to the~~

~~sedimentation and erosion control requirements to establish~~ shall continue to enforce a level of sedimentation control that will protect the water quality and the habitat of rare mussel species in the Little River, the Flat River, and the Eno River watersheds.

**Policy 7.1.2c. Stream Buffers.** Through the Unified Development Ordinance, continue to require undisturbed, naturally vegetated buffers of at least 50 feet on land adjacent to intermittent and perennial streams and prohibit most development activities in order to protect water quality. Through the Unified Development Ordinance, limit the ability to utilize land in stream buffers to meet minimum lot size requirements, and allow development and platting of lots in stream buffers only in limited, strictly regulated, and special conditions. (See Policy 9.1.4f. Stream Buffers.)

**Low Impact Development**  
Low impact development (LID) refers to an ecologically-friendly approach to site development and stormwater management. LID aims to preserve open space and minimize land disturbance; protect drainage ways, vegetation, soils, and sensitive areas; re-examine the use and sizing of traditional site infrastructure and customize site design to each site; incorporate wetlands, stream corridors and mature forests as site design elements; and decentralize and micromanage stormwater at its source.

**Policy 7.1.2d. Low Impact Development.** In order to reduce the impact of development on stream water quality, the City Public Works Department and the County Engineering Department shall research and propose changes to the City and County Stormwater Ordinances to encourage low impact development (LID) design.

**Policy 7.1.2e. Permanent Buffer Protection.** The City Public Works Department, the Soil and Water Conservation District and the County Engineering and Environmental Services Department shall seek grant funds from the NC Clean Water Management Trust Fund, the Ecosystem Enhancement Program and other ~~funding sources to fund programs to purchase land and/or buffered easements or accept donated buffered easements~~ in order to increase the amount of stream buffer areas in permanent protection.

**Policy 7.1.2f. Wetland Restoration** The City Public Works Department, the Soil and Water Conservation District and the County Engineering and Environmental Services Department shall work in conjunction with the NC Ecosystem Enhancement Program, the United States Department of Agriculture and other funding sources to explore opportunities for stream and wetland restoration projects on streams in Durham.

**Policy 7.1.2g. Stream ~~Bank Vegetation~~ Restoration.** In order to protect water quality and stream habitat, the City Public Works Department and the Soil and Water Conservation District, the State of North Carolina, and other agencies, in conjunction with local nonprofit organizations, shall research, propose, and implement programs to restore streams and natural stream bank vegetation ~~and in the floodplain habitat in~~ of Durham.

**Policy 7.1.2h. Collaborative Partnerships for Water Quality.** The City-County Planning Department, the City Public Works Department, the Soil and Water Conservation District and the County Engineering and Environmental Services Department shall

collaborate with and support the efforts of local nonprofit organizations, such as ~~Ellerbe Creek Watershed Association and the Friends of South Ellerbe Creek~~, to improve stream water quality.

**Policy 7.1.2i. Rainwater Capture.** The County Engineering and Environmental Services Department, the Soil and Water Conservation District, and the City Public Works Department shall research, propose, and implement cost share programs such as the Community Conservation Assistance Program (CCAP) and other funding sources. The results will help to capture and store runoff from impervious surfaces using above and/or below ground capture devices such as rain barrels, cisterns, rain gardens and green roofs.

**Policy 7.2.2j. Stream Flow Restoration.** In order to protect water quality and stream habitat, the County Engineering and Environmental Services Department, the City Public Works Department, the Soil and Water Conservation District, the State of North Carolina, and other agencies, in conjunction with local nonprofit organizations, shall research, propose, and implement programs to reduce peak flows and enhance base flows in streams receiving stormwater discharges.

### Objective 7.1.3. Floodplain Protection

Protect Durham's floodplain areas from inappropriate development in order to maintain the carrying capacity of the floodplain, improve water quality, provide wildlife habitat, and reduce potential threats to human life and damage to property.

**Policy 7.1.3a. Floodplain Protection.** Through the Unified Development Ordinance, prohibit most development in the ~~100 year floodplain~~ Special Flood Hazard Areas, as identified by the Federal Emergency Management Agency (FEMA). The Unified Development Ordinance shall allow development and platting of lots in the ~~100-year floodplain~~ Special Flood Hazard Areas only in limited, strictly regulated, and special conditions.

**Policy 7.1.3b. Floodplain Determination.** The City Public Works Department shall model the ~~100-year floodplain~~ Special Flood Hazard Areas based on full build-out conditions (rather than existing conditions) in order to better identify and protect the ~~100-year floodplain~~ Special Flood Hazard Areas from adverse impacts of development and to protect property from damage.

### Objective 7.1.4. Air Quality

~~Achieve Federally mandated air quality standards in Durham as identified by~~ Work to improve air quality to meet and exceed the National Ambient Air Quality Standard and ~~work to improve air quality~~

to anticipate future air quality problems using measures with multiple benefits as much as possible.

**Policy 7.1.4a. Greenhouse Gas Emissions Local Action Plan** ~~The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization City-County Sustainability Office, in conjunction with other City and County Departments and the Environmental Affairs Board Durham-Chapel Hill-Carrboro Metropolitan Planning Organization, shall update and present to elected boards for adoption and implementation the Greenhouse Gas Emissions Local Action Plan initially prepared for the City in October 1999 adopted by the City and County in September 2007, as may be updated from time to time.~~

**Policy 7.1.4b. Impervious Surface Shading.** Through the Unified Development Ordinance, require shading of impervious surfaces, such as streets and parking lots, in the Suburban, Urban, Compact Neighborhood and Downtown Tiers in order to reduce glare and heat build up within urban these areas, ~~thereby increasing the air quality benefits of tree cover.~~

**Policy 7.1.4c. Tree Cover Canopy.** ~~The City-County Planning Department, in conjunction with the City Public Works Department and the Environmental Affairs Board,~~ shall research and propose development regulations and/or programs to increase and target tree coverage canopy in the Suburban, and Urban, ~~Compact Neighborhood and Downtown~~ Tiers in order to reduce air pollution, improve water quality, improve the quality and reduce the quantity of stormwater runoff, ameliorate heat retention, and provide aesthetic benefits to Durham residents.

**Policy 7.1.4d. Alternative Transportation and Fuels for City and County Vehicles.** Support alternative transportation ~~in~~ order to maintain air quality, preserve natural resources, reduce reliance on oil, and save money through lower fuel costs. ~~The City General Services Department and the County General Services Department shall implement a program for using non-gasoline "alternative fuels" in City and/or County vehicles.~~

### Objective 7.1.5. Energy Conservation and Greenhouse Gas Reduction

Reduce the amount of energy consumed for heating and cooling of buildings in order to reduce heating and cooling costs and reduce greenhouse gas emissions.

**Policy 7.1.5a. Energy Consumption in City, County and Schools Buildings.** The City-County Sustainability Office, the City General Services Department, the County General Services Department, and the Durham Public Schools shall establish ongoing programs, appropriately staffed, to identify opportunities for cost-effective energy conservation in all public buildings.

**Policy 7.1.5b. Energy Saving Designs.** The City General Services Department, the County Engineering Department, and the Durham Public Schools shall ensure that new facilities planned by the City and County incorporate energy conservation features in accordance with Leadership in Energy and Environmental Design or other high performance or green building standards.

**Policy 7.1.5c. Million Solar Roofs Initiative.** The Durham County ~~Center of the NC~~ Cooperative Extension Service shall maintain its partnership in the Million Solar Roof Initiative and shall develop and staff programs to promote residential, commercial, institutional and industrial energy savings.

**Policy 7.1.5d. Green Building Program.** The City-County Sustainability Office, with assistance from the Environmental Affairs Board, shall encourage builders of new residential construction to adopt innovative building practices that achieve energy efficiency improvements above the minimum energy code and other sustainable building practices by developing a voluntary rating system, such as the Home Energy Rating System, so that an analysis can be given to the homebuyer and/or lender of anticipated energy usage.

**Policy 7.1.5e. Energy Efficient ~~Mortgage~~ Financing Programs.** The City and County shall encourage lenders to relax underwriting guidelines for homes with energy efficient features and retrofits verified by the Home Energy Rating System.

### Objective 7.1.6. Habitats and Rare Species Protection

Identify and protect sites that provide habitat for biologically significant plant and animal species and serve as critical corridors for animal movements.

**Policy 7.1.6a. The Natural Heritage Inventory.** The City and County shall adopt and include by reference in the Durham Comprehensive Plan the North Carolina Natural Heritage Program Inventory of Significant Natural Heritage Sites ~~the “Durham County Inventory of Important Natural Areas, Plants and Wildlife”~~ as a source of information about the location and importance of special places and species in Durham County, and shall use the “Durham Inventory Review Committee Biological Significance Rankings” from the Inventory ~~North Carolina Natural Heritage Program Inventory of Significant Natural Heritage Sites~~ as a guide to biological significance.

**Policy 7.1.6b. Development Review and the Natural Heritage Inventory.** The City-County Planning Department and other City and County Departments shall review development proposals in relation to the Natural Heritage Inventory to preserve Natural Heritage Inventory sites and encourage new developments to avoid the sites by using infill development, planned

#### **Million Solar Roofs Initiative**

The Million Solar Roof Initiative (MSRI) is a US Dept. of Energy effort to facilitate the installation of solar energy systems on one million US buildings by 2010. The MSRI is designed to support states and local communities as they develop a strong commitment to the sustained deployment of solar energy technologies.

developments, cluster developments, conservation-by-design subdivisions, and other means.

**Policy 7.1.6c. Preservation and Management Plans.** The City-County Planning Department and the County Engineering and Environmental Services Department shall prepare or participate in the preparation of detailed plans for the preservation and management of publicly owned sites identified in the Natural Heritage Inventory.

**Policy 7.1.6d. Regular Natural Heritage Inventory Updates.** The City-County Planning Department shall ~~assist the Durham Inventory Review Committee in updating~~ update and maintain the Natural Heritage Inventory as necessary to ~~maintain~~ retain the accuracy of the information.

**Policy 7.1.6e. Natural Heritage Inventory Sites and Property Owner Contact.** The County Engineering and Environmental Services Department shall contact and work with owners of properties containing Natural Heritage Inventory sites to propose acquisition of conservation easements or other protection measures to ensure preservation of Natural Heritage Inventory sites.

**Policy 7.1.6f. Invasive Landscape Plants.** Through the Unified Development Ordinance, prohibit the use of invasive landscape plant species and support the use of native plant species where possible.

**Policy 7.1.6g. Wildlife Corridors.** The City-County Planning Department and the City Transportation Department shall encourage roadway crossings that funnel wildlife traffic over or under roads to improve migration corridors and to reduce wildlife and vehicle conflicts. These departments should work with the North Carolina Department of Transportation to consider this issue on state roadways.

### Objective 7.1.7. Drought-Resistant Community

**Policy 7.1.7a. Water Demand Generation Rates.** The City-County Planning Department shall utilize the most recent information on water demand, as provided by the Water Management Department to determine and report the impact of the proposed zoning and plan amendment changes on water demand.

**Policy 7.1.7b. Water-Wise Landscaping.** The City-County Planning Department shall ~~modify~~ utilize the Durham Landscape Guidelines to encourage the efficient use of water in landscaping and irrigation practices. The City-County Planning Department shall research and propose changes in the Unified Development Ordinance to promote preservation of existing trees, water reclamation and groundwater recharge.

**Goal 7.2, Open Space**

Provide ample open and green spaces for Durham residents and wildlife and protect important open spaces in Durham County from the impacts of development.

**Objective 7.2.1. Open Space Level of Service Standards**

Establish and maintain appropriate level of service standards for open space in the City and County.

**Policy 7.2.1a. Open Space Level of Service Standards.** Through the Unified Development Ordinance, continue to require preservation of open space appropriate to the intensity of development in each the Rural, Suburban, and Urban Tiers, consistent with Table 7-1, Open Space Level of Service Standards. ~~Through the Unified Development Ordinance, develop a process to waive the standards for small infill sites in the Urban, Compact Neighborhood and Downtown Tiers at the discretion of the Planning Director.~~

Table 7-1, Open Space Level Of Service Standards		
Tier	Minimum Open Space Required	
	Residential	Nonresidential
Rural	40%	--
Suburban	15%	10%
Urban	5%	3%
<del>Compact Neighborhoods</del>	<del>2%</del>	<del>1%</del>
<del>Downtown</del>	<del>1%</del>	<del>1%</del>

**Policy 7.2.1b. Interconnected Open Spaces.** The City-County Planning Department shall develop a plan to interconnect ~~many~~ of open and green spaces where possible, including many of the larger areas designated for open space in open space plans and large undeveloped large tracts to reduce isolation resulting from fragmentation.

**Objective 7.2.2. Open Space Planning**

Through systematic, community based planning processes, identify important natural, cultural, historic and open space resources in Durham County and establish plans for their long term preservation and protection.

**Policy 7.2.2a. Recreation and Open Space Areas.** Durham shall identify and protect Recreation and Open Space areas, as shown on Map 2-1, Future Land Use Map, including:

- i. ~~The 100-year floodplains~~ Special Flood Hazard Areas, as defined by the Federal Emergency Management Agency;
- ii. US Army Corps of Engineers land;
- iii. North Carolina State park land or historic sites;
- iv. Duke Forest;
- v. NCSU Hill Forest;
- vi. Privately-owned conservation lands held by local land trusts;
- vii. City or County owned land identified on an adopted open space plan;
- viii. ~~Lake Crabtree lands;~~
- ix. Public land around ~~Lake Michie~~ reservoirs;
- x. ~~Public land around the Little River Reservoir;~~
- xi. ~~City New Hope Corridor Open Space;~~
- xii. ~~County New Hope Corridor Open Space;~~
- xiii. City and County Parks;
- xiv. ~~City Parks;~~
- xv. ~~Privately owned conservation lands held by local land trusts, such as the Eno River Association, the Triangle Land Conservancy, the Ellerbee Creek Watershed Association, and other local land trusts;~~
- xvi. Culturally or historically significant cemeteries; and
- xvii. Abandoned or unused railroad corridors; ~~and~~
- xviii. ~~State-owned historic sites.~~

(See Policy 2.1.3b, Recreation and Open Space Defined)

**Policy 7.2.2b. Preservation of Areas Designated as Open Space.**

Through the Unified Development Ordinance, ensure that all areas designated as open space in any plan officially approved by the governing bodies (including, but not limited to open space plans and parks plans), be protected through means such as dedication or reservation. At a minimum, this shall include permitting the public entity with authority to acquire the property the ability to place a reservation on the property for a limited period of time, ensuring that entity with sufficient opportunity to proceed with acquisition of the site if the entire site is designated as open space in the approved plan.

**Policy 7.2.2c. Eno River State Park Protection and Coordination.**

Through the Unified Development Ordinance, the City and County shall protect the Eno River State Park by restricting uses adjacent to the Park to those compatible with recreational uses, such as residential uses and public and private recreation and open space. The City Parks and Recreation Department and the County Engineering and Environmental Services Department shall coordinate park development and open space protection programs with the Eno River State Park and the Eno River Association.

**Policy 7.2.2d. Open Space Master Plans.** In order to coordinate the Durham Comprehensive Plan with open space planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the following open space master plans: the “New Hope Creek Corridor Open Space Master Plan, April 1991”, the “Little River Corridor Open Space Master Plan, 2001”, and the “Eastern Durham Open Space Plan, 2007” (and any future updates of these plans). (see Policy 10.1.4c, Open Space Master Plans).

~~**Policy 7.2.2e. New Hope Creek Corridor Open Space Plan Update.** The City-County Planning Department and the County Engineering Department, in conjunction with the New Hope Advisory Committee, shall continue to implement the New Hope Creek Corridor Open Space Plan and develop a schedule for updating the Plan to ensure that its objectives and policies are protecting the open space resources in the Corridor. (See Policy 10.1.4d, New Hope Creek Corridor Open Space Plan.)~~

~~**Policy 7.2.2f. Little River Corridor Open Space Plan.** The County Engineering Department and the City Parks and Recreation Department shall continue to implement the Little River Corridor Open Space Plan, coordinate its implementation with Federal, State and local agencies and land trusts, and develop a schedule for updating the Plan. (See Policy 10.1.4e, Little River Corridor Open Space Plan.)~~

~~**Policy 7.2.2g. Eastern Durham Open Space Plan.** The City-County Planning Department, in conjunction with the City Parks and Recreation Department, the County Engineering Department and the Durham Open Space and Trails Commission shall prepare an open space plan for the Lick Creek and Little Lick Creek basin area of Durham County. Base the plan on the integrated open space objectives of continuous open space corridors, water quality, wildlife habitat protection, scenic and aesthetic considerations, recreation, and preservation of significant historic and cultural features.~~

**Policy 7.2.2e. Flat River Open Space Plan.** The City-County Planning Department, in conjunction with the City Parks and Recreation Department, the County Engineering and Environmental Services Department, and the Durham Open Space and Trails Commission, shall prepare an open space plan for the Flat River basin area of Durham County. Base tThe plan on the shall address integrated open space objectives of continuous open space corridors, water quality, wildlife habitat protection, scenic and aesthetic considerations, recreation, and preservation of significant historic and cultural features.

**Policy 7.2.2f. City-Urban Open Space Plan Corridors.** The City-County Planning Department, ~~in conjunction with the City Parks~~

~~and Recreation Department, shall prepare an identify and plan for a system of linked urban open spaces plan, such as areas along Ellerbee and Third Fork Creeks, for the Downtown, Compact Neighborhood, and Urban Tiers to protect and link important open space areas and identify opportunities for open space preservation, and appropriate low impact recreational opportunities, and improvement of environmental conditions in the urban core. In the Compact Neighborhood and Downtown Tiers, establish alternative standards for open space to ensure public space in a defined setting with plazas and urban public places, as well as green spaces. (See Policies 2.3.3c, Provision of Open Space and 10.1.4e, Urban Open Space Plan.)~~

**Policy 7.2.2g. Regional Coordination.** The City-County Planning Department, City Parks and Recreation Department and the County Engineering and Environmental Services Department shall coordinate Durham's open space plans with other jurisdictions' plans and other regional open space initiatives, ~~such as the Triangle GreenPrint Project and the Center of the Region Enterprise study.~~

**Policy 7.2.2h. State Open Space Efforts.** Durham City and County shall support State open space efforts, such as the NC Million Acre Initiative and the Mountain to Sea Trail, by coordinating their open space preservation efforts with the State.

**Policy 7.2.2i. Open Space Collaboration.** The City Parks and Recreation Department and the County Engineering and Environmental Services Department shall work collaboratively with the Durham Open Space and Trails Commission, local land trusts, and other community organizations to increase the amount of open space preserved. The County Engineering and Environmental Services Department shall establish and convene an open space coordination group, including the Durham Open Space and Trails Commission and various organizations and agencies involved in open space preservation, to meet regularly in order to ensure better coordination and opportunities for collaboration.

**Policy 7.2.2j. Currently-Owned Real Estate as Open Space.** The County Engineering and Environmental Services Department shall review County real estate holdings to identify those parcels that the County should retain and manage as open space. The City Parks and Recreation and General Services Departments shall review City real state holding to identify those parcels that the City should retain and manage as open space.

### Objective 7.2.3. Farmland Protection and Preservation

Protect active farmland in Durham in order to enhance economic activity and preserve Durham's ~~rural~~ agricultural heritage.

**Policy 7.2.3a. Farmland Preservation Protection Advisory Board.**

The City and County shall continue to support the Durham Farmland Preservation Protection Advisory Board as an advisory body to the City and the County related to farming and farmland preservation issues.

**Policy 7.2.3b. Agricultural Priority Areas.** The County shall continue to designate Agricultural Priority Areas in order to establish priorities for targeting agricultural preservation efforts. The County shall review its designation of Agricultural Priority Areas in conjunction with a review and update of the Farmland Protection Ordinance.

**Policy 7.2.3c. Voluntary Agricultural Districts Program.** The County Soil and Water Conservation District shall continue ~~it's~~ the county's Voluntary Agricultural Districts Program where land owners voluntarily maintain their properties in farm use.

**Policy 7.2.3d. Farmland Conservation Easement Purchase.** The County shall continue to provide funds to purchase farmland conservation easements in Agriculture Priority Areas and aggressively seek grants and other forms of assistance to increase the funds available for farmland preservation. The County shall also seek a dedicated source for the funding of farmland and open space capital projects.

**Policy 7.2.3e. Present Use Valuation Programs.** The County shall continue its Present Use Valuation Programs for agricultural, horticultural, and forest land to provide an incentive for maintaining those uses in the County by taxing land at its present use value rather than fair market value.

**Policy 7.2.3f. Farmland Preservation Outreach.** The County Soil and Water Conservation District and the County Engineering Department shall prepare and disseminate educational materials regarding the value of farmland preservation to the Durham community.

**Policy 7.2.3g. Rural Tier Agricultural Activities.** Through the Unified Development Ordinance, ensure that land use regulations allow agricultural activities by right within the Rural Tier. (See ~~Policy 2.3.1g~~ 2.2.1c, Rural Tier Agricultural Activities.)

## DELETED POLICIES

**Policy 7.2.2e. New Hope Creek Corridor Open Space Plan Update.** The City-County Planning Department and the County Engineering Department, in conjunction with the New Hope Advisory Committee, shall continue to implement the New Hope Creek Corridor Open Space Plan and develop a schedule for updating the Plan to ensure that its objectives and policies are protecting the open space resources in the Corridor. (See Policy 10.1.4d, New Hope Creek Corridor Open Space Plan.)

**Policy 7.7.2f. Little River Corridor Open Space Plan.** The County Engineering Department and the City Parks and Recreation Department shall continue to implement the Little River Corridor Open Space Plan, coordinate its implementation with Federal, State and local agencies and land trusts, and develop a schedule for updating the Plan. (See Policy 10.1.4e, Little River Corridor Open Space Plan.)

**Policy 7.7.2g. Eastern Durham Open Space Plan.** The City-County Planning Department, in conjunction with the City Parks and Recreation Department, the County Engineering Department and the Durham Open Space and Trails Commission shall prepare an open space plan for the Lick Creek and Little Lick Creek basin area of Durham County. Base the plan on the integrated open space objectives of continuous open space corridors, water quality, wildlife habitat protection, scenic and aesthetic considerations, recreation, and preservation of significant historic and cultural features.



**Adopted, February 28, 2005  
Updated, April 2012**

# Durham Comprehensive Plan

## Chapter 8 Transportation Element

**Durham City-County Planning Department**

# The Durham Comprehensive Plan

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# Chapter 8, Transportation Element

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## Transportation Element



*Summary of Issues  
Goal 8.1, Durham's  
Transportation  
System*

The intent of the Transportation Element is to plan for a safe and efficient multi-modal transportation system that emphasizes offers a choice between public transit, and pedestrian and bicycle use, and movement, as well as automobile travel. Durham strives to create seamless connections between different modes of transportation, as well as ensure that transportation serves development appropriately. ~~Durham desires to coordinate local transportation planning with the Transportation Plan of the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization.~~ The Transportation Element establishes objectives and policies to guide how the transportation network grows and accommodates new demands ~~the delivery of transportation services and the provision of transportation facilities.~~

### Summary of Issues

1. **Regional Transportation Coordination.** ~~How can transportation planning in Durham be successfully integrated into planning for the larger region?~~ The growing problem of congestion is not unique to Durham; it also affects the Research Triangle Park and all the surrounding communities. Linking the transportation planning work of the Durham-Chapel Hill-Carrboro (DCHC) Metropolitan Planning Organization (MPO) with that of the Capital Area MPO (CAMPO) is crucial. Continued regional planning efforts among the MPOs and Regional Planning Organizations (RPOs) will improve decision-making that affects the region. ~~Both the State and the Federal government have been encouraging MPO's that are obviously linked by transportation demands to work together. The DCHC MPO and CAMPO have had preliminary discussions about merging. An important issue for the Triangle communities to deal with is how the two MPOs can work together to improve communications and decision-making that affects the entire Region.~~
2. **Local vs. State Planning Conflicts.** ~~How can e~~Conflicts can be resolved arise between transportation needs at the State level and ~~those the local levels?~~ How can t~~Transportation planning~~

needs to be balanced between the sometimes competing needs to move vehicular traffic faster and more safely, and ~~the desire to~~ reducing traffic speeds to encourage bicycle and pedestrian use. ~~?~~ Even more complicated are issues related to roads that are important to intrastate travel, but that are undesirable to local citizens. Recognizing and addressing these issues of State and local conflict are critical if Durham is to effectively manage its future growth and development while meeting its mobility needs.

3. **Reducing Transportation Demand.** ~~Can Durham should continue to implement policies that reduce its demand for new or expanded vehicular transportation facilities through changes in its land use patterns? How aggressively should this strategy be pursued? Can The Commute Trip Reduction Program and travel demand management (TDM) strategies are methods to effectively address this issue?~~
4. **Unmet Transportation Needs.** ~~The demand need for reliable transportation choices for travel in Durham and in the Triangle Region is growing faster than the community's ability to supply necessary facilities. This imbalance applies to build new roads, and improve existing roadway capacity, provide transit services, and connect bicycle and pedestrian facilities. These deficiencies lead to questions concerning the What level of congestion is Durham is willing to accept? Should and if Durham's standard for levels of service should be different in different areas of the community (for example, in downtown vs. rural areas)? How successful Durham is in addressing this problem will significantly influence the community's future quality of life.~~
5. **Collector Streets.** ~~Durham's long-range transportation plans have traditionally dealt with freeways, major thoroughfares and minor thoroughfares. How can Collector streets, and even local streets, should be formally incorporated into Durham's transportation planning process?~~
6. **Transit, Bicycling, and Walking Alternatives Choice.** ~~If bicycle and pedestrian facilities were substantially improved, would more people choose them as a mode of travel and reduce highway demand? How Durham plans for and invests in facilities for walking, bicycling, and transit will affect future mobility and accessibility. Policies should be put in place to make biking and walking more viable alternatives to driving. Can Regional and local transit services should be improved to offer a cost-effective and time competitive alternative to choice that captures a larger proportion of trips in Durham? Will the inception of regional rail and feeder bus service in 2008 have an impact on the roadway deficiency problem?~~
7. **Transportation and Land Use Planning Integration.** ~~How can Durham's better integrate its land use and transportation~~

planning processes? need to be properly integrated to maximize efficiency. How do we ensure that Durham's land use patterns help achieve the transportation goals, and vice versa. A challenge of the Durham Comprehensive Plan is to bridge the gap and improve the integration of transportation planning and land use planning.

8. **Connectivity.** Integrating Durham's land use and transportation systems requires focus on connectivity, including: ~~How much emphasis should Durham place on improving neighborhood connectivity? Should improved connections between neighborhoods and communities be required? How can Durham improve connectivity while at the same time while addressing citizen concerns about safety and cut-through traffic? These are questions that decision-makers will address in preparing the Comprehensive Plan.~~
9. **Transportation Improvements Funding.** Addressing ~~present~~ current transportation deficiencies and providing ~~transportation~~ infrastructure to support new development are ~~some of the most~~ daunting challenges ~~facing for~~ Durham. Federal and State dollars are allocated to projects of statewide importance as well as to those that provide benefits to Durham residents. Impact fees for new development only cover a portion of the real cost of needed transportation infrastructure and cannot be used to alleviate ~~pre-existing present~~ pre-existing deficiencies. Appropriate policies should be put in place to ensure funding from public and private sectors for necessary transportation improvements. The General Assembly is reluctant to consider local options for generating revenue to pay for new facilities. Yet, ease of movement around the urban area is a luxury to which we have increasingly grown accustomed. How can Durham pay for needed transportation improvements? What role does new development have?
10. **Energy Conservation and Emission Reduction.** Durham should institute policies that ensure an attractive environment that conserves energy and reduces automobile emissions through regulation and other mechanisms, such as the use of electric and hybrid vehicles. Durham will thus remain at the forefront of sustainability by keeping abreast of new technologies and planning ahead for increased consumer and public sector demand.
11. **Airport Noise.** As the Region's municipalities grow together, they grow toward the edges of RDU International Airport. New development around the airport and expansions of RDU operations and facilities increase the potential for conflict.

## Goal 8.1, Durham’s Transportation System

Provide a safe, accessible, connected, efficient, attractive, multi-modal transportation system that, includes pedestrians, bicycles and transit facilities and support, in accordance with regional and local growth management objectives and policies.

### Objective 8.1.1. Overall Transportation System

Through planning, programming, design, construction, retrofit, operations and maintenance activities, ~~P~~provide a safe, efficient, attractive, multi-modal transportation system that supports local land use priorities, accommodates trip-making choices, maintains mobility, connects adjacent and related land uses, protects the environment and neighborhoods, and improves the quality of life for all Durham residents.

The City-County Planning Department, and the City Public Works and Transportation departments shall provide for the needs of drivers, public transportation vehicles and patrons, bicyclists, and pedestrians of all ages and abilities in all planning, programming, design, construction, reconstruction, retrofit, operations, and maintenance activities and products, where feasible. These departments shall view all transportation improvements as opportunities to improve safety, access, and mobility for all travelers in Durham County and recognize bicycle, pedestrian, and transit modes as integral elements of the transportation system.

**2025 Long Range Transportation Plan**  
 The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization 2025 Long Range Transportation Plan was approved on December 18, 2002. The Conformity Analysis Report and Conformity Determination Plan found that it complies with provisions of the Clean Air Act Amendments of 1990 and the Transportation Equity Act for the 21st Century of 1997, and accomplishes the intent of the NC State Implementation Plan (SIP).

**Policy 8.1.1a. Regional Transportation Model.** ~~The City Public Works Department of Transportation, with the Metropolitan Planning Organization~~ DCHC MPO and other regional partners, shall develop and maintain a multi-modal regional transportation model for the purposes of long range planning and evaluating the impacts of proposed transportation investments on travel and land use patterns.

**Policy 8.1.1b. Long-Range Transportation Plan.** In order to coordinate the Durham Comprehensive Plan with long range transportation planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the most recent “Durham-Chapel Hill-Carrboro ~~Metropolitan Planning Organization~~ MPO 2025-Long Range Transportation Plan,” as may be amended from time to time, including the ~~Recommended Highway element Map, the Recommended Transit Component, the Recommended Fixed-Guideway Component, and the Recommended Bicycle Component,~~ pedestrian and bicycle component, and travel demand management (TDM) and transportation systems management (TSM) policies. In

preparation of long range transportation plans, the City-County Planning Department and the City ~~Public Works~~ Department of Transportation shall recommend transportation services and facilities to match the Tier designations and land uses identified in the Durham Comprehensive Plan.

**Policy 8.1.1c. Implement the Long Range Transportation Plan**~~Transportation Improvements.~~ The City ~~Public Works~~ Department of Transportation shall recommend ~~and program~~ transportation projects and programs that are consistent with the most recent Long Range Transportation Plan.

**Policy 8.1.1d. Complete Streets.** Establish and implement Complete Street design standards for city maintained roads that provide mobility for all types of transportation users regardless of mode (automobile, transit, bicycle, pedestrian) and support mutually reinforcing land use and transportation decisions. Work with NCDOT to implement these design standards for state maintained roads within the City’s jurisdiction. (See Policy 2.4.2a, Complete Streets.)

**Policy 8.1.1e. Energy Conservation and Emission Reduction.** The City-County Planning, City Transportation, and County Engineering and Environmental Services departments shall research and propose mechanisms for anticipating and meeting public and private sector demand for electric charging stations and other transportation-related technologies that help conserve energy and reduce greenhouse gas emissions.

**Objective 8.1.2. Road System**

Construct and maintain an attractive street and highway system that allows multi-modal, safe, convenient, and efficient movement of people and goods. ~~people and goods to be moved safely, conveniently, and efficiently.~~

**Policy 8.1.2a. Transportation Traffic Level of Service Standards.** The level of service standards for development tiers in Durham shall be as indicated in Table 8-1, Transportation Traffic Level of Service Standards.

<b>Table 8-1, <u>Transportation Traffic Level of Service Standards</u></b>	
<b>Application</b>	<b>Level of Service Standard</b>
Downtown Tier	LOS E
Compact Neighborhood Tier	LOS E
Urban Tier	LOS D
Suburban Tier	LOS D
Rural Tier	LOS C

~~**Policy 8.1.2b. Transportation Corridor Segment Level of Service Standards.** The City Public Works Department and the City County Planning Department shall evaluate and establish distinct transportation level of service standards for thoroughfare corridor segments. In undertaking this evaluation, give priority to the US 15-501 corridor and the NC 54/I-40 corridor.~~

**Policy 8.1.2b. Policy 8.1.2c. Traffic Impact Mitigation.** Where proposed development in the Urban, Compact Neighborhood, or Downtown Tiers would cause traffic to exceed the established level of service standards (Table 8-1), required mitigation strategies shall be designed to ~~not~~ avoid adversely impacts to established existing developments; such these mitigation measures could include dispersal of traffic through alternative routes, changes in signalization, travel demand management, traffic calming, and provision of transportation alternatives.

**Policy 8.1.2c. Policy 8.1.2d. Transportation Facilities Plan.** The City ~~Public Works~~ Department of Transportation shall prepare an updated ~~thoroughfare plan~~ Comprehensive Transportation Plan, to be called the Durham Transportation Facilities Plan, and to show locations for long-range transportation facilities, including major thoroughfares, collector streets, fixed-guideway transit routes, other transit routes, sidewalks, and bicycle routes. Upon adoption by the City and County, the Durham Transportation Facilities Plan shall be adopted and included by reference in the Durham Comprehensive Plan as the Official Map for purposes of right-of-way preservation.

**Policy 8.1.2d. Policy 8.1.2e. US 15-501 Major Investment Study.** The City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “US 15-501 Major Investment Study, Phase II Report” (as may be amended from time to time) and other companion corridor studies.

~~**Policy 8.1.2e. NC 54/I-40 Transit Corridor Feasibility Study, Phase I.** The City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “NC 54/I-40 Transit Corridor Feasibility Study, Phase I” (as may be amended from time to time).~~

**Policy 8.1.2e. Policy 8.1.2g. Typical Roadway Cross Sections.** For development in the City, the City ~~Public Works~~ Department of Transportation shall require right-of-way dedication in accordance with the typical roadway cross sections adopted by the City Council. In absence of a set of cross-sections adopted by the City Council, the City Department of Transportation and Public Works Department shall use the typical roadway cross-sections indicated in the “Fiscally Constrained ~~2025~~ 2035 Long-Range Transportation Plan” (as may be amended from time to time) and emerging NC DOT Complete Streets Design Framework. The City

Departments of Public Works and Transportation shall require construction of residential streets in accordance with the “City of Durham Reference Guide For Development,” (as may be amended from time to time). Reference Guide for Development updates shall include Complete Streets design guidelines. For development in the County, the City-County Planning Department shall require right-of-way dedication in accordance with the typical roadway cross section established by the NC Department of Transportation, including where appropriate the NC Department of Transportation “Traditional Neighborhood Development Design Guidelines.”

**Policy 8.1.2f. ~~Policy 8.1.2h.~~ Trees and Bicycle- and Pedestrian-Friendly Street Cross Sections.** The City ~~Public Works~~ Departments of Public Works and Transportation and the City-County Planning Department shall re-evaluate adopted street cross sections in order to promote bicycle and pedestrian travel and safety, provide safe and accessible public transit facilities along established and planned transit routes, minimize impervious surfaces, and allow for more tree planting within the right-of-way, with particular consideration to variable standards by Tier. ~~Such street cross sections shall allow trees planted in medians and within the right of way, making appropriate provisions to minimize tree and utility conflicts, doing so in a manner that promotes tree planting opportunities rather than limiting them.~~

**Policy 8.1.2g. ~~Policy 8.1.2i.~~ Adopted Collector Street Plans.** The City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “Wake-Durham Comprehensive Street System Plan,” and the “Southwest Durham-Chapel Hill Collector Street Plan” (as may be amended from time to time).

**Policy 8.1.2h. ~~Policy 8.1.2j.~~ Collector Street Plans.** The City ~~Public Works~~ Department of Transportation, in conjunction with the DCHC MPO and the City-County Planning Department, shall prepare ~~a~~ collector street plans for portions of Durham that existing plans do not cover. ~~In preparing collector street plans,~~ priority shall be given to areas in southwest Durham County.

**~~Policy 8.1.2k. Center of the Region Collector Street Plan.~~** ~~The City and County acknowledge the work being undertaken by the Triangle J Council of Governments (TJCOG) to develop a collector street plan within the Center of the Region area, as defined by the TJCOG. Upon completion of the collector street plan, the City and County shall evaluate the plan and consider amending the Durham Comprehensive Plan to incorporate the collector street plan.~~

**Policy 8.1.2i. ~~Policy 8.1.2i~~ Transportation Plan Implementation.**

The City-County Planning Department and other City and County departments shall use the "Transportation Facilities Plan," the "Wake-Durham Comprehensive Street System Plan," the "Southwest Durham-Chapel Hill Collector Street Plan" and other adopted collector street plans when evaluating new development and shall require that new development provide facilities in conformance with those collector street plans.

**Policy 8.1.2j. Transportation Level of Service Maintenance.**

In order to maintain the level of service on Durham roads, the City-County Planning Department shall not recommend approval for any zoning map change which would result in the average daily trips exceeding 110 percent of the adopted level of service standard for any adjacent road, unless the impact on the adjacent roads is mitigated. Development projects shall be exempt from this policy if the project results in a change in the average daily trips of no more than 3 percent of the level of service standard on any adjacent road. This exemption shall not apply if the present average daily trips exceed 120 percent of the level of service standard on any adjacent road. If the zoning map change request is found to be inconsistent with this policy, any associated Plan Amendment shall also be recommended for denial.

**Policy 8.1.2k. ~~Policy 8.1.2k~~ Tracking Cumulative Road Impacts.**

The City ~~Public Works~~ Department of Transportation and the City-County Planning Department shall ~~develop tracking systems to quantify~~ the cumulative impacts of developments on road capacity in order to better maintain the adopted level of service on Durham roads.

**Policy 8.1.2l. ~~Policy 8.1.2l~~ Traffic Impact Analysis.**

Through the Unified Development Ordinance, require that the developer provide a Traffic Impact Analysis (TIA) prior to any site plan or development plan approval where the development proposes to generate at least 150 peak hour vehicle trips. Required TIA's shall be prepared in accordance with standards established by the City ~~Public Works~~ Department of Transportation.

**Policy 8.1.2m. ~~Policy 8.1.2m~~ Transportation Street Impact Fee Structure.**

The City ~~Public Works~~ Department of Transportation, in conjunction with the City Budget and Management Services Department and the City-County Planning Department, shall ~~reassess the current impact fee structure in relation to current level of service standards established or identified~~ reflect level of service standards established or identified in the Durham Comprehensive Plan when updating the City's impact fees and methodology.

**Policy 8.1.2n. ~~Policy 8.1.2n~~ Unpaved Streets.**

The City Public Works Department shall prepare a plan for paving gravel streets

in the Urban Tier and shall include a timeframe and proposed program of capital improvement projects.

### Objective 8.1.3. Mass Transit

Provide a safe, convenient, accessible, competitive, and affordable mass transit system, provided by public and private operators, that enhances mobility, economic development, air quality and the development of compatible land uses along transit corridors.

**Policy 8.1.3a. Promoting Transit.** Durham shall promote and support public transportation options to increase mobility of residents, employees, and visitors.

**Policy 8.1.3b. ~~Policy 8.1.3a.~~ Mass Transit Level of Service Standards.** The City ~~Public Works~~ Department of Transportation, the Durham Area Transit Authority (DATA), ~~the~~ Triangle Transit Authority and the City-County Planning Department shall evaluate and establish transit level of service standards for different Tiers and thoroughfare corridor segments to achieve a higher transit mode split.

**Policy 8.1.3c. ~~Policy 8.1.3b.~~ Regional Bus Transit Service Coordination.** The City shall continue to coordinate local bus route planning with ~~the~~ Triangle Transit Authority and other communities in the Region to explore opportunities for improved bus service through regionalization of mass transit.

**Policy 8.1.3d. ~~Policy 8.1.3c.~~ Regional Rail System, Phase I Durham County Bus and Rail Investment Plan.** In order to coordinate the Durham Comprehensive Plan with ~~regional rail plans~~ the Durham County Bus and Rail Investment Plan, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the Triangle Transit Authority Regional Rail Plan, Phase I Durham County Bus and Rail Investment Plan. The City and County shall continue efforts to implement the Durham County Bus and Rail Investment Plan Regional Rail Plan by designating Compact Neighborhoods around proposed regional rail transit stations and programming capital improvements that support mass transit in the vicinity of designated transit stations. (See Policy 16.1.3c. Regional Rail System, Phase I.)

**Policy 8.1.3e. ~~Policy 8.1.3d.~~ Regional Transit Plan.** The City and County shall support planning for and protection of the transit corridors identified in the most recently adopted version of the Triangle Transit Authority's Regional Transit Plan Durham County Bus and Rail Investment Plan.

**Policy 8.1.3f. ~~Policy 8.1.3e~~ Development Review and Regional Rail.** The City-County Planning Department and the City ~~Public Works~~ Department of Transportation shall review development proposals in relation to ~~the~~ adopted Regional Transit Plans, and

shall seek dedication or reservation of right-of-way along designated transit corridors in conformance with the ~~that those~~ Plans.

**Policy 8.1.3g. ~~Policy 8.1.3f~~ Requirements for Mass Transit Facilities.** The City-County Planning Department shall ensure that, through the Unified Development Ordinance, transit passenger terminals are a permitted use within zoning districts in the Compact Neighborhood and Downtown Tiers, and where appropriate, in the Suburban Tier.

**Policy 8.1.3h. Connectivity to Bicycle and Pedestrian Facilities.** The City-County Planning Department, in conjunction with the City Transportation Department and Triangle Transit, shall promote the integration of transit stations with existing and planned pedestrian and bicycle facilities. Through the Unified Development Ordinance, provide facilities for pedestrians and bicyclists at fixed guideway transit stations, such as bicycle lockers, transit shelters, and amenities.

#### Objective 8.1.4. Bicycle and Pedestrian Transportation

Provide a pedestrian and bicycle system that offers ~~an alternative means of transportation,~~ a viable alternative to driving and allows greater access to public transit, supports recreational opportunities, and connect adjacent and related land uses.

**Policy 8.1.4a. Durham Trails and Greenways Master Plan.** In order to coordinate the Durham Comprehensive Plan with trails and greenways planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “Durham Trails and Greenways Master Plan, 2001” (as may be amended from time to time). (See Policy 10.1.4b, Durham Trails and Greenways Master Plan.)

**Policy 8.1.4b. Development Review and the Adopted Trails and Greenways Plan.** The City-County Planning Department, the City Parks and Recreation Department, and the City Public Works Department shall review development proposals in relation to the Durham Trails and Greenways Master Plan and seek dedication or reservation of right-of-way or easements and construction of facilities in conformance with that Plan.

**Policy 8.1.4c. ~~Regional Bicycle Plan~~ Comprehensive Durham Bicycle Transportation Plan.** In order to coordinate the Durham Comprehensive Plan with ~~the regional bicycle~~ planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “Regional Bicycle Plan, Durham and Orange Counties, NC” 2006 Comprehensive Durham Bicycle Transportation Plan (as may be amended from time to time).

**Policy 8.1.4d. Development Review and the Adopted Regional Bicycle Plans.** The City-County Planning Department, the City Parks and Recreation Department, and the City Public Works Department, and the City Department of Transportation shall review development proposals in relation to the Regional 2006 Comprehensive Durham Bicycle Transportation Plan and the Bicycle Component of the 2025 most recent adopted Long Range Transportation Plan, and seek dedication or reservation of right-of-way or easements and construction of facilities in conformance with that Plan and Complete Street design standards.

**Policy 8.1.4e. Regional Bicycle Plan Update.** The City ~~Public Works~~ Department of Transportation shall participate with the ~~Metropolitan Planning Organization~~ DCHC MPO and regional partners to update the ~~Regional Bicycle 2006 Comprehensive Durham Bicycle Transportation Plan~~.

**Policy 8.1.4f. Bicycle and Pedestrian Advisory Commission.** The City and County shall continue to support the Bicycle and Pedestrian Advisory Commission as an advisory body to the City and the County promoting bicycle and pedestrian opportunities. (See Policy 16.1.3e. Bicycle and Pedestrian Advisory Committee.)

**Policy 8.1.4g. Public Education, Bicycling and Walking.** The City ~~Public Works~~ Department of Transportation, the DCHC MPO and the Pedestrian and Bicycle Advisory Commission shall increase efforts to educate the public about the benefits of walking and bicycling.

**Policy 8.1.4h. Bicycle Facilities in New Development.** Through the Unified Development Ordinance, establish standards for bicycle facilities in new developments, including the provision of bicycle parking facilities, as well as bicycle travel lanes, tailored to the unique character of each Tier.

**Policy 8.1.4i. Pedestrian Facilities in New Development.** Through the Unified Development Ordinance, continue to implement established pedestrian circulation standards for new development in the Suburban, Urban, Compact Neighborhood and Downtown Tiers, considering the length and classification of the street, as well as the emphasis on pedestrian modality of the Tier.

**Policy 8.1.4j. ~~City Sidewalks and Pedestrian Infrastructure.~~** In order to promote pedestrian safety and access, the City ~~Public Works~~ Department shall prepare a plan to complete the sidewalk and pedestrian infrastructure in established neighborhoods and developed areas in the City where the sidewalk system is incomplete. Durham Walks Pedestrian Plan. In order to coordinate the Durham Comprehensive Plan with pedestrian infrastructure planning, the City adopts and includes by reference

the “Durham Walks Pedestrian Plan” (as may be amended from time to time).

**Policy 8.1.4k. Walk-Friendly Communities Designation.** Durham will participate in the Pedestrian and Bicycle Information Center’s “Walk-Friendly Communities” program with a goal of earning official designation within the next five years, subject to funding and resource availability.

**Policy 8.1.4l. County Sidewalks and Pedestrian Infrastructure.** In order to promote pedestrian safety and access, the Bicycle and Pedestrian Advisory Commission shall prepare a plan to complete the sidewalk and pedestrian infrastructure in established neighborhoods and developed areas within the Suburban Tier, Compact Neighborhood Tier, and Rural Villages where the sidewalk system is incomplete.

**Policy 8.1.4m. Pedestrian and Bicycle Facilities on Secondary Roads.** ~~The City Public Works Departments of Transportation and Public Works and the NC Department of Transportation should consider facilities for pedestrian and bicycle travel, such as wide outer lanes and sidewalks,~~ Complete Streets design standards, including facilities for pedestrian and bicycle travel, when planning any projects related to widening or repaving of secondary roads.

**Policy 8.1.4n. Off-Road Trails in New Residential Development.** Through the Unified Development Ordinance, encourage the inclusion of a system of off-road trails in new residential developments, with connectivity, where feasible, to adjacent development, community facilities, and transit.

**Policy 8.1.4o. Bicycle-Friendly Community.** ~~Durham will participate in the League of American Bicyclists Bicycle Friendly Community Program with a goal of earning Silver level designation within the next five years. The program provides a useful set of benchmarks for implementing a comprehensive bicycle plan.~~

**Policy 8.1.4p. New Bicycle Routes.** Whenever possible, incorporate recommended bike lanes or wide shoulders during street resurfacing or reconstruction and convert railroad corridors to bikeways.

**Policy 8.1.4q. Workplace Facilities.** Encourage bicycle facilities, such as secured bicycle racks, personal lockers, and showers for new and existing office developments.

### Objective 8.1.5. RDU Airport

Ensure that land uses around the Raleigh-Durham International Airport are appropriate to the Airport vicinity and contribute to safe operations of the Airport.

**Policy 8.1.5a. Airport Overlay.** The City and County shall continue to implement the Airport Overlay in the Unified Development Ordinance to ensure the compatibility of development within the 60 Ldn of the Raleigh-Durham Airport Authority with anticipated noise generated at the Airport.

**Policy 8.1.5b. Airport Authority Development Review.** The City-County Planning Department shall coordinate review of development proposals within the Airport Overlay with the Raleigh Durham Airport Authority, submitting such proposals to the Authority for review and comment before action by any approving authority. (See Policy 16.1.3d Support for the Raleigh-Durham Airport Authority.)

### **Objective 8.1.6. Integrate Land Use and Transportation Integration**

Maintain a long-range Transportation Plan that is coordinated with integrated with local land use plans and development policies to efficiently utilize resources and support economic growth.

**Policy 8.1.6a. Transit Supportive Downtown and Compact Neighborhoods Tiers.** ~~Using the Durham Comprehensive Plan, the City-County Planning Department shall recommend appropriate land uses, parking requirements, and development regulations for incorporation into the Unified Development Ordinance that encourage compact, mixed use, transit-friendly, bicycle-friendly and pedestrian-friendly development in the Compact Neighborhood Tier. Plan for and reinforce the Downtown and Compact Neighborhood Tiers as supportive of multi-modal transportation through increased density, reduced parking requirements, high quality pedestrian and bicycle facilities, and supportive infrastructure and design requirements. (See Policy 2.4.1a.)~~

**Policy 8.1.6b. Minimum Residential Density in the Compact Neighborhood Tier.** The City and County shall encourage transit services in the Compact Neighborhood Tier by adopting and enforcing through the Unified Development Ordinance minimum residential densities ~~for the residentially designated portions of this area (see Table 2-1 Residential Densities).~~

**Policy 8.1.6c. Mixed Use in Compact Neighborhood and Downtown Tiers.** To encourage transit services, the City and County shall encourage increased intensities in mixed use projects within the Compact Neighborhood and Downtown Tiers through the use of incentives, such as density and height bonuses for projects that integrate uses vertically.

**Policy 8.1.6d. Development Review and Adopted Transportation Plans.** The City-County Planning Department and the City Public

~~Works~~ Department of Transportation shall review development proposals in relation to all adopted transportation plans, and shall seek dedication or reservation of right-of-way along designated road and transit corridors in conformance with ~~these~~ those plans and Complete Streets design standards.

**Policy 8.1.6e. Internal Connectivity.** In order to ensure that streets function in an interdependent manner, the City and County, through the Unified Development Ordinance, shall implement established standards for internal pedestrian and bicycle connectivity ~~such as a minimum connectivity ratio (as measured by the ratio of links to nodes in any development)~~. ~~The City Public Works Department, in conjunction with the City County Planning Department and the Bicycle and Pedestrian Advisory Commission, shall develop standards for bicycle and pedestrian connectivity to be incorporated into the Unified Development Ordinance.~~

**Policy 8.1.6f. External Connectivity.** In order to ensure that streets function in an interdependent manner, provide a network for walking and bicycling, provide access for emergency, transit and service vehicles, and provide a continuous and comprehensible street system that can operate within the adopted level of service and reduce demand on ~~thoroughfare streets~~, the City and County shall generally require external connectivity in new developments. Through the Unified Development Ordinance, the City and County shall require connectivity within new developments and between new developments and existing development, where feasible, with street connections to adjacent areas in each direction, where feasible, at appropriate spacing intervals.

- i. Connectivity requirements in new residential developments shall take into account the need for off-site improvements reasonably proximate to the new development, the safety of pedestrians and bicyclists, and the mitigation of traffic impacts.
- ii. Unless identified as a facility on the adopted Transportation Facilities Plan, the street connections shall include traffic calming measures, as appropriate.
- iii. Street connections shall consider the specific topographic and hydrologic features of the area, existing development patterns, and the proximity of collector streets in the area that can serve the function of external connectivity among development projects.
- iv. The Unified Development Ordinance provisions shall make exceptions for small developments.

**Policy 8.1.6g. Parking Requirements.** Through the Unified Development Ordinance, establish motor vehicle and bicycle

parking requirements, including location and arrangement, tailored to the unique character of each Tier.

**Policy 8.1.6h. Regional Park-and-Ride System.** The City ~~Public Works~~ Department of Transportation shall participate with regional partners to develop a regional park and ride system for cars and bicycles to support transit services and encourage ridesharing.

**Policy 8.1.6i. Travel Demand Management.** In order to expand ridesharing, carpooling, ~~and~~ vanpooling opportunities, walking and bicycling, Durham County shall continue to implement its travel demand management efforts, including the Commute Trip Reduction Ordinance and programs to promote alternative travel options and improve air quality.

**Policy 8.1.6j. Best Work Places for Commuters.** The City and County shall take steps necessary to maintain their status as “Best Work Places for Commuters,” as defined by the US Environmental Protection Agency.

**Policy 8.1.6k. Intelligent Transportation Systems.** The City ~~Public Works~~ Department of Transportation shall investigate and propose actions to use intelligent transportation systems and advanced technologies to support appropriate transportation facility use and traffic law compliance, ~~and to achieve the objectives of the Transportation Element.~~

**Policy 8.1.6l. Neighborhood Traffic Calming.** The ~~Public Works~~ City Department of Transportation shall seek funding for preparation and update studies of neighborhood traffic calming, giving priority to residential areas. ~~as requested, giving priority to the Downtown, Compact Neighborhood and Urban Tiers.~~ The Department shall seek funding for implementation of recommended measures identified in these studies through the City’s annual budget process and the Capital Improvement Program and from funding sources available through the ~~Durham-Chapel Hill-Carrboro Metropolitan Planning Organization~~ DCHC MPO. ~~The Department shall annually report on the progress of neighborhood traffic calming studies and implementation measures to the City Council, the Planning Commission and the Inter-Neighborhood Council.~~

**Policy 8.1.6m. Traffic Calming Standards and Practices.** To encourage streets in new developments to be designed with traffic calming principles, the ~~Public Works~~ City Department of Transportation, ~~in conjunction with the Planning Commission, the Inter-neighborhood Council and representatives of the development community,~~ shall identify and require street design elements in new development which provide traffic calming benefits to control inappropriate traffic volumes and speeds.

~~These standards and practices should consider adopted bicycle and pedestrian plans and Complete Streets design standards. prepare a manual of acceptable traffic calming standards and practices that can be used in streets in new and existing development streets for traffic volume and speed control.~~

**Policy 8.1.6n. Preservation of Neighborhood Streets.** The City-County Planning Department shall assess ways to analyze the impact of new development on neighborhood streets in the rezoning process. The Department shall develop standards for inclusion in the Unified Development Ordinance to allow site plans and preliminary plats to be rejected on the basis that traffic impact would materially alter the nature and character of existing neighborhood streets.

**Policy 8.1.6o. Energy Conservation Vehicles.** The City-County Planning Department shall research and propose land use regulations or incentives that foster the use of electric vehicles and other modes of transportation that conserve energy and reduce greenhouse gas emissions.

## DELETED POLICIES

**Policy 8.1.2b. Transportation Corridor Segment Level of Service Standards.** The City Public Works Department and the City-County Planning Department shall evaluate and establish distinct transportation level of service standards for thoroughfare corridor segments. In undertaking this evaluation, give priority to the US 15-501 corridor and the NC 54/I-40 corridor.

**Policy 8.1.2e. NC 54/I-40 Transit Corridor Feasibility Study, Phase I.** The City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “NC 54/I-40 Transit Corridor Feasibility Study, Phase I” (as may be amended from time to time).

**Policy 8.1.2k. Center of the Region Collector Street Plan.** The City and County acknowledge the work being undertaken by the Triangle J Council of Governments (TJCOG) to develop a collector street plan within the Center of the Region area, as defined by the TJCOG. Upon completion of the collector street plan, the City and County shall evaluate the plan and consider amending the Durham Comprehensive Plan to incorporate the collector street plan.

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Adopted, February 28, 2005  
Updated, April 2012

## Durham Comprehensive Plan

# Chapter 9 Water and Wastewater Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 9, Water and Wastewater Element

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# Water and Wastewater Element



*Summary of Issues*  
*Goal 1, Water*  
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Water is a basic human need and a fundamental service for municipal governments. Likewise, wastewater collection and treatment is also a fundamental service provided by many local governments. In recent years, Federal mandates have also made stormwater management a local government function. The central focus of the Water Utilities Element of the Durham Comprehensive Plan is to provide high quality utility services, while protecting the natural environment. Durham recognizes the importance for the community’s health, safety and economic well being of keeping water, wastewater, and stormwater facilities well maintained and adequate to accommodate new development.

## Summary of Issues

- 1. Raw Water Sources.** Durham will need to develop new supplies of raw water to serve expected future populations growth. ~~Which actions or combinations of action should the City take to provide, taking into account the most reliable and cost-efficient water supply options with the least adverse environmental impact?~~
- 2. Regional Cooperation in Water Supply.** Durham must continue to work with Chatham, Orange and Person and potentially other counties on joint water supply initiatives, as well as adoption of local regulations that can preserve the present water quality, while taking into account the needs and concerns of these communities.
- 3. Regional Cooperation in Water Treatment.** Regional water treatment arrangements may benefit multiple jurisdictions and maximize the efficiency of the jurisdiction’s public infrastructure. ~~What other opportunities exist for regional cooperation? Such regional water arrangements should be pursued in ways that most benefit Durham.~~
- 4. Water Conservation.** Water conservation programs are aimed at reducing the use of potable water for residences and businesses. Water conservation will delay the need for new water supplies and facilities and minimize the impact of water shortages. ~~What~~

~~other approaches to water conservation could Durham implement to reduce water demand?~~

5. **Wastewater Treatment Capacity.** Future growth and development in Durham depends on sufficient wastewater treatment capacity. Projected wastewater treatment demand is expected to reach 90 percent of plant capacity at the City's two wastewater treatment plants by 2017 and 2025. Durham will need to provide additional capacity by then, either through plant upgrade or building new facilities.
6. **Wastewater Treatment Standards.** Durham will likely face more stringent effluent standards at its wastewater treatment facilities, resulting in greater expense for wastewater treatment. Expensive upgrades to wastewater treatment facilities may be required in both the Cape Fear and Neuse River basins.
- ~~7. **Management of Septic Systems.** How involved should Durham become in the business of systematic monitoring and managing of on-site waste disposal systems?~~
8. **Stormwater Treatment Standards.** The State ~~has set or will continue to~~ set standards for on-site stormwater management and nitrogen export. Durham will be required to enforce these additional State standards to maintain high water quality.

## Goal 9.1, Water

Provide high quality potable water services to Durham's water service area in accordance with growth management objectives and policies.

### Objective 9.1.1. Water Level of Service Standards

Establish level of service standards for water supply and treatment.

**Policy 9.1.1a. Well Water Level of Service Standard.** In the Rural Tier and in other locations where public water supply is not available, the level of service standard shall be a well or a community well permitted in accordance with applicable requirements of the Durham County Health Department: or the North Carolina Division of Environment and Natural Resources, Water Supply Section.

**Policy 9.1.1b. Public Water Level of Service Standard.** Continue to operate and maintain water treatment and distribution facilities to provide 170 gallons per capita per day in compliance with standards established by the US Environmental Protection Agency and the State of North Carolina, and in accordance with City of Durham City engineering standards.

### Objective 9.1.2. Water Supply

Continue to identify and develop sufficient new raw water supply sources to support Durham's future demand, while efficiently using present water supply sources.

~~**Policy 9.1.2a. Teer Quarry.** The Department of Water Management shall acquire and develop the abandoned Teer Quarry site in northern Durham as a storage facility for raw water and ensure water quality within the quarry.~~

**Policy 9.1.2a. Jordan Lake Water Supply.** The Department of Water Management shall continue to pursue water supply allocations from Jordan Lake (in addition to the present 10 million gallon per day allocation).

**Policy 9.1.2b. Future Water Supply Source.** The Department of Water Management shall continue to assess long-range water supply options to identify the most efficient alternatives to meet Durham's long-term water supply needs, evaluating, at a minimum, the following:

- i. Expand the capacity of Lake Michie by constructing a new, and higher, dam downstream of the existing dam, raising the lake's water pool elevation;
- ii. Develop a new water supply on either the Flat River or the Little River; and
- iii. Obtain a water supply allocation from Kerr Lake.

### Objective 9.1.3. Water Treatment and Distribution

Develop and maintain capacity for treatment and distribution of water sufficient to support Durham's present and future water demand, while encouraging efficient use through a robust water conservation program.

**Policy 9.1.3a. Water Treatment Plant Capacity Expansion.** The Department of Water Management shall continue to plan for increasing additional water treatment plant capacity with a target date for ~~expanded operation at the City's Brown Water Treatment Plant operation~~ by 2012. ~~Further options for capacity expansion include~~ Capacity expansions shall include upgrades to the City's Brown Water Treatment Plant to provide for treatment of 42 million gallons per day. Additional long term options may include construction of a new plant at Jordan Lake and purchase of treatment capacity from Cary.

**Policy 9.1.3b. Finished Water Interconnections.** The Department of Water Management shall ~~develop new finished water interconnections with the City of Raleigh and Butner to improve system reliability and emergency response. Reinforce and expand the existing finished water interconnects with the Town of Cary,~~

~~the Orange Water and Sewer Authority (OWASA) and Chatham County to enhance the system reliability and emergency response. shall continue to explore interconnections with other water providers to enhance regional sustainability.~~

**Policy 9.1.3c. Water Distribution System Plan.** The Department of Water Management shall continue to update the City's Water Distribution System Master Plan every 5 to 7 years.

**Policy 9.1.3d. Water Mains.** The City Public Works Department shall continue to construct new ~~and rehabilitate existing~~ water mains to meet distribution needs. Program projects for ~~inclusion~~ both new construction and rehabilitation shall be included in the annual Capital Improvements Program.

**Policy 9.1.3e. Water Service Extension Outside the Urban Growth Area.** The City Public Works Department shall continue to prohibit extensions of the water distribution system outside of the Urban Growth Area (UGA). The City may consider extension of the water distribution system outside the UGA only ~~except~~ to properties with a verified water supply of unsatisfactory quantity or quality. Any extension as described above shall be contingent upon approval by the City Council and shall be in accordance with applicable codes, policies, standards and specifications of the City.

**Different Watersheds Protection Regulations**  
Land use regulations for watershed protection are different in the watersheds of the various water supply reservoirs because of the differences in their size, their sensitivity to water quality degradation, and their State water supply classification.

#### Objective 9.1.4. Water Supply Protection

Protect Durham's and the Region's water supply sources from water quality degradation by maintaining low intensity land uses on land near water supply reservoirs, reducing the risk of pollution from stormwater running off impervious surfaces, and by reducing the risk of discharge of hazardous and toxic materials into the natural drainage systems tributary to drinking water reservoirs. Allow development and platting of lots in stream buffers only in limited, strictly regulated, and special conditions.

**Policy 9.1.4a. Low Intensity Land Uses.** The City-County Planning Department and the City-County ~~Inspections Services~~ Department shall use the Unified Development Ordinance to maintain and enforce land use restrictions around water supply reservoirs.

**Policy 9.1.4b. Watershed Critical Areas and Land Use.** The City-County Planning Department shall use the Unified Development Ordinance to prohibit industrial land uses and maintain zoning that permits only low-density land uses in the Watershed Critical Areas, the most sensitive land near water supply reservoirs.

**Policy 9.1.4c. Impervious Surface Credit Transfer.** Through the Unified Development Ordinance, ~~allow and establish~~ maintain procedures for the transfer of impervious surface credit from a donor parcel to a receiver parcel, provided that:

- i. The donor parcel and the receiver parcel shall be within the same water supply watershed;
- ii. The impervious surface credit transfer shall not be from a donor parcel in the Protected Area to the receiver parcel in the Critical Area; and
- iii. The portion of the donor parcel which is restricted from development shall remain in a vegetated or natural state and shall be placed in a permanent conservation easement granted to the City or County, or a land trust or similar conservation-oriented nonprofit organization.

Use of this tool shall allow a project to increase its impervious surface above the limits that would otherwise be required, but would not reduce the requirements to provide engineered stormwater systems for the receiver sites. (See Policy ~~2.2.7a~~ 2.3.3b, Impervious Surface Credit Transfer.)

**Policy 9.1.4d. Land Acquisition for Buffers.** To create a greater buffer around Lake Michie and other water supply sources, the Department of Water Management shall continue to acquire land from willing sellers.

**Policy 9.1.4e. Reservoir Buffers.** Through the Unified Development Ordinance, maintain undisturbed, naturally vegetated buffers on land within 250 feet of water supply reservoirs, and prohibit development activities within the reservoir buffers.

**Policy 9.1.4f. Stream Buffers.** Through the Unified Development Ordinance, continue to require undisturbed, naturally vegetated buffers of at least 50 feet on land adjacent to intermittent and perennial streams and prohibit most development activities in order to protect water quality. Through the Unified Development Ordinance, limit the ability to utilize land in stream buffers to meet minimum lot size requirements, and allow development and platting of lots in stream buffers only in limited, strictly regulated, ~~and special~~ conditions. (See Policy 7.1.2c. Stream Buffers and Policy 9.4.2b. Stream Buffers.)

### Objective 9.1.5. Regional Water Supply and Treatment Cooperation

Support and encourage regional cooperation in water supply and water treatment services when such cooperation improves the protection of public health and the environment; reduces the cost of water services; and improves the quality, delivery and overall reliability of water services to customers.

**Policy 9.1.5a. Available Capacity of Neighboring Utility Systems.** Where possible and cost-effective, Durham shall utilize any available finished water capacity of neighboring utility systems to provide for additional reliability during periods when demands

approach available water supply and treatment capacity, and to defer additional water treatment capital projects. The Department of Water Management shall explore a potential cooperative agreement with the Town of Cary for using the Town's excess water treatment capacity related to Durham's Jordan Lake water allocation.

**Policy 9.1.5b. Cooperation of Jordan Lake Water Treatment.**

~~The Department of Water Management shall investigate a cooperative agreement with the Orange Water and Sewer Authority (OWASA) and/or other interested water suppliers for operation of a water treatment facility to utilize allocations from Jordan Lake.~~ Through the creation of the Jordan lake Partnership, the City Department of Water Management shall continue to partner with the Orange Water and Sewer Authority (OWASA), Chatham County, Orange County, the Town of Cary, and other interested water suppliers in the region to forge regional relationships for collaboration on Jordan Lake water treatment.

## Goal 9.2, Wastewater

Provide wastewater collection and treatment services to Durham's service area, within the UGA and in accordance with growth management guidelines. Provide for the use by property owners of on-site ground absorption waste disposal systems where public wastewater utilities have not or will not be extended in accordance with the Laws and Rules for Sewage Treatment and Disposal Systems (15A NCAC 18A 1900) which are enforced by the Durham County health Department. Plan for the use of high quality treated wastewater (reclaimed water) for use for irrigation and other approved uses.

### Objective 9.2.1. Wastewater Level of Service Standards

Establish level of service standards for wastewater collection and treatment.

**Policy 9.2.1a. Wastewater Collection Level of Service Standards.**

The City ~~Public Works~~ Department of Water Management and the County Engineering and Environmental Services Department shall continue to operate and maintain wastewater collection facilities in compliance with standards established by the US Environmental Protection Agency and the State of North Carolina, and in accordance with Durham City and County engineering standards.

**Policy 9.2.1b. Wastewater Treatment Level of Service Standards.** The Department of Water Management and the County Engineering and Environmental Services Department shall treat wastewater and resulting effluent and sludge in compliance with applicable National Pollutant Discharge Elimination System (NPDES) permits and within standards established by the US Environmental Protection Agency and the State of North Carolina.

**Policy 9.2.1c. On-Site Disposal System Level of Service Standard.** In the Rural Tier and in other locations where public wastewater collection and treatment is not available, the level of service standard shall be an operating on-site disposal system or a community wastewater treatment system permitted in accordance with applicable requirements of the County Health Department.

### Objective 9.2.2. Wastewater Collection

Construct, operate and maintain in a cost-effective manner a wastewater collection system that serves the citizens and businesses inside the Urban Growth Area and protects the natural environment.

**Policy 9.2.2a. Sewer Rehabilitation.** The City ~~Public Works~~ Department of Water Management shall continue to rehabilitate portions of the City's wastewater collection system by repairing, cleaning and replacing mains and outfalls, and shall use flow monitoring and television examination to monitor problem areas and program rehabilitation actions as needed.

**Policy 9.2.2b. Upgrade the Wastewater Collection System.** The City Public Works Department shall continue to upgrade Durham's wastewater collection system to meet collection needs, including constructing sewer lines by petition, constructing sewer lines, rehabilitating wastewater lines, and making wastewater collection system improvements in advance of street paving.

**Policy 9.2.2c. Sewer Pump Station Removal.** The Department of Water Management shall seek funding to remove pump stations in the City's wastewater collection system that are located close to existing sewer outfalls in order to reduce operation and maintenance costs.

**Policy 9.2.2d. Sewer Service Extension Outside the Urban Growth Area.** The City Public Works Department and the County Engineering Department shall continue to prohibit extensions of the sewer collection system outside of the Urban Growth Area (UGA), except to properties with a verified existing health hazard from an on-site sanitary sewer system. Any extension as described above shall be contingent upon approval by the City Council and shall be in accordance with applicable codes, policies, standards and specifications of the City.

### Objective 9.2.3. Wastewater Treatment

Develop and maintain capacity for cost-effective wastewater treatment sufficient to support Durham's present and future demand, while meeting or exceeding State and Federal effluent standards and protecting the natural environment.

**Policy 9.2.3a. Water Reclamation Plant Renovation.** The Department of Water Management shall renovate the North Durham Water Reclamation Facility and the South Durham Water Reclamation Facility, and County Engineering and Environmental Services Department shall renovate the Triangle Wastewater Treatment Plan as needed to maintain efficient and cost-effective operation.

**Policy 9.2.3b. Wastewater Treatment in the Rural Tier.** The City-County Planning Department ~~in conjunction with the Environmental Affairs Board~~ and the County Health Department shall explore and propose regulatory provisions in the Unified Development Ordinance for wastewater treatment in the Rural Tier that facilitate conservation-by-design and clustered residential and nonresidential development while protecting the Region's water supplies.

### Objective 9.2.4. Regional Cooperation

Support and encourage regional cooperation in wastewater services when such cooperation improves the protection of public health and the environment; reduces the cost of wastewater services; and improves the quality, delivery and overall reliability of wastewater services to customers.

**Policy 9.2.4a. Collaboration Between Durham, and the Orange Water and Sewer Authority.** The Department of Water Management and the County Engineering and Environmental Services Department shall seek opportunities to collaborate between the City of Durham, Durham County and the Orange Water and Sewer Authority (OWASA) regarding discharges into tributaries of Jordan Lake.

**Policy 9.2.4b. Collaboration with Other Jurisdictions.** The Department of Water Management shall continue discussions with other jurisdictions in the Upper Neuse River basin to investigate opportunities to collaborate on discharges into Falls Lake Basin.

## Goal 9.3, Resource Conservation and Recovery

To integrate pollution prevention and resource conservation into all operations of local government, to reduce the environmental impacts of local government, and to minimize costs associated with waste management.

### Objective 9.3.1. Water Conservation

Reduce per capita water usage in the Durham water service area.

**Policy 9.3.1a. Water Audit and Leak Detection Study.** The Department of Water Management shall continue to implement recommendations from the 2008 water audit and leak detection study.

**Policy 9.3.1b. Water Conservation Program.** The Department of Water Management Department shall continue to monitor and evaluate water consumption of all customers and the costs and effectiveness of adopted water conservation actions and program activities.

**Policy 9.3.1c. Water Rates.** The Department of Water Management shall continue to utilize ~~proposed and the City Council adopted~~ a rate structure that encourages water conservation.

**Policy 9.3.1d. Educate Households on Water Conservation.** In order to offset the economic impact of higher rates in the future, the City Manager's Office and the Department of Water Management shall provide households with information about how to save water.

**Policy 9.3.1e. Provision of Household Water Conservation Resources.** In order to offset the economic impact of higher water rates in the future, the City Manager's Office and the Department of Water Management shall develop programs to provide households with water-saving devices such as high efficiency showerheads, faucet aerators, and provide incentives such as toilet rebate/credit programs ~~and tank displacement devices.~~

**Policy 9.3.1f. Water Conservation in Areas not Served by the City Department of Water Management.** The Durham County Health Department shall advise property owners served by private wells on the importance of leak detection and water conservation.

### Objective 9.3.2. Water Reclamation and Re-use

Promote opportunities for bulk use of reclaimed water from Durham’s water reclamation facilities.

**Policy 9.3.2a. Reclaimed Water Pilot Program.** The City Department of Water Management and the County Engineering and Environmental Services Department shall plan and ~~has~~ implemented a pilot reclaimed water system near one of Durham’s water reclamation or wastewater treatment facilities serving nearby City facilities, County facilities, and/or private reclaimed water users.

**Policy 9.3.2b. Bulk Reclaimed Water.** The Department of Water Management’s Master Plan for Water Reclamation Facilities shall include permanent bulk reclaimed water from at the North Durham Water Reclamation Facility. The Department shall implement other pilot facilities at the City and County Wastewater Reclamation Facilities.

**Residuals Management is necessary because** ~~W~~ater treatment processes and wastewater treatment processes produce leftover solid materials, called residuals. Durham has an obligation to dispose of these materials in an environmentally safe way.

### Objective 9.3.3. Water and Wastewater Treatment Residuals

Develop long-range plan for the safe and efficient disposal of dewatered solids from Durham’s water treatment plans and water reclamation facilities.

**Policy 9.3.3a. Water and Wastewater Treatment Residuals Management Studies.** The Department of Water Management and the County Engineering and Environmental Services Department shall conduct studies to evaluate cost-efficient options for managing and disposing of water and wastewater treatment plan residual solids.

**Policy 9.3.3b. Regional Water and Wastewater Treatment Residuals Management Facility.** The Department of Water Management and the County Engineering and Environmental Services Department shall continue dialogue with other utility providers in the Region about joint residual management options that take advantage of economies of scale.

## Goal 9.4, Stormwater Management

Design, construct and maintain a stormwater management system that minimizes water quality degradation and water quantity impacts associated with stormwater runoff and preserves and utilizes the existing natural systems. Encourage low impact development design and “green” stormwater management strategies.

### Objective 9.4.1. Stormwater Level of Service Standards

Establish level of service standards for managing stormwater quantity and quality.

**Policy 9.4.1a. Water Quantity Level of Service Standard.** The water quantity level of service standard shall be that new development will not increase the post-development peak runoff rate from the 1-year storm over the predevelopment peak runoff rate by more than 10 percent.

**Policy 9.4.1b. Water Quality Level of Service Standard, Nutrient Export Limits.** Through the Unified Development Ordinance and City and County Stormwater Ordinances, the City and County shall establish a level of service standard for nutrient and other pollutant export from new development. These standards shall meet or exceed the limits adopted for Jordan and/or Falls lakes by the North Carolina Environmental Management Commission and/or the North Carolina General Assembly. The City and County shall ensure that this standard is met by evaluating all new development proposals at the time of site plan submission.

**Policy 9.4.1c. Water Quality Level of Service Standard, Watershed Protection Areas.** The level of service standard for water quality in watershed protection areas shall be deemed to be met by the treatment of the first 1-inch of stormwater runoff.

**Policy 9.4.1d. Stormwater Management Standards for Compact Neighborhood and Downtown Tiers.** The City Public Works and the City-County Planning Departments shall research and propose stormwater management standards that accommodate the development pattern of the Downtown and Compact Neighborhood Tiers and that are compatible with State and Federal requirements.

**Policy 9.4.1e. Re-evaluating Stormwater Management Level of Service Standards.** The City-County Planning Department, the City Public Works Department, and the County Engineering and Environmental Services Department shall re-evaluate the stormwater management level of service standards specifically seeking to address run-off associated with the 30-year storm when considering changes to the Unified Development Ordinance to incorporate stormwater management requirements.

### Objective 9.4.2. Natural Stormwater System

Protect the natural functions of stormwater management features.

**Policy 9.4.2a. Development Regulation.** Through the Unified Development Ordinance, maintain land use and development regulations to protect the natural functions of streams and water features.

**Policy 9.4.2b. Stream Buffers.** Through the Unified Development Ordinance, continue to require undisturbed, naturally vegetated buffers of at least 50 feet on land adjacent to intermittent and perennial streams and prohibit most development activities in order to protect water quality. Through the Unified Development Ordinance, limit the ability to utilize land in stream buffers to meet minimum lot size requirements, and allow development and platting of lots in stream buffers only in limited, strictly regulated, and special conditions. (See Policy 7.1.2c. Stream Buffers and Policy 9.1.4f. Stream Buffers.)

### Objective 9.4.3. Managing Stormwater from Existing Development

Improve water quality and reduce stream degradation from stormwater runoff from existing development in Durham.

**Policy 9.4.3a. Illicit Discharges.** The City Public Works Department shall continue to operate a program to detect and eliminate significant hidden non-stormwater discharges either directly into receiving waters or indirectly via the stormwater conveyance system. The program shall:

- i. Identify problems and priority areas through stream monitoring and other means;
- ii. Trace the source of an illicit discharge;
- iii. Remove the source of the discharge; and
- iv. Include ongoing evaluation of program effectiveness.

**Policy 9.4.3b. Industrial and Commercial Inspections.** The City Public Works Department shall continue to conduct regular inspections of industrial and commercial operations to detect unauthorized discharges into the stormwater drainage system.

**Policy 9.4.3c. Street Sweeping.** The City Public Works Department shall continue to conduct a ~~regular~~ periodic program of street sweeping to remove leaves, other organic debris, trash and other pollutants from street gutters in order to enhance the quality of stormwater runoff.

**Policy 9.4.3d. Stormwater System Retrofit.** The City Public Works Department shall continue to identify locations for cost-effective retrofit or improvements to the stormwater conveyance system that will improve the quality of stormwater runoff and/or reduce the potential for downstream flooding.

### Objective 9.4.4. Stormwater from New Development

Durham will take actions to reduce pollution from stormwater runoff from new development, both during the construction process and after construction is complete.

**Policy 9.4.4a. Sedimentation and Erosion Control.** The County Engineering and Environmental Services Department shall continue to regulate land-disturbing activity to control accelerated erosion and sedimentation in order to prevent the pollution of water and other damage to lakes, watercourses and other public and private property ~~by sedimentation~~. No person shall initiate any land-disturbing activity that uncovers more than ~~one acre~~ 20,000 square feet without having an erosion control plan approved by the Sedimentation and Erosion Control Office. In accordance with the Durham Sedimentation and Erosion Control Ordinance, the erosion control plan shall:

- i. Identify critical areas on the site subject to severe erosion and offsite areas vulnerable to damage;
- ii. Limit time of exposure;
- iii. Limit exposed areas;
- iv. Control surface water originating upgrade of the exposed areas;
- v. Control sedimentation; and
- vi. Manage stormwater runoff to control the velocity at the point of discharge to minimize accelerated erosion of the site and increased sedimentation of the stream.

(See Policy 7.1.2a. Sedimentation and Erosion Control.)

**Policy 9.4.4b. Development Review.** The City Public Works Department and the County Engineering and Environmental Services Department shall continue to review new development proposals, specifically development plans, site plans, and construction drawings, to ensure compliance with City of Durham or Durham County stormwater requirements, including:

- i. Stormwater impact assessment requirements for peak flow control;
- ii. Design of new best management practices (BMPs) to comply with requirements for watershed protection high density option; and
- iii. Neuse River Basin stormwater management requirements.

**Policy 9.4.4c. Stormwater Impact.** Through the Unified Development Ordinance, require that any person proposing new development assess potential flooding and water pollution impacts on existing downstream areas as a result of the new development. Prior to the approval of any preliminary plat or site plan, or the issuance of a building permit for any structure other than a single-family residence, the owner of the property proposed for development shall submit a Stormwater Impact Analysis which determines the impact of the increased stormwater runoff on downstream stormwater facilities and properties. The Stormwater Impact Analysis shall be required whenever:

- i. Proposed development anywhere in the County proposes to increase the peak runoff rate from wither the 2-year storm or the 10-year storm; or
- ii. Proposed development in the Neuse River basin proposes to increase peak runoff rate from the 1-year storm.

The Stormwater Impact Analysis shall comply with the requirements of the City Public Works Department Director or County Engineer, as appropriate. The City Public Works Department Director or County Engineer, as appropriate, shall determine the need for stormwater management facilities to address offsite impacts.

**Policy 9.4.4d. Required Stormwater Management Facilities and Improvements.** Through the Unified Development Ordinance, require that, for any land-disturbing activity which results in a significant increase in stormwater discharge, the City Public Works Department Director or the County Engineering and Environmental Services Department Director, as appropriate, may require the developer to provide stormwater management facilities or make other improvements to the existing drainage system to address water quantity concerns, water quality concerns, or both if the proposed development will increase potential flood damages to existing properties or significantly increase pollutant levels in downstream receiving waters. The City Public Works Department Director or the County Engineering and Environmental Services Department Director, as appropriate, shall determine pollution source hotspots, including but not limited to trash compactors and vehicle wash facilities, that require higher levels of treatment.

**Policy 9.4.4e. Engineered Stormwater Controls, Neuse River Basin.** Engineered stormwater controls shall be required for new development within the Neuse River basin if the post-development peak runoff rate from the 1-year storm increases by more than 10 percent, such that there is no net increase.

**Policy 9.4.4f. Engineered Stormwater Controls, County-Wide.** Engineered stormwater controls may be required for new development anywhere in the County at the discretion of the City Director of Public Works Department or the County Engineer, as appropriate, if the post-development peak runoff rate from the 2-year and 10-year storms increases by more than 10 percent, such that there is no net increase.

**Policy 9.4.4g. Stormwater Management and Redevelopment.** The City Public Works and the City-County Planning Departments shall research and propose specific measures to remove disincentives to redevelopment associated with requirements for nitrogen reduction and stormwater management.

**Policy 9.4.4h. Stormwater Credit.** For new development other than single-family residential development, the City Public Works Department shall continue to offer a credit against the ratepayer's stormwater service fee for measures that contribute to a reduction in peak discharge or an improvement in water quality, or for maintenance activities.

**Policy 9.4.4i. Low Impact Design in Watershed Critical Areas.** To encourage use of low impact site design in Watershed Critical areas, require through the Unified Development Ordinance, that only those site plans which propose to use the high density option (employing greater impervious surface and engineered stormwater controls) in these areas shall require approval by the Governing Bodies. Site plans employing less impervious surface may be approved administratively unless other issues require plans to be reviewed by Governing Bodies.

**Policy 9.4.4j. Floodplain Developments.** The Unified Development Ordinance shall allow development and platting of lots in the 100-year floodplain only in limited, strictly regulated, and special conditions. To discourage fill in the floodplains and reliance on more natural drainage systems, require, through the Unified Development Ordinance, that site plans for projects in the Rural and Suburban Tiers that propose to use fill in the floodplain as part of their design shall require approval by the Governing Bodies. Such approval shall be granted only if the project results in a higher quality design than would otherwise be available.

**Policy 9.4.4k. Alternative Stormwater Treatment.** The City Public Works Department, the County Engineering and Environmental Services Department and the City-County Planning Department shall develop and propose changes to the Unified Development Ordinance and other stormwater requirements to offer incentives for alternative stormwater treatment techniques, such as rain gardens, stormwater re-use, and natural stormwater retention areas.

#### Objective 9.4.5. Public Education and Outreach

Implement a public education program to distribute educational materials to the community about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

**Policy 9.4.5a. Educational Program.** The City Public Works Department shall:

- i. Prepare and distribute informative newsletters;
- ii. Establish and maintain a telephone hotline for citizens to report suspected incidents of stormwater pollution;
- iii. Create and make presentations to schools and community groups about the stormwater runoff, and

- iv. Conduct workshops for the development community and for local government officials about the stormwater management program.

**Policy 9.4.5b. Impervious Surfaces Mapping.** The City-County Planning Department shall prepare a map showing, with the best available data, existing levels of impervious surfaces in Durham County, especially in the urbanized areas.

#### DELETED POLICIES

**Policy 9.1.2a. Teer Quarry.** The Department of Water Management shall acquire and develop the abandoned Teer Quarry site in northern Durham as a storage facility for raw water and ensure water quality within the quarry.



Adopted, February 28, 2005  
Updated, April 2012

## Durham Comprehensive Plan



# Chapter 10 Parks and Recreation Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 10, Parks and Recreation Element

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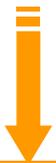
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# Parks and Recreation



*Summary of Issues  
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Recreation  
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and Greenways*

Parks, recreation and open space are essential elements to a community’s quality of life. A well-planned program of parks, recreation ~~programs~~ and open space will enrich people’s lives and will help to attract new residents and businesses by positively impacting tourism, real estate values and land development patterns. The Parks and Recreation Element identifies strategies for the provision of adequate parks, greenways and recreation facilities designed to meet the needs of Durham’s diverse and growing population. A system of parks, greenways and open space also provides many environmental benefits that are essential to the health of the community.

## Summary of Issues

- 1. Parks.** Durham will need to acquire additional land resources for the development of future park and recreation facilities to meet the demands and needs of an ever growing and diverse population. It is estimated that the population of Durham County will increase from 268,000 in 2010 to 356,000 by 2030. ~~70,000-100,000 in the next twenty years.~~ That growth rate will reflect an increasing need for park and recreation facilities. The public will expect a system of parks, greenways, trails, recreation centers and programs that reflect the community desires and expectations of quality.
- 2. Funding.** Durham will need to identify funding strategies to provide the means to acquire future parkland, develop facilities and to upgrade and improve existing facilities. The City must identify additional funding sources to provide relief to traditional tax based sources and to build public support to finance the Master Plan. Development of partnerships with other local, state, federal agencies, non-profit groups and commercial providers of recreation will be crucial in identifying future funding.
- 3. Maintenance.** The City parks and recreation facilities are currently not maintained at the desired levels to promote use, safety and visitor appreciation. The City must establish minimum maintenance standards for all parks, recreation facilities, trails

and greenways and open space areas. The City should develop park standards to include development, signage, and facility standards. These standards will provide a guide for determining what appropriate land areas are needed for certain facilities and what type of parks and facilities are needed to support future populations.

4. **Safety.** Currently park users have reported that they do not feel safe in our parks and recreation facilities. The City should increase its police presence at all facilities, events and greenways to instill that sense of safety. Improved maintenance of facilities will also increase the public perception of cared for and maintained parks. Incorporation of volunteer park watch type programs can instill a sense of “ownership” that will dissuade undesirable activities.
5. **Greenways and Trails.** The City must continue its program of providing a comprehensive system of accessible, safe, and convenient greenways and trails. This greenway system must be a joint program of many departments to identify lands that serve multiple functions for transportation, connectivity, and storm-water control.

### Goal 10.1, Parks, Recreational Facilities, Trails and Greenways

Provide a system of parks, recreational facilities, and greenways that meets the needs of Durham’s growing and diverse population.

#### Objective 10.1.1. Parks and Recreation Level of Service Standards

Establish level of service standards for the provision of parks and recreation facilities to meet expressed community desires.

**Policy 10.1.1a. Parks and Recreation Level of Service Standards, City.** The level of service standards indicated below in Table 10-1, Parks and Recreation Level of Service Standards, shall be established as targets that the City shall strive towards in order to provide optimum access to recreational opportunities in the Durham community, meanwhile noting that adequate service areas for facilities are as critical as the number of facilities. The City Parks and Recreation Department shall review the level of service standards at regular intervals to ensure that they address community desires for parks and recreation facilities.

**Policy 10.1.1b. Parks and Recreation Level of Service Standards, County.** The County shall continue to provide passive nature-based recreational opportunities, including trails and resource-oriented parks, on County-owned sites.

<b>Table 10-1, Parks and Recreation Level of Service Standards</b>		
Type of Facility	Level of Service Standard	Facility Needs By 2020 <del>2010</del>
Adult baseball fields (lighted)	1 per 20,000 people	<u>14</u> <del>12</del> fields
Youth baseball/adult softball	1 per 5,000 people	<u>54</u> <del>46</del> fields
Ball fields (soccer and football)	1 per 5,000 people	<u>54</u> <del>46</del> fields
Basketball courts	1 per 5,000 people	<u>54</u> <del>46</del> courts
Tennis courts	1 per 2,000 people	<u>135</u> <del>115</del> courts
Picnic tables	1 per 125 people	<u>2156</u> <del>1,842</del> tables
Picnic shelters	1 per 2,000 people	<u>135</u> <del>115</del> shelters
Playgrounds	1 per 1,000 people	<u>270</u> <del>230</del> playgrounds
Trails	0.4 mile per 1,000 people	<u>10892</u> miles
Recreation Centers, with gym	1 per 25,000 people	<u>11</u> <del>9</del> centers
Swimming pools	1 per 20,000 people	<u>14</u> <del>12</del> pools
Golf courses, 18-hole	1 per 50,000 people	<u>6</u> <del>5</del> courses
Open Space/Park Lands	16 acres per 1,000 people	<u>4312</u> <del>3,680</del> acres
Dog Parks	1 per 50,000 people	<u>6</u> <del>5</del> parks
Skateboard Parks	1 per 100,000 people	<u>3</u> <del>2</del> parks
<p>Note: Assumes <del>2010</del> 2020 City of Durham population of <del>230,284</del> 270,000 people. <u>These numbers are not intended to represent “minimally acceptable levels” of parks and recreation facilities; however, they are target numbers for our population as suggested by the National Recreation and Park Association to work toward for an optimum level of service for the Durham community. These numbers can be achieved by park facilities alone or by park facilities in combination with school facilities and possibly even private facilities when they can be used by the public. Existing facilities can be found in the Existing Conditions report.</u></p>		

**Objective 10.1.2. Existing Park and Recreation Facilities**

Upgrade existing park and recreation facilities to improve their safety, accessibility, and functionality, and provide a higher level of maintenance for all park facilities.

**Policy 10.1.2a. Capital Improvements Program, Existing Park Deficiencies.** In the programming of capital facilities for parks, the City Parks and Recreation Department shall give equal priority to existing deficiencies upgrading and renovating existing facilities, developing new facilities for underserved areas, and providing innovative facilities to serve new recreation demands.

**Policy 10.1.2b. Coordination of City Parks Maintenance.** ~~The City Parks and Recreation Department and the City General Services Department shall develop more effective communications and use of resources in order to improve maintenance of City parks.~~

**Policy 10.1.2b. City Parks Maintenance Standards.** The City Parks and Recreation Department shall work collaboratively with the City General Services Department to establish minimum standards for maintenance of park and recreation facilities. These standards shall ensure that Durham citizens enjoy safe, well-maintained and aesthetically pleasing facilities. They shall include minimum standards for response times for maintenance requests, an effective request procedure, maintenance inspections, and maintenance frequencies of parks, community centers, greenway trails and special use facilities.

**Policy 10.1.2c. City Adopt-a-Park and Adopt-a-Trail Programs.** The City Parks and Recreation Department shall continue and expand its voluntary Adopt-a-Park and Adopt-a-Trail Programs to invite citizen participation and ownership in park and recreation facility care and maintenance. Coordination of these programs shall include both the City General Services Department and the Durham Police Department.

~~**Policy 10.1.2d.** City Parks and Recreation Department shall work collaboratively with neighborhoods and non-profits to identify and manage appropriate areas within parks for nature study, wildlife habitat, and observation.~~

### Objective 10.1.3. New Park and Recreation Facilities

Ensure comprehensive park and recreational services and leisure opportunities for all of Durham's citizens by implementing parks and recreation and greenways facilities plans and by providing adequate funding to ensure comprehensive recreational and leisure opportunities for all of Durham's citizens.

**Policy 10.1.3a. New Park Facility Priorities.** The City Parks and Recreation Department shall prepare an annually report for the governing bodies on their efforts to that identifies locations for new and expanded parks, greenways, and community centers in relation to underserved population concentrations and connections to existing facilities, both public and private.

**Policy 10.1.3b. Co-Location for New Park Facilities.** In the programming of capital facilities for new park facilities, the City Parks and Recreation Department shall fully explore, and wherever possible, utilize opportunities for co-location of parks facilities with other public uses, especially schools. The Durham Public Schools shall be encouraged to work with Parks and Recreation in planning and shared use of facilities.

**Policy 10.1.3c. Co-Location for New Park Facilities in Relation to Private Development.** The City Parks and Recreation Department shall actively look for co-location opportunities with private developments, such as large shopping centers, offices or mixed use projects, where all citizens may benefit from the City may

~~acquire the advantages of shared parking or unique public spaces for all citizens.~~

**Policy 10.1.3d. Parks and Recreation Funding.** The City Parks and Recreation Department and the County Engineering Department shall identify all available funding sources to provide for adequate facilities, operations and recreational opportunities to supplement traditional funding sources. The City Parks and Recreation Department and County Engineering Department shall seek available grant funding from local, State and Federal agencies and from non-profit foundations, and shall investigate partnerships with other departments and agencies to identify funding sources. The City Parks and Recreation Department shall continue to work with Keep Durham Beautiful ~~support the newly chartered Durham Parks Foundation~~ to assist the City in several types of fundraising activities including individual gifts to endowments for grant funding.

**Policy 10.1.3e. Urban Parks.** In recognition of the importance of urban parks and public open spaces in the Downtown, Compact Neighborhood, and Urban Tiers, the City Parks and Recreation Department shall look for opportunities to provide these amenities in a public setting, rather than relying on privately provided space in these areas, ~~in order to protect their urban character.~~

**Policy 10.1.3f. Trails and Greenways.** The City Parks and Recreation Department, in conjunction with the City General Services Department, shall continue its development of the trails and greenways system to work toward ~~provide for~~ a comprehensive system of greenway corridors throughout Durham in order to provide passive recreation, transportation, connectivity, and protection of linear stream-based corridors, and associated wildlife habitat. The trails and greenways system shall link residential areas, schools, parks, institutions, shopping centers, and other greenway corridors.

**Policy 10.1.3g. Budgeting Parks Maintenance Costs.** The City Budget and Management Services Department shall, upon approval of parks and recreation capital projects, automatically add the appropriate maintenance costs into the General Services Department operations budget as requested by the Department and approved by City Council beginning in the year the project is expected to begin operation.

~~**Policy 10.1.3h. Park Improvement Districts.** The City Budget and Management Services and Parks and Recreation Departments shall research the possible establishment of Park Improvement Districts as voluntary tax assessment districts providing a dedicated revenue stream to fund improvements in individual parks. The Park Improvement Districts shall be voluntary and~~

~~neighborhood controlled and managed, with City oversight of fiscal practices.~~

**Policy 10.1.3h. Southwest Durham County Park.** The County Engineering Department shall consider developing a regional park in southwest Durham in the area bounded by Ephesus Church Road, I-40, NC 54 and the Orange County line. (See Map 10-1, Park Search Areas.)

#### Objective 10.1.4. Parks and Recreation Long Range Planning

Ensure comprehensive park and recreational services and leisure opportunities for all of Durham's citizens by developing an ongoing planning process that includes updates of the park and recreation plans and public participation.

**Policy 10.1.4a. Parks and Recreation Master Plan.** In order to coordinate the Durham Comprehensive Plan with long range parks and recreation planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the "Durham Parks and Recreation Master Plan, 2003-2013" (as may be amended from time to time).

**Policy 10.1.4b. Durham Trails and Greenways Master Plan.** In order to coordinate the Durham Comprehensive Plan with long range trails and greenways planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the "Durham Trails and Greenways Master Plan, 2001" (as may be ~~amended~~ updated from time to time). (See Policy 8.1.4a, Durham Trails and Greenways Master Plan.)

~~**Policy 10.1.4c. Durham Trails and Greenways Master Plan Update.** The City Parks and Recreation Department and the City-County Planning Department shall update the "Durham Trails and Greenways Master Plan" to reflect current conditions and to identify future needs for trails and greenways throughout the City and County, where appropriate. The Master Plan shall include level of service standards for trails and greenways and shall be updated with community input and intergovernmental coordination.~~

**Policy 10.1.4c. New Hope Creek Corridor Open Space Master Plans.** In order to coordinate the Durham Comprehensive Plan with open space planning, the City and County hereby adopts and includes by reference in the Durham Comprehensive Plan the following open space master plans: the "New Hope Creek Corridor Open Space Master Plan, April 1991", the "Little River Corridor Open Space Master Plan, 2001", and the "Eastern Durham Open Space Plan, 2007" (and any future updates of these plans as may be amended from time to time). (see Policy 7.2.2d,

~~Open Space Master Plans (See Policy 7.2.2c, New Hope Creek Corridor Open Space Plan.)~~

~~**Policy 10.1.4d. Little River Corridor Open Space Plan.** In order to coordinate the Durham Comprehensive Plan with open space planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “Little River Corridor Open Space Master Plan, 2001” (as may be amended from time to time). (See Policy 7.2.2d, Little River Corridor Open Space Plan.)~~

~~**Policy 10.1.4e. Lick Creek and Little Lick Creek Open Space Master Plan.** The City-County Planning Department, in cooperation with the City Parks and Recreation Department and the County Engineering Department, beginning in 2004 shall prepare an open space plan for the Lick Creek and Little Lick Creek areas in eastern Durham. Upon completion of this open space plan, the City and County shall amend the Durham Comprehensive Plan to incorporate the open space plan.~~

**Policy 10.1.4d. Flat River Open Space Master Plan.** The City-County Planning Department, in cooperation with the County Engineering Department, shall prepare an open space plan for the Flat River basin areas in northern Durham. Upon completion of this open space plan, the City and County shall amend the Durham Comprehensive Plan to incorporate the open space plan.

**Policy 10.1.4e. Urban Open Space Plan.** The City-County Planning Department shall prepare an urban open space plan(s) for the Downtown, Compact Neighborhood, and Urban Tiers to protect and link important open space areas and identify opportunities for open space preservation, appropriate low impact recreational opportunities, and improvement of environmental conditions in the urban core. (See Policies 2.3.3c, Provision of Open Space and 7.2.2f, Urban Open Space Plan).

**Policy 10.1.4f. Parks and Open Space Plan Implementation.** The City-County Planning Department and other City and County departments shall use the parks and open space plans when evaluating new development and may require that new development provide land in conformance with those plans. (See Map 10-1, Park Search Areas.)

**Policy 10.1.4g. Park Dedication Requirements.** Through the Unified Development Ordinance, require that new residential development within the City and County provide recreation facilities within the development that are accessible to residents and visible from the street to encourage its utilization.

**Policy 10.1.4h. City Parks and Recreation Impact Fees.** The City Parks and Recreation Department shall periodically assess impact fee zones to determine their appropriateness to work with the

~~City Budget and Management Services Department and the City-County Planning Department to determine if the current impact fee methodology and impact fee zones are appropriate to the current levels of service standards and population distributions.~~

**Policy 10.1.4i. Public Participation in Parks Planning.** The City and County shall provide parks and recreation planning processes that include public participation by providing the opportunity for public involvement on the long range plan updates, park facility development, and recreation and leisure services activities. The City and County shall offer the opportunity for citizens to serve on various advisory groups, including, but not limited to the Recreation Advisory Committee, the Durham Open Space and Trails Commission, the Bike and Pedestrian Advisory Commission, the Lyon Park Advisory Board, the New Hope Creek Corridor Advisory Committee, and the Durham Arts Council.

#### **Objective 10.1.5. Partnerships and Intergovernmental Cooperation**

Coordinate and communicate with all providers of parks, recreation facilities, and open space including local, State, and Federal agencies and the private sector to ensure that the needs of the community are met in the most cost efficient and beneficial manner.

**Policy 10.1.5a. Parks and Durham Public Schools.** The City Parks and Recreation Department and the County Engineering Department shall develop a partnership with the Durham Public Schools Board to establish a system of School Parks that assist in the provision of active facilities, cultural education and life enrichment programs. This partnership shall enable City and County agencies to make the best use of available and existing facilities and make them available for the most public use consistent with the agencies' basic mission.

**Policy 10.1.5b. Parks and Recreation Interlocal Agreements.** The City Parks and Recreation Department and the County Engineering Department shall investigate and expand interlocal agreements with other local, State and Federal parks and recreation providers in Durham. The Departments shall establish joint-use agreements with private and non-profit providers of recreation activities and facilities to make those more available to the public.

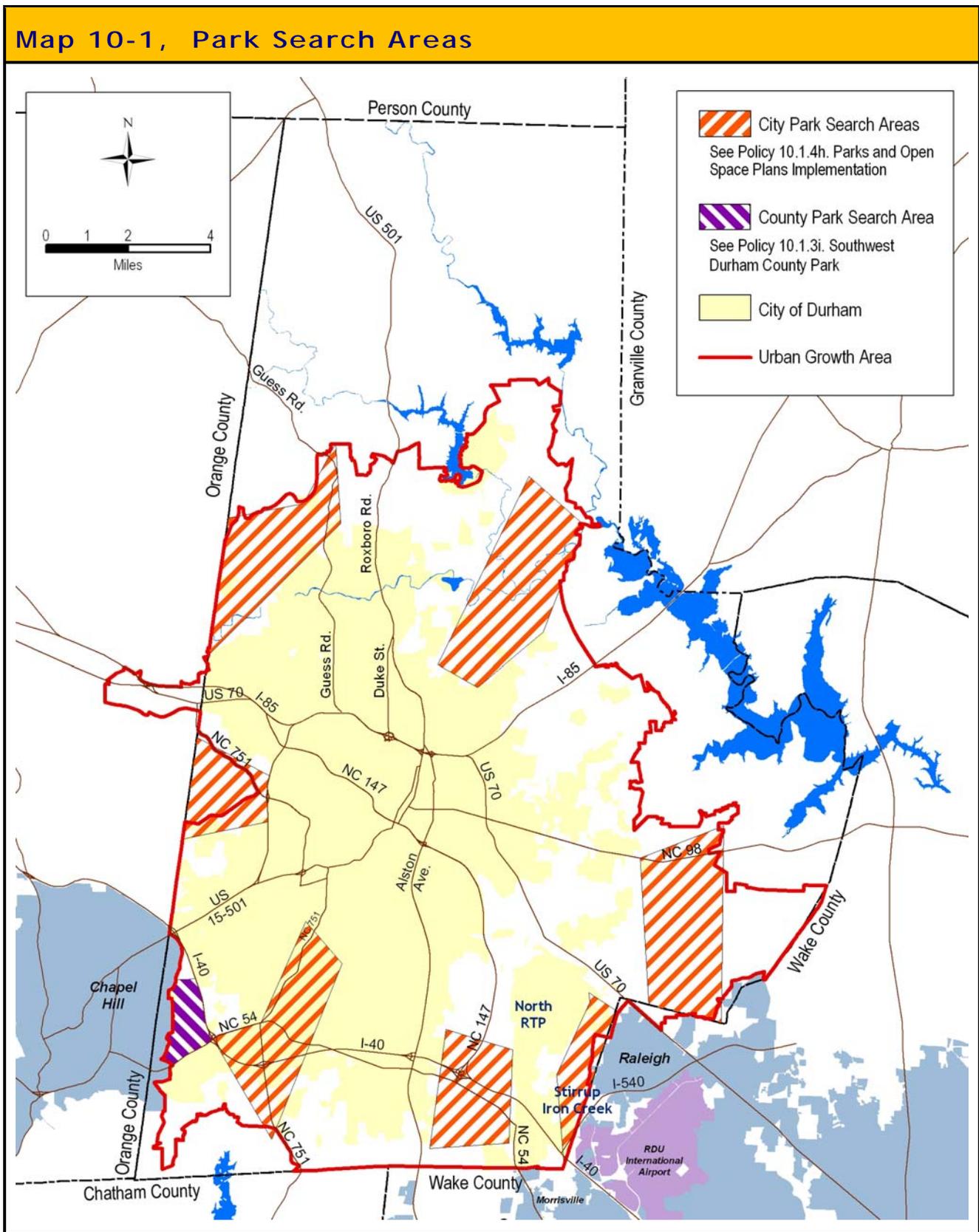
**Policy 10.1.5c. Partnership with the Durham Convention and Visitors Bureau.** The City Parks and Recreation Department shall investigate establishing a partnership with the Durham Convention and Visitors Bureau (DCVB) to identify programs and activities where the DCVB can help support the Department's goals and mission.

### Objective 10.1.6. Public Outreach and Community Education

Implement a public outreach and community education program with materials to inform citizens about the benefits of a comprehensive parks and recreation program.

**Policy 10.1.6a. Parks and Recreation Marketing Plan.** The City Parks and Recreation Department and the County Engineering Department shall develop a comprehensive marketing plan that provides citizens with information on parks, greenways, recreation programs and other services in Durham. This information shall be disseminated by means such as newsletters, program brochures, enhanced web site presence, and other media information.

**Policy 10.1.6b. Parks and Recreation Public Outreach.** The City Parks and Recreation Department shall continue to dedicate staff to serve as liaison with the local community, including the local Latino/Hispanic community, to improve involvement and participation from this growing population group.



## DELETED POLICIES

**Policy 10.1.2b. Coordination of City Parks Maintenance.** The City Parks and Recreation Department and the City General Services Department shall develop more effective communications and use of resources in order to improve maintenance of City parks.

**Policy 10.1.2d.** City Parks and Recreation Department shall work collaboratively with neighborhoods and non-profits to identify and manage appropriate areas within parks for nature study, wildlife habitat, and observation.

**Policy 10.1.3h Park Improvement Districts.** The City Budget and Management Services and Parks and Recreation Departments shall research the possible establishment of Park Improvement Districts as voluntary tax assessment districts providing a dedicated revenue stream to fund improvements in individual parks. The Park Improvement Districts shall be voluntary and neighborhood-controlled and -managed, with City oversight of fiscal practices.

**Policy 10.1.4c. Durham Trails and Greenways Master Plan Update.** The City Parks and Recreation Department and the City-County Planning Department shall update the “Durham Trails and Greenways Master Plan” to reflect current conditions and to identify future needs for trails and greenways throughout the City and County, where appropriate. The Master Plan shall include level of service standards for trails and greenways and shall be updated with community input and intergovernmental coordination.

**Policy 10.1.4d. Little River Corridor Open Space Plan.** In order to coordinate the Durham Comprehensive Plan with open space planning, the City and County hereby adopt and include by reference in the Durham Comprehensive Plan the “Little River Corridor Open Space Master Plan, 2001” (as may be amended from time to time). (See Policy 7.2.2d, Little River Corridor Open Space Plan.)

**Policy 10.1.4e. Lick Creek and Little Lick Creek Open Space Master Plan.** The City-County Planning Department, in cooperation with the City Parks and Recreation Department and the County Engineering Department, beginning in 2004 shall prepare an open space plan for the Lick Creek and Little Lick Creek areas in eastern Durham. Upon completion of this open space plan, the City and County shall amend the Durham Comprehensive Plan to incorporate the open space plan.

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Adopted, February 28, 2005  
Updated, April 2012

# Durham Comprehensive Plan

## Chapter 11 Schools Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 11, Schools Element

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# Schools Element



*Summary of Issues  
Goal 1, Adequacy of  
School Facilities  
Goal 2, Integration of  
Land Use and School  
Facility Planning  
Definitions*

Durham continues to feel the pressure of new demands placed on schools by new residential development. In addition, the quality of schools and the quality and accessibility of school facilities are important features for making a community an attractive place to live, so planning for adequate schools is essential to the economic health and integral to land use priorities for Durham. The Schools Element identifies strategies for planning coordination and the provision of adequate school facilities

## Summary of Issues

- 1. Adequacy of School Facilities.** Student population has increased by 1 to 1½ percent annually over the past few years. The number of students added in a typical year could fill a new elementary school. Durham Public Schools must continue to utilize long-range facility planning to address facility needs over the next two decades. The City and County must act to ensure that new development does not result in additional students beyond what the school system can accommodate. In addition, research has shown that children learn better in schools with daylighting and other green features, and school facilities should be planned to best enable an optimal learning environment.
- 2. Reliance on Mobile Classrooms.** Without provision of permanent space to accommodate student population growth, the Durham Public Schools must rely on mobile classrooms. Mobile classrooms provide valuable temporary space and can be used to address a variety of needs, but they cannot match the quality of educational environment that can be established in permanent buildings.
- 3. Integration of Land Use and School Facility Planning.** Schools, historically, were central points in communities. To ensure opportunities for schools to resume this position, Durham Public Schools’ planning efforts must be integrated with those of the City and County. New schools should not be located in areas where growth is not planned by the City and County. Similarly, opportunities for the collocation of schools with other

complementary public facilities, such as parks, greenways and libraries, should be pursued.

### Goal 11.1, Adequacy of School Facilities

Provide and maintain sufficient school building capacity for the needs of school children in Durham.

#### Objective 11.1.1. School Level of Service Standards

Establish and maintain level of service standards for public school facilities by type of facility (elementary, middle, and high school).

**Policy 11.1.1a. School Level of Service Standard.** The level of service for public school facilities shall be established as a maximum enrollment of ~~120~~110 percent of the system’s maximum permanent building capacity, measured on a system-wide basis for each type of facility. Currently, the rate of growth in student population is averaging an annual increase of 1.5 percent to 2 percent, but is projected by DPS to be in the 1 percent to 1.5 percent range within five years. Within four years, the City and County shall change the level of service standard from 120 to 110 percent of the system’s maximum permanent building capacity.

**Policy 11.1.1b. Adequate Schools Facilities.** The City-County Planning Department shall recommend denial of all Zoning Map amendments that propose to allow an increase in projected student generation over that of the existing zoning that would cause the schools of any type to exceed the level of service. In application of this Policy, consideration shall be given to any commitments made by the developer to mitigate the exceedance.

**Policy 11.1.1c. Adequate School Facility Policies on a Less than County-Wide Basis.** The City-County Planning Department, in conjunction with the City and County Attorneys’ Offices and the Durham Public Schools, shall continue to explore legally defensible strategies to permit adequate school facility policies to be applied on a less than County-wide basis. As part of this effort, the Durham Public Schools shall reassess the school attendance zones and the transfer policy in order to achieve better utilization of school facilities.

#### Objective 11.1.2. Data for Evaluating Adequate Schools Facilities

Develop and maintain current data for the evaluation of the adequacy of school facilities in rezoning requests.

**Policy 11.1.2a. Data on School Capacity and Enrollment.** The Durham Public Schools shall provide the following data to the

**Concern about School Level of Service Standard**  
One member of the Comprehensive Plan Steering Committee had serious disagreement about the school level of service standard using 120 percent rather than 100 percent.

City-County Planning Department for use in the evaluation of the adequacy of school facilities:

- i. Total building capacity of all schools by type (elementary, middle and high schools) in the school system;
- ii. The 20th day actual daily enrollment for all schools in the school system;
- iii. An updated copy of Durham Public School's "Capital Improvements Plan;" and
- iv. Additional information describing the capacity that will be added as a result of any projects for which funding is committed; and
- v. Revised attendance zone boundaries and projections of the attendance impact on all schools of revised attendance zone boundaries.

**Policy 11.1.2b. Student Generation Rates.** The City-County Planning Department shall utilize the most recent student generation multipliers developed by the Durham Public Schools and approved by the City and County in determining the impact of proposed zoning changes on school capacity.

**Policy 11.1.2c. Committed Building Capacity.** Projects that add permanent building capacity to schools shown to be funded in documents provided to the Planning Department by the Durham Public Schools shall be considered to have been committed and shall be included in the evaluation of available space for schools of the particular facility type programmed.

**Policy 11.1.2d. Data on the Impacts of Prior Zonings.** The City-County Planning Department shall maintain records illustrating the impact of all zoning changes over a three-year period, considering that capacity to have been committed as a result of prior actions by the City and County.

### Objective 11.1.3. Maintenance and Improvement of Facilities

Maintain and improve public school facilities as needed.

**Policy 11.1.3a. Regular Maintenance and Improvement.** Durham Public Schools shall continue to implement a regular program to maintain and improve its school facilities in order to provide students and staff with the best environment for learning.

### Objective 11.1.4. Mobile Classroom Usage

~~Lessen~~ Minimize reliance on mobile classrooms.

**Policy 11.1.4a. Consideration of Mobile Classrooms in School Facility Analysis.** Mobile classrooms shall not be included in the evaluation of the school level of service. These facilities may be required under special provisions of temporary use to support

school enrollment and/or academic requirements at a particular school site over a period of years.

## Goal 11.2, Integration of Land Use and School Facility Planning

Ensure that school facilities are incorporated into the long-range comprehensive planning process so that schools may serve as focal points for communities and neighborhoods.

### Objective 11.2.1. Shared Data

Utilize common data sources in the development of the Durham Public Schools' "Capital Improvements Plan." and the Comprehensive Plan.

**Policy 11.2.1a. The Durham Comprehensive Plan and the School Capital Improvements Plan.** Durham Public Schools shall consider the land use pattern adopted in the ~~Durham Comprehensive Plan~~ Future Land Use Map, ~~as well as the~~ distribution of growth projections developed for the Comprehensive Plan, and the DPS Land Use Study for projected needs through 2019 in their planning process ~~to enhance coordination between the plans of the City, County, and Durham Public Schools Board.~~

### Objective 11.2.2. Siting of Schools

Locate schools where they may assist in providing community and neighborhood focal points.

**Policy 11.2.2a. Coordination of Planning.** Durham Public Schools, the City, and the County shall coordinate plans for capital projects, seeking to co-locate schools with other facility types, such as parks and libraries that may function as complementary uses.

**Policy 11.2.2b. School Sites.** Schools shall not be located on sites with severe environmental constraints to development or significant historic resources such that the design of the site would compromise the resources.

**Policy 11.2.2c. Joint Planning Protocol, Siting.** Durham County and the Durham Public Schools shall implement their Joint Planning Protocol regarding the siting of schools.

**Policy 11.2.2d. Accessibility for Biking and Walking.** The Durham Public Schools shall include the potential for children to walk or bike to school as a consideration in school site location and design criteria.

**Policy 11.2.2e. Facility and Site Reuse.** The Durham Public Schools shall consider using existing inactive facilities and site for reuse.

**Policy 11.2.2f. Standards for School Site Sizes.** The Durham Public Schools shall establish alternative standards for the size of elementary, middle and high school sites appropriate to each Tier. (See Policy 4.3.3b, Standards for School Site Sizes.)

### Objective 11.2.3. Planning Process and Standards

Consider community character in the design and appearance of schools.

**Policy 11.2.3a. Joint Planning Protocol, Planning.** Durham County and the Durham Public Schools ~~shall implement~~ shall consider an update of their Joint Planning Protocol regarding planning school facilities.

**Policy 11.2.3b. Public School Planning Workshop.** In order to most efficiently use school sites and link schools with neighborhoods, the Durham Public Schools shall begin the planning for each new school and major school additions with a public school planning workshop, involving the Durham Public Schools, City and County officials, staff and interested citizens.

**Policy 11.2.3c. Daylighting.** In order to maximize student performance, designs for new schools and major school renovations shall incorporate daylighting techniques. (See Policy 4.2.5c, Daylighting.)

~~**Policy 11.2.3d. Appearance Commission Review of Proposed School Facilities.** In order to enhance design and appearance, the Durham City County Appearance Commission shall review and comment on proposed school facilities.~~

DELETED POLICIES

**Policy 11.2.3d. Appearance Commission Review of Proposed School Facilities.** In order to enhance design and appearance, the Durham City-County Appearance Commission shall review and comment on proposed school facilities.



Adopted February 28, 2005  
Updated, April 2012

# Durham Comprehensive Plan

## Chapter 12 Public Safety Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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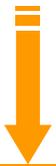
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# Public Safety Element



*Summary of Issues  
Goal 12.1, Fire Safety  
Goal 12.2, Emergency  
Medical Services  
Goal 12.3, Law  
Enforcement  
Goal 12.4, Emergency  
Management*

Public safety includes fire protection, emergency medical services, and law enforcement. Fire protection in Durham is provided by a combination of City and County fire fighters. ~~The City of Durham Fire Department has approximately 275 employees that operate out of 14 fire stations, one administrative office, and the fire academy.~~ The City of Durham carries an Insurance Services Office (ISO) rating of 3.

County fire protection is provided by five departments with stations throughout the County. These departments are primarily staffed by volunteers, but full time firefighters, employed by the County, work at the Lebanon and Bethesda Volunteer Fire Departments. The County Fire Marshal’s Office provides training and administrative assistance to the volunteer departments.

The Durham County Emergency Medical Service (EMS) is the primary EMS provider for the City and County. Paramedic services are provided from five EMS stations within the City limits and one County ambulance temporarily located at Durham City Fire Station 5 on Chapel Hill Road. ~~Additional EMS services locations outside the City limits are provided by the Bahama, Redwood, Bethesda, Lebanon, and Parkwood Volunteer Fire Departments. The first three of these Volunteer Fire Departments provide the ambulance and driver and Durham EMS provides a paramedic and equipment. Parkwood Volunteer Fire Department provides its own ambulances and paramedics, and Lebanon Volunteer Fire Department provides first responder assistance only.~~ Additional first responder assistance is provided within the City limits by the Durham Fire Department. ~~The Duke Rescue Squad serves the Duke Campus as a first responder service~~ Duke EMS is a student run first responder service providing response on the Duke Campus.

Law enforcement is provided by the City of Durham Police Department and the Durham Sheriff’s Office. ~~The Durham Police Department has approximately sworn officers and approximately 100~~

~~civilian employees. The Department has five substations located throughout the City and several leased satellite facilities, in addition to the central station central Headquarters building in downtown Durham. The Sheriff's Office provides law enforcement outside the City's corporate limits in addition to serving civil process throughout the County. The Office also provides court security and operates the County Detention Facility. The Sheriff's Office has approximately 120 sworn officers and 40 civilians. In addition, approximately detention officers and 30 civilians operate the Detention Center.~~ The Sheriff's Office has three substations in addition to its headquarters in the Judicial Building in downtown Durham.

## Summary of Issues

- 1. Coordinating Emergency Services with Growth.** Rapid response is a key component of insuring the safety of Durham's citizens. Continued growth will increase the demand for services beyond current levels. Reducing or maintaining response times will become more difficult. New technology can improve the effectiveness of staff resources, but public safety requires that increased facilities and staffing, sufficient vehicles and equipment and expanded facilities are provided with new development. ~~staffing be provided with new development.~~ Planning for the future should be based on the premise that sufficient facilities should be built to maintain the current ratios of staffing and facilities to population.
- 2. Coordination with Other Services.** Whenever it is more efficient or cheaper, public safety facilities should be coordinated or ~~combined~~ co-located with other municipal service and support facilities. Public safety activities and responses in Durham should be coordinated with other jurisdictions and with State and Federal agencies to reduce risk and enhance resources.
- 3. Community Involvement.** Public safety, particularly crime prevention, is not solely the responsibility of the public safety agencies. Public safety is a shared responsibility that is affected by the actions of many agencies and community organizations.
- 4. The Built Environment and Crime.** Some areas of existing development include isolated uses that inadvertently discourage community interaction. This social and spatial isolation can unintentionally harbor crime. There are aspects of public planning that can affect crime and the perception of safety. For example, creating vibrant urban centers, well-used parks and walkable neighborhoods puts more "eyes on the street," making these areas safer. Fostering neighborhood pride in residential areas and encouraging pedestrian activity on the streets and in public areas create a more active and cohesive community with

safety benefits as well. These kinds of activities could increase the perception of safety and act as a crime deterrent.

## Goal 12.1, Fire Protection

Provide an effective program of fire protection to maintain a safe environment for Durham's citizens.

### Objective 12.1.1. Fire Protection Level of Service Standards, City

Establish and maintain an appropriate level of fire protection in the City as growth-related demand for services occurs.

**Policy 12.1.1a. City Fire Protection Response Time.** Maintain the following response times:

- i. ~~A six (6)-6 minute total reflex emergency response~~ time for the first arriving unit for ~~85~~90% of all incident occurrences;
- ii. ~~A two (2)-two~~ minute turn out time for 100% of incident occurrences (911 Center one minute call processing time plus one minute enroute time);
- iii. ~~4~~ Four (4) minutes for actual travel time for ~~85~~90% of occurrences.

**Policy 12.1.1b. City Fire Protection Equipment and Staffing.** Determine strategic placement of engine company ladder companies, and other emergency response apparatus by utilizing fire service jurisdiction assessment and fire data analysis software. Primary considerations include call volume, call frequency, call type (Fire, EMS), in addition to building occupancy, design and hazard.

**Policy 12.1.1c. City Fire Station Locations.** Determine the need for new City fire station sites based on assessments that include, at a minimum, the following factors:

- i. Increases in development activity that would eventually rule out a 4 minute travel time;
- ii. Trends in adjoining service areas toward a rise in the number of calls, call type, and increasing travel times.
- iii. Risk assessments and standard of coverage applications; and
- iv. Increasing population or population density, and building values in the proposed fire service area.

**Policy 12.1.1d. Fire Hydrant System.** Reduce the level of risk by maintaining the hydrant system with adequate fire flows.

### Objective 12.1.2. Fire Protection Level of Service Standards, County

Establish and maintain an appropriate level of fire protection in Durham County outside the City as growth-related demand for services occurs.

**Policy 12.1.2a. County Fire Protection Response Time.** Maintain an 8 minute emergency response time for 80 percent of the calls and a turn out time of less than one minute for at least 90 percent of calls.

**Policy 12.1.2b. Volunteer Fire Department Stations in Durham County.** Determine the need for new County volunteer fire department station sites based on assessments that include, at a minimum, the following factors:

- i. Increasing population and building values in the proposed fire service area;
- ii. Increases in development activity that would extend response times; and
- iii. Trends in adjoining service areas toward a rise in the number of calls and increasing travel times.

**Policy 12.1.2c. City Fire Station Locations.** Determine the need for new City fire station sites based on the use of fire service jurisdiction assessment and fire data analysis software. Variables used in decisions that include, ~~at a minimum, the following factors:~~

- i. Increasing population or population density, and building values in the proposed fire service area.
- ii. Building occupancy, design, and hazard;
- iii. Increases in development activity that would eventually rule out a 4 minute travel time;
- iv. Trends in adjoining service areas toward a rise in the number of calls, call type, and increasing travel times; and
- v. Risk assessments and standard of coverage applications.

**Policy 12.1.2d. Fire Hydrant System.** Reduce the level of risk by maintaining the hydrant system with adequate fire flows.

### Objective 12.1.3. Interagency Cooperation

Maintain high levels of cooperation among all departments and agencies involved in fire protection and emergency services to assure a high level of service in a cost effective manner.

**Policy 12.1.3a. Mutual Aid.** Continue to implement mutual aid agreements with other jurisdictions and the State.

**Policy 12.1.3b. Fire Protection Plan.** The City Fire Department and the Durham County Fire Marshall shall develop a long range fire protection plan for comprehensive fire services throughout Durham County.

**Policy 12.1.3c. Siting Public Safety Facilities.** Establish a cooperative process among jurisdictions for the appropriate siting of public safety facilities, particularly at the boundaries of jurisdictions development and location of public safety facilities - especially for collaborative training sites.

**Policy 12.1.3d. Multiple Use Sites.** In programming new sites for fire and emergency medical facilities, the City and County shall evaluate the feasibility of the proposed sites to accommodate a combination of uses whenever possible in order to provide services more cost effectively and to create centers for community activities.

## Goal 12.2, Emergency Medical Services

Provide an effective program of emergency medical services to maintain a safe environment for Durham's citizens.

### Objective 12.2.1. Emergency Medical Service Level of Service Standards

Establish and maintain an appropriate level of emergency medical service protection in Durham as growth-related demand for services occurs.

**Policy 12.2.1a. EMS Response Time.** The Durham Emergency Medical Services Department shall maintain a County-wide response time of 8:59 minutes or less.

**Policy 12.2.1b. EMS Equipment Needs.** The Durham Emergency Medical Services Department shall maintain a ratio of ambulances to population of 1 to 21,500.

**Policy 12.2.1c. EMS Alternative Funding Methods.** The Durham Emergency Medical Services shall explore supplemental funding methods to improve EMS services in the County.

### Objective 12.2.2. Interagency Cooperation

Maintain high levels of cooperation among all agencies involved in emergency medical services to assure prompt emergency response in a cost effective manner.

**Policy 12.2.2a. Paramedics at VFD Stations.** Maintain agreements to locate paramedics at Volunteer Fire Stations.

**Policy 12.2.2b. EMS Mutual Aid.** Maintain the agreement for first responder assistance with the City Fire Department.

**Policy 12.2.2c. Multiple Use Facilities.** In planning new stations, the EMS shall evaluate the feasibility of using the sites to

accommodate educational programs for citizens and training programs for staff and, in collaboration with other agencies, to provide co-housing of public safety/ EMS agencies within Durham City and County.

## Goal 12.3, Law Enforcement

Continue efforts to prevent, control, and reduce crime.

### Objective 12.3.1. Law Enforcement Level of Service Standards

Establish and maintain an appropriate level of service for law enforcement as growth-related demand for services occurs.

**Policy 12.3.1a. City Law Enforcement Staffing.** Maintain adequate patrols to provide an average response time of 6.5 minutes or less for Priority 1 calls.

**Policy 12.3.1b. County Law Enforcement Staffing.** Maintain a ratio of sworn officers to the County population (outside the City limits) of 1:316229.

**Policy 12.3.1c. Mutual Aid.** Continue to implement mutual aid agreements with other jurisdictions, the State and Federal law enforcement agencies.

### Objective 12.3.2. Shared Roles in Crime Prevention with Other Agencies

Involve other agencies in preventing crime.

**Policy 12.3.2a. Crime Prevention Coordination.** Coordinate a shared approach with community agencies toward reducing criminal activity through educational efforts that focus on crime prevention by conducting community education programs. Include coordination with ~~the North Carolina Central University Police Department and Duke University Police Department~~ major institutional, commercial and corporate stakeholders.

**Policy 12.3.2b. Crime Prevention Through Environmental Design.** ~~Ensure the~~ Continue consideration of *Crime Prevention Through Environmental Design* (CPTED) strategies in site design through integration of CPTED principles in the Unified Development Ordinance and design guidelines. (See Policy 4.1.1e*j*. Crime Prevention Through Environmental Design.)

**Policy 12.3.2c. Neighborhood Watch and Other Volunteer Programs.** Involve neighborhoods in crime prevention, disaster preparedness, citizen volunteer police services and shelter management through the establishment of neighborhood programs.

## Goal 12.4, Emergency Management

Provide an effective program of emergency management to maintain a safe environment for Durham's citizens.

### Objective 12.4.1. Emergency Management Services

Establish and maintain an appropriate level of emergency management in Durham.

**Policy 12.4.1a. Emergency Operations Plan.** Maintain and implement an effective Emergency Operations Plan to protect people and property in Durham in times of emergency. The Plan shall delineate roles and establish policies, procedures and responsibilities for public and non-profit agencies at times of emergency. The National Incident Management System model will be incorporated into the response plan.

**Policy 12.4.1b. Community and Volunteer Coordination.** The Emergency Management Department shall work with the Sheriff's Office, City and County Managers, City's Police and Fire Department, Volunteer Fire Departments, Emergency Medical Services, other agencies and citizen groups, such as the American Red Cross, the Salvation Army, Amateur Radio (ARES), Community Emergency Response Teams (CERT), Police Reserves, Sheriff's Reserves, and Citizen Observer Patrol (COPS), to implement the Emergency Operations Plan and coordinate activities and responsibilities during periods of disaster.

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**Adopted, February 28, 2005  
Updated, April 2012**

## **Durham Comprehensive Plan**

# **Chapter 13 Solid Waste Element**

**Durham City-County Planning Department**

# The Durham Comprehensive Plan

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# Chapter 13, Solid Waste Element

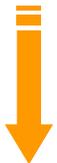
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# Solid Waste Element



*Summary of Issues  
Goal 1, Solid Waste  
Collection and Disposal  
Goal 2, Waste Reduction*

The purpose of the Solid Waste Element is intended to integrate Durham’s solid waste collection and disposal goals with the Durham Comprehensive Plan. The Element is consistent with the Solid Waste Management Plan prepared by the City of Durham in accordance with NC General Statute 130A-309.09A(b), whose the purpose of which is to meet solid waste needs and to protect public health and the environment.

## Summary of Issues

**Solid Waste Disposal Capacity.** As Durham’s population increases over the next decades, so will the amount of solid waste the community generates. Durham does not operates ~~no~~ solid waste landfill facilities in the area, so solid waste is ~~presently~~ collected, compacted, and transferred to rail cars, and sent to a sanitary landfill in Virginia. landfill outside of Durham, ~~currently in Mt Gilead, NC. The contract for landfill disposal fees expire in July 2012.~~ Durham will need to monitor the capacity of this facility and undertake alternative waste disposal methods, such as recycling, to increase this facility’s time horizon. ~~Will that landfill facility continue to provide solid waste disposal for Durham? Will the transfer facility be sufficient to handle future volumes of waste? To what degree can recycling reduce Durham’s waste stream?~~

## Goal 13.1, Solid Waste Collection and Disposal

Provide a comprehensive, responsive, environmentally safe, efficient, and cost-effective solid waste collection program for residents, businesses and industries.

### Objective 13.1.1. Solid Waste Level of Service Standards, City

Provide residential, ~~commercial and industrial~~ solid waste collection services in an efficient and cost-effective manner, and limited

commercial and industrial services. Establish level of service standards for solid waste collection and disposal in the City.

~~**Policy 13.1.1a. Level of Service for Solid Waste.** The solid waste disposal level of service shall be disposal capacity of sufficient capacity to meet the City's needs. to accommodate per capita solid waste generation of 6.3 pounds per person per day (or 1.15 tons per person per year).~~

**Policy 13.1.1b. Residential Collection.** The residential collection level of service shall be weekly, curbside collection of household garbage, and non-recyclable packaging and other materials.

**Policy 13.1.1c. Yard Waste Collection.** The yard waste collection level of service shall be weekly, curbside collection of yard waste from subscribing residences, consisting of leaves, grass and shrub clippings garden residue, twigs, limbs and small branches.

~~**Policy 13.1.1d. Stationary Container Collection.** The stationary container (dumpster) collection level of service standard shall be weekly collection to subscribing businesses or multi-family residential complexes.~~

**Policy 13.1.1d. Bulky Item Collection.** The bulky items collection level of service shall be collection services on demand for a fee weekly for a limited number of items. Roll-off container rentals will be made available for larger amounts of bulk waste.

**Policy 13.1.1e. Household Hazardous Wastes.** The City shall actively promote and continue to provide, at least monthly, for drop off of household hazardous wastes, including electronic waste, for citizens of Durham and surrounding areas.

**Policy 13.1.1f. Multi-Family Waste Collection.** The City Solid Waste Management Department shall evaluate and propose standards for curbside collection of solid waste from multi-family ownership residential units on public streets.

### Objective 13.1.2. Solid Waste Level of Service Standards, County

Establish level of service standards for solid waste collection in the County.

**Policy 13.1.2a. County Convenience Centers.** Durham County shall operate and maintain solid waste Convenience Centers to provide County residents a place to dispose of residential solid waste, major appliances, and yard waste.

### Objective 13.1.3. Solid Waste Disposal

Provide solid waste disposal services in an efficient and cost-effective manner.

**Waste Reduction in Durham's waste reduction use a base year of is measured using FY 1988-1989 as a base year because in order to recognize waste reduction efforts that began in 1988. During that year, Durham County disposed of 224,196 tons of waste and had a population of 171,483, resulting in a base per capita disposal rate of 7.18 pounds per person per day, or 1.31 tons per person per year.**

**Policy 13.1.3a. Disposal Contract.** The City Solid Waste Management Department shall contract for transfer and disposal of solid waste in an approved Subtitle D sanitary landfill.

**Policy 13.1.3b. Transfer Station.** The City Solid Waste Management Department shall upgrade the transfer station facility at 2115 East Camden Avenue to allow for expected growth during the next ten years.

~~**Policy 13.1.3c. Debris Landfill.** The City Solid Waste Management Department shall continue to own and operate the Land Clearing and Inert Debris (LCID) Landfill.~~

**Policy 13.1.3c. Solid Waste Disposal Alternatives.** The City Solid Waste Management Department shall investigate, alone or with other jurisdictions in the Region, alternatives for solid waste disposal.

**Goal 13.2, Waste Reduction**

Reduce the amount of waste that Durham produces and disposes.

**Objective 13.2.1. Waste Reduction**

Establish targets for waste reduction.

**Policy 13.2.1a. Waste Reduction Targets.** Durham shall reduce its waste disposal by 13 percent by FY 2005-2006 (to 6.30 pounds per person per day) and by 21 percent by FY 2012-2013 (to 5.70 pounds per person per day), in accordance with Table 13-1. Waste Reduction Targets.

<b>Table 13-1, Waste Reduction Targets</b>		
	<b>Three Year Target FY 2005-2006</b>	<b>Ten Year Target FY 2012-2013</b>
Waste Reduction Goal	13 Percent	21 Percent
Target Disposal Rate	6.30 Pounds per Person per Day	5.70 Pounds per Person per Day
Projected Waste Disposed	234,954 Tons	233,232 Tons
Waste Reduction Amount	32,689 Tons	60,551 Tons
Note: Waste reduction is relative to the FY 1988-1989 rate of 7.18 pounds per person per day (1.31 tons per person per year).		

**Objective 13.2.2. Recycling**

Require the recycling of steel cans, aluminum cans, glass bottles and jars, newspaper, and corrugated cardboard.

**Policy 13.2.2a. Collection of Recyclable Materials.** The City of Durham shall provide curbside collection of recyclable materials.

~~**Policy 13.2.2b. City Recycling Drop-off Centers.** The City of Durham shall continue to provide recycling drop-off centers, with 24-hour access, at convenient locations scattered around the community.~~

**Policy 13.2.2b. County Recycling Convenience Centers.** Durham County shall operate and maintain solid waste Convenience Centers to provide County residents a place to dispose of recyclable materials.

~~**Policy 13.2.2c. Composting.** The City Solid Waste Management Department and the County General Services Department shall explore programs to encourage composting of some portion of Durham's solid waste stream~~ shall continue to operate a Type I yard waste processing facility.

**Policy 13.2.2d. Construction and Demolition Waste Recycling.** The City Solid Waste Management Department and the County General Services Department shall consider establishing a recycling program for construction and demolition waste.

**Policy 13.2.2e. Public Education About Recycling.** The City Solid Waste Management Department, the County General Services Department and the City and County Public Information Offices shall continue ~~present~~ efforts to promote recycling and shall propose new public education programs related to recycling.

### Objective 13.2.3. Methane Gas Utilization

Utilize the large energy resource in the methane that is being released from the closed landfill and from the anaerobic digesters at the North Durham Water Reclamation Facility.

**Policy 13.2.3a. Methane Gas Monitoring and Utilization.** The City Water Management Department shall continue to ~~monitor the quality and quantity of methane gas produced from the North Durham Water Reclamation Facility to evaluate the feasibility of~~ utilize methane gas produced from the utilization options produced from the North Durham Water Reclamation Facilities. The City Water Management Department shall conduct a feasibility study to evaluate the potential utilization options more closely.

## DELETED POLICIES

**Policy 13.1.1d. Stationary Container Collection.** The stationary container (dumpster) collection level of service standard shall be weekly collection to subscribing businesses or multi-family residential complexes.

**Policy 13.2.2b. City Recycling Drop-off Centers.** The City of Durham shall continue to provide recycling drop off centers, with 24 hour access, at convenient locations scattered around the community.

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Adopted, February 28, 2005  
Updated, April 2012

# Durham Comprehensive Plan

## Chapter 14 Libraries Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 14, Libraries Element

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# Libraries Element



*Summary of Issues  
Goal 1, Library  
Facilities, Services,  
and Technology*

The purpose of the Libraries Element of the Durham Comprehensive Plan is to ensure the provision of library services to the people of Durham County. The Libraries Element identifies strategies for providing library facilities and services sufficient to meet the needs of Durham’s diverse and rapidly growing population. The Durham County Library faces many challenges in meeting the information needs of an evolving, multi-ethnic and multi-literate population.

## Summary of Issues

- 1. Library Facilities and Growth.** Within the past five years, Durham County Library has completed three new branch libraries identified within its Capital Improvements Plan, which has brought library facilities to levels that meet current demand. However, as As Durham continues to grow, new residents will additional library facilities may be required, either as new construction or an expansion of existing facilities. In some locations, this may mean expanding existing facilities and upgrading technology. In other locations, existing facilities do not exist and Durham will need to identify needed facilities, select appropriate sites and program construction. Present capital improvements planning for the Durham County Library has identified three new branch libraries and two expansion projects to meet the growing demand for library services. How can Durham implement these plans? What needs will face beyond these facilities the Durham County Library face over the coming decades?
- 2. Service Expansion.** The Durham County Library has identified the need for several key service expansions. Services need to be increased for children aged five and under and for young adults. The Library needs to expand its hours of operation and capacity for remote access in order to increase community access to library services. In addition, the Durham County Library needs to expand the service it provides to Hispanics and other non-English speaking populations. Workforce development will also be key to expanding services. Challenging economic times over the past

five years has caused a tremendous increase in the number of customers needing basic assistance to complete online job applications, create resumes and cover letters, searching for employment, or in acquiring basic computer skills that would allow customers to utilize available technology in their job searches.

- 3. **Technology.** Through its strategic planning, the Durham County Library has identified a variety of needs related to technology. These needs include upgrading the Library’s computerized central collection catalogue and circulation software, as well as an overall upgrade upgrading and coordination of the Library’s personal computers targeted for patron use. ~~How can the Durham County Library address these operational needs as well as its future facility needs?~~

### Goal 14.1, Library Facilities, Services, and Technology

Provide library facilities and services that are state-of-the-art, accessible and attractive, and of sufficient size and design to meet the Library’s mission. Build on current Library strengths and meet the service needs of a wide array of citizens.

#### Objective 14.1.1. Library Level of Service Standards

Establish level of service standards for the provision of library facilities to meet community needs.

**Policy 14.1.1a. Library Level of Service Standards, Space.** Durham County shall provide Library building space equal to at least 0.50 square feet per capita. Sufficient space shall be provided to accommodate the planned program of service for each facility.

**Policy 14.1.1b. Library Level of Service Standard, Books.** Durham County shall maintain Library books in an amount equal to at least 3.00 books per capita.

**Policy 14.1.1c. Library Level of Service Standards, Distribution.** Durham County shall provide Library facilities such that most County residents are within 5 miles of a Library facility.

#### Objective 14.1.2. Existing Facilities

Improve and expand existing library facilities. (See Map 14-1, Library Facilities.)

**Policy 14.1.2a. Facilities Renovation Plan.** The Durham County Library and the County General Services Department shall

**Durham County Library Mission Statement**  
 The mission of the Durham County Library is to provide to the entire community books, services, and other resources which inform, inspire learning, cultivate understanding, and excite the imagination.

develop a plan for periodic maintenance and renovation of existing facilities.

**Policy 14.1.2b. Library Space Needs Assessment.** The Durham County Library and County Engineering Department, in conjunction with community organizations, shall perform a space needs assessment at all facilities.

### Objective 14.1.3. New Facilities

Provide new library facilities to meet demand created by a diverse and growing population.

**Policy 14.1.3a. Long Range Facilities Plan.** The Durham County Library shall work with the County Engineering Department and community organizations to develop a long range plan for facilities that reflects the adopted Library level of service standard and the anticipated population growth.

**Policy 14.1.3b. Surplus Properties Evaluation.** The Durham County Library, County Engineering Department, and the City General Services Department shall jointly evaluate the viability of publicly owned surplus properties for development of library facilities.

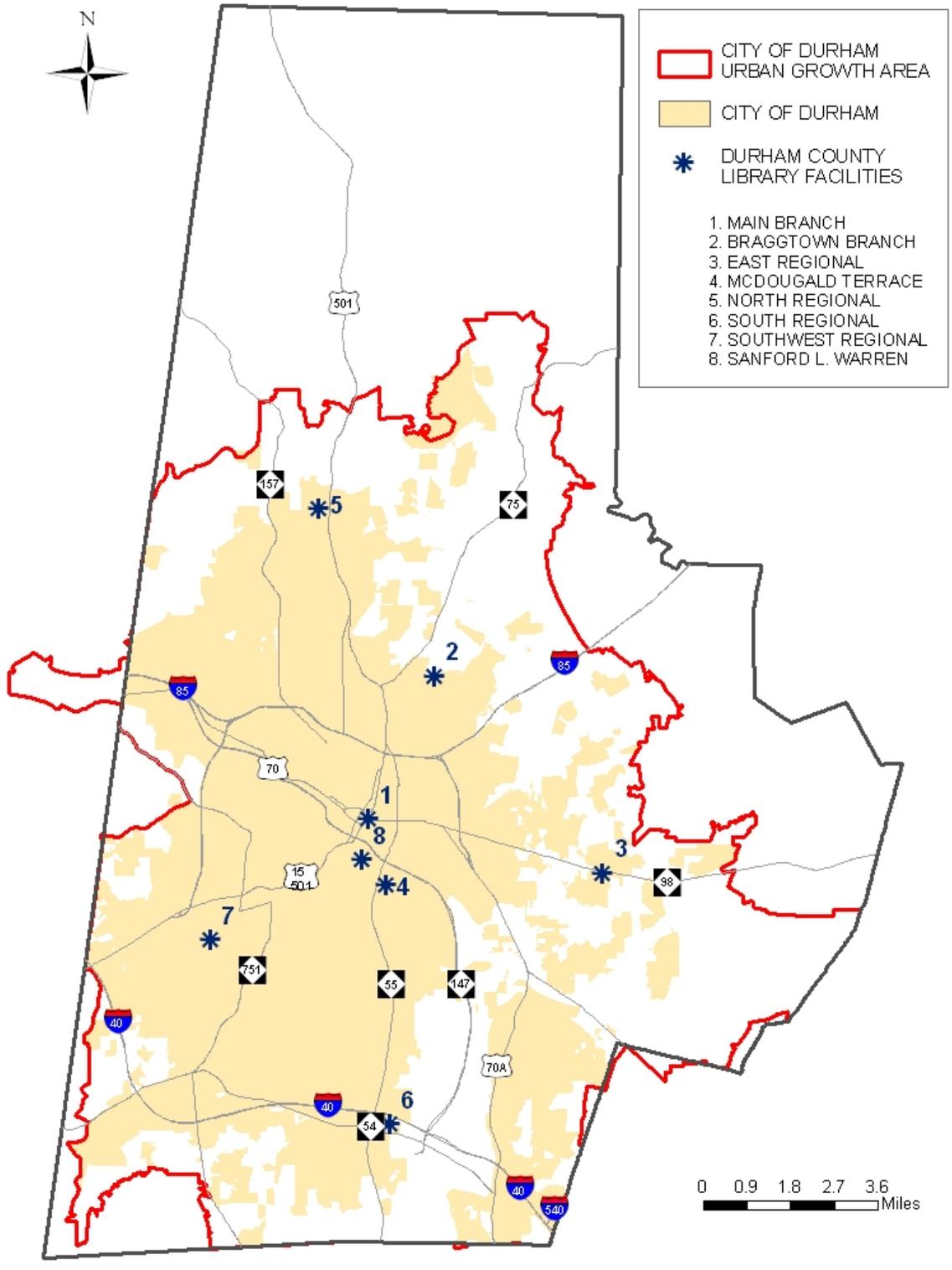
**Policy 14.1.3c. Libraries and Co-Location.** In order to maximize accessibility, the Durham County Library shall explore opportunities for co-location of libraries with other government and community facilities, such as schools, parks, and community centers.

### Objective 14.1.4. Technology Management Plan

Implement the recommendations of the Technology Management Plan.

**Policy 14.1.4a. New Technology.** The Durham County Library shall continually evaluate opportunities for integrating new technology in its operations and management.

# Map 14-1. Library Facilities





Adopted, February 28, 2005  
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## Durham Comprehensive Plan

# Chapter 15 Capital Improvements Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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# Chapter 15, Capital Improvements Element

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# Capital Improvements Element



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Goal 15.1,  
Coordination with  
the Plan  
Goal 15.2, Funding  
Public Facilities  
Goal 15.3, Continued  
Assessment*

The Durham Comprehensive Plan elements identify the levels of public service that will be needed to serve Durham’s future residents. The City and County Capital Improvement Programs (CIPs) will play significant roles in synchronizing development and the provision of services. The Capital Improvements Element of the Comprehensive Plan establishes policies to assure that the public facilities will be available in the proper locations to support the projected population. The Capital Improvement Element policies are intended to connect the funding programs to the goals of the Comprehensive Plan. These policies link the Future Land Use Map to the ability of the City and County to construct the facilities necessary to accommodate the new growth.

## Summary of Issues

- 1. Assessment of Impacts of Growth.** Regular reviews of the effects of growth are needed to assure that development does not exceed the capacity of the programmed public facilities. Such reviews can assist in insuring facilities will be adequately sized and in the proper locations to serve growth and development. By evaluating the effects of growth against the desired levels of service, Durham can better maintain its quality of life.
- 2. Coordination with the Impact of Growth.** To effectively manage growth, the Comprehensive Plan must be used to assess the demand for public infrastructure and, thereby, plan for additional public infrastructure. Reliance on the Comprehensive Plan reinforces Durham’s goals for levels of service and makes funding decisions more predicible.

## Goal 15.1, Coordination with the Plan

Use the Durham Comprehensive Plan and the Future Land Use Map to guide decisions about funding of public facilities.

**Objective 15.1.1. Implementing the Comprehensive Plan**

Use the Comprehensive Plan as guide for determining when and where to locate future public facilities.

**Policy 15.1.1a. Public Services and Tiers.** City and County Departments and the Durham Public Schools shall provide public services at the level and location appropriate to the Tiers established by the Comprehensive Plan.

**Policy 15.1.1b. Levels of Service Established.** The City, County, and Durham Public Schools shall maintain Durham's quality of life by maintaining the level of service standards, as defined in the elements of the Durham Comprehensive Plan and summarized in Table 15-2, Summary of Level of Service Standards.

<b>Table 15-1, Summary of Level of Service Standards</b>		
Service	Level of Service Standard	Element Reference
<b>Open Space</b>	Require preservation of open space appropriate to the intensity of development in each Tier, consistent with Table 7-1, Open Space Level of Service Standards, or other adopted open space plans. Provide for the acquisition of farmland conservation easements	Chapter 7, Conservation and Environment Element
<b>Transportation</b>	Provide road capacity at levels of service consistent with Table 8-1, Traffic Level of Service Standards “C” for the Rural Tier, “D” for the Suburban and Urban Tiers, and “E” for the Compact Neighborhoods and Downtown Tiers.	Chapter 8, Transportation Element
<b>Water Supply</b>	Continue to operate and maintain water treatment and distribution facilities to provide 170 gallons per capita per day consistent with Federal and State standards.	Chapter 9, Water and Wastewater Element
<b>Wastewater Treatment</b>	Continue to treat wastewater and resulting effluent and sludge to meet or exceed Federal and State standards.	Chapter 9, Water and Wastewater Element
<b>Utilities and the Urban Growth Area</b>	Continue to prohibit extensions of the water distribution system outside of the Urban Growth Area (UGA) except to properties with a verified water supply of unsatisfactory quantity or quality. Continue to prohibit extensions of the sewer collection system outside of the Urban Growth Area (UGA), except to properties with a verified existing health hazard from an on-site sanitary sewer system.	Chapter 9, Water and Wastewater Element
<b>Stormwater Collection</b>	New development shall not increase the post-development peak runoff rate from the 1-year storm over the predevelopment peak runoff rate by more than 10 percent. Ensure that, in the Neuse River basin, new development limits nitrogen export to 3.6 pounds per acre per year. New development in watershed protection areas shall treat the first 1-inch of stormwater runoff.	Chapter 9, Water and Wastewater Element
<b>Libraries</b>	Provide at least 0.50 square feet of library space per capita, at least 3.00 books per capita, and provide facilities such that most County residents are within 5 miles of a library facility.	Chapter 14, Libraries Element
<b>Parks and Recreation</b>	Provide parks and recreation services and facilities in the City in accordance with Table 10-1, Parks and Recreation Level of Service Standards. In the County, continue to provide passive, nature-based recreational opportunities.	Chapter 10, Parks and Recreation Element
<b>Schools</b>	Provide public school facilities with a maximum enrollment of <del>120</del> <u>110</u> percent of the system’s maximum permanent building capacity, measured on a system-wide basis for each type of facility.	Chapter 11, Schools Element
<b>Public Safety</b>	For City fire protection, maintain a <del>4</del> <u>six</u> minute emergency response time for <del>80</del> <u>90</u> percent of the calls, which includes and a turn out time of less than <del>1</del> <u>two</u> minutes for <del>at least 90</del> <u>100</u> percent of the calls <del>and</del> <u>all incident occurrences</u> and four minutes of travel time for 90 percent of occurrences. For County fire protection, maintain an 8 minute emergency response time for 80 percent of the calls and a turn out time of less than one minute for at least 90 percent of calls. For emergency medical services, maintain a County-wide response time of <del>8:59</del> <u>minutes</u> or less. For City police protection, maintain adequate patrols to provide an average response time of <del>6:30-5</del> <u>minutes</u> or less for Priority 1 calls. For County Sheriff’s Office protection, maintain a ratio of sworn officers to the (non-City) County population of <del>1:316</del> <u>229</u> .	Chapter 12, Public Safety Element

<p><b>Solid Waste</b></p>	<p>Provide disposal capacity sufficient to accommodate <u>the City's needs</u><del>per capita solid waste generation of 6.3 pounds per person per day</del>. In the County, operate and maintain solid waste Convenience Centers to provide County residents a place to dispose of solid waste.</p>	<p>Chapter 13, Solid Waste Element</p>
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**Goal 15.2, Funding Public Facilities**

Program public facilities and services ~~with~~ to meet the needs of Durham's growing population.

**Objective 15.2.1. Funding Policies**

Program facilities to keep pace with Durham's growth. Maximize cost-effectiveness of facilities by maximizing multiple uses whenever feasible.

**Policy 15.2.1a. CIP Review.** The City-County Planning Department, in conjunction with the City and County Budget and Management Services Departments, shall review the City and County's proposed Capital Improvement Programs (CIPs) for consistency with the Comprehensive Plan to ensure that capital improvements keep pace with Durham's growth consistent with the adopted level of service standards.

**Policy 15.2.1b. Level of Service Standards Amendments.** The City-County Planning Department shall initiate Plan Amendments to revise the level of service standard, when constraints preclude the ability to maintain the adopted level of service.

**Policy 15.2.1c. Other Funding Sources.** City Departments, County Departments, and the Durham Public Schools shall seek grants or alternative funds when available to support facility expansion and improvements.

**Policy 15.2.1d. Capital Projects Assessment.** The City and County Budget and Management Services Departments shall assess and identify capital projects and programs proposed for funding as either:

- i. Essential services, or services that are directly related to protecting the immediate health and safety of citizens from an existing or imminent hazard;
- ii. Necessary services, or services that are directly related to maintaining the level of service established by the Comprehensive Plan; or
- iii. Desirable services, or services that are related to enhancing the desirability of Durham as a place to live.

### Objective 15.2.2. Capital Improvements Program Policies

Develop multi-year capital improvement programs as part of the annual budget process.

**Policy 15.2.2a. Capital Improvements Programs.** The City and County Budget and Management Services Departments shall prepare Capital Improvement Programs (CIPs) that:

- i. Identify those facilities which are required to maintain the levels of service standard;
- ii. Identifies the source of funds for each proposed facility; and
- iii. Identifies and includes in the annual budget the costs of operating and maintaining all proposed projects.

**Policy 15.2.2b. Joint Siting and Use of Facilities.** The City-County Planning Department, in conjunction with the City and County Budget and Management Services Departments and the Durham Public Schools, shall coordinate CIP project development and recommendations to assure that facilities are provided in a cost-effective manner and that shared facilities are developed whenever possible, as outlined in the most recent “~~2003~~ Joint Capital Improvements Projects Report.”

**Policy 15.2.2c. Evaluation.** In making the decision to recommend funding of capital facilities, the City and County Budget and Management Services Departments shall consider:

- i. The need to correct public hazards;
- ii. The need to eliminate existing deficiencies or maintain existing service levels;
- iii. The need to provide capacity for the future;
- iv. The need to provide for the renewal and replacement of, and improvement to, existing facilities;
- v. The desire to implement the Goals, Objectives and Policies of the Durham Comprehensive Plan; and,
- vi. The ability to take advantage of special or unique development opportunities in a timely manner.

### Objective 15.2.3. Fee Policies

New development shall pay impact and user fees for new capital facilities or the expansion of existing facilities, according to fee schedules adopted by the Governing Boards.

**Policy 15.2.3a. Impact Fees.** The City and County Budget and Management Services Departments shall periodically reassess impact fees to ensure that the fees reflect the actual cost of services.

**Policy 15.2.3b. User Fees.** The City and County Departments shall establish user fees such that, to the extent possible, costs of

services shall be recovered from the user that benefits from the services rather than recovered from the community as a whole.

### Goal 15.3, Continued Assessment

Conduct regular assessments of the effects of growth on the adequacy of public services and facilities, as well as the effect of the location and availability of public services and facilities on patterns of growth.

#### Objective 15.3.1. Reporting Measures

Measure the impacts of growth and the effectiveness of funding measures on maintaining the adopted levels of services.

**Policy 15.3.1a. Assessment Reports.** The City-County Planning Department shall use the level of service standards in the Durham Comprehensive Plan to evaluate development proposals and report the impact of the new development on public facilities. The City-County Planning Department shall work with other relevant City and County Departments to determine, if possible and appropriate, what is needed to mitigate the impact if the levels of service would fall below the adopted standards as well as how to better provide services and facilities to support the goals of the Durham Comprehensive Plan.

**Policy 15.3.1b. Capacity for Growth.** The City-County Planning Department shall provide regular reports on the available capacity of public facilities to accommodate additional growth.

**Policy 15.3.1c. Effectiveness of Funding Methods.** The City and County Budget and Management Services Departments shall regularly evaluate the effectiveness of the public facility funding methods and investigate alternative methods to find the most efficient funding system to pay for public services.



Adopted, February 28, 2005  
Updated, April 2012

## Durham Comprehensive Plan

# Chapter 16 Intergovernmental Coordination Element

Durham City-County Planning Department

# The Durham Comprehensive Plan

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- Chapter 1. Introduction and Administration Element
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# Chapter 16, Intergovernmental Coordination Element

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# Intergovernmental Coordination Element



*Summary of Issues  
Goal 16.1 Planning  
and Development  
Coordination*

The Research Triangle Region is a collection of individual towns, cities, and counties, each with their own unique character and special places. While the local governments are separate jurisdictions, they provide similar governmental services. Each recognized that the Triangle Region is a popular destination for people and businesses migrating in. Each is faced with concerns about the most efficient way to expand facilities and services to meet the needs of expected future population. Each is faced with challenges of growing with nearby neighbors, weaving together the fabric of community at their and their neighbors’ edges. Local governments are learning that coordination of land development patterns and cooperation in service provision can offer mutual benefits.

Coordination presently occurs through several vehicles:

- The Triangle J Council of Governments (TJCOG) is a voluntary organization of municipal and county governments in North Carolina’s Region J, including the counties of Chatham, Durham, Johnston, Lee, Moore, Orange and Wake. The TJCOG works to meet the Region’s needs in a wide range of areas, from land use, transportation, housing and environmental planning, to programs for the aging and information services.
- Transportation planning takes place through the Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO). The DCHC MPO includes the following seven member governments and 14 agencies and organizations: the City of Durham, the Town of Carrboro, the Town of Chapel Hill, the Town of Hillsborough, Durham County, Orange County, Chatham County, the North Carolina Department of Transportation, the US Federal Highway Administration, the US Federal Transit Administration, the US Environmental Protection Agency, the North Carolina

Department of Environment and Natural Resources, the Triangle J Council of Governments, the Raleigh-Durham Airport Authority, the Triangle Transit Authority, Duke University, the University of North Carolina at Chapel Hill, North Carolina Central University, Carolina Trailways, the Research Triangle Park and the Research Triangle Foundation of North Carolina.

- ~~The Triangle Transit Authority (TTA)~~ was created to plan, finance, organize and operate a public transportation system for the Research Triangle area. Its main program areas include regional bus service, a ridesharing program, and regional transit planning. Triangle Transit's TTA's Mission is to plan, facilitate, and promote, for the Greater Triangle Community, an affordable, safe and secure customer-oriented public transportation network that provides mobility, promotes economic opportunities, and protects the environment.
- The Upper Neuse River Basin Association (UNRBA) was formed to provide an ongoing forum for cooperation on water quality protection and water resource planning and management within the 770 square mile watershed. ~~The eight municipalities, six counties, and local Soil and Water Conservation Districts in the watershed voluntarily formed the Association.~~ UNRBA was formed voluntarily and is currently comprised of eight municipalities and 5 counties. The Mission of the UNRBA is to preserve the water quality of the Upper Neuse River Basin through innovative and cost-effective pollution reduction strategies, and to constitute a forum to cooperate on water supply issues within the Upper Neuse River Basin.
- Raleigh-Durham International Airport is governed by the Raleigh-Durham Airport Authority. The Airport Authority is a governmental body responsible for the development, operation and maintenance of the airport. The City of Durham and Durham County should continue their active support for and participation in the Raleigh-Durham Airport Authority.

## Summary of Issues

1. **Regional Planning.** Over the past few years, Triangle local governments have made great strides in opening and maintaining communications about matters of mutual interest. However, the Triangle Region needs to engage in more extensive regional planning to better address common problems related to growth and development. Regional cooperation could expand in the

areas of transportation planning, recreation and open space planning, water supply, wastewater treatment, and solid waste disposal, among others.

## Goal 16.1, Planning and Development Coordination

Coordinate government planning and decisions about land use, transportation and public services and facilities between the City of Durham and Durham County, and surrounding cities, town and counties in order to accomplish the goals of the Durham Comprehensive Plan.

### Objective 16.1.1. City and County Coordination

Coordinate the land use planning effort of the City and County.

**Policy 16.1.1a. Joint Planning Commission.** The City and County shall continue to support the Durham Planning Commission by designating it as the planning advisory body to the City and the County.

**Policy 16.1.1b. Joint Board of Adjustment.** The City and County shall continue to support the joint Board of Adjustment (BOA), which shall exercise all the powers and duties authorized under North Carolina General Statutes, all applicable special enabling legislation, and the Unified Development Ordinance.

**Policy 16.1.1c. City-County Planning Department.** The City and County shall continue to support a joint Durham Planning Department ~~Agency~~ to act as the administrative body for performing the professional planning functions and providing information, reports, and recommendations to the Planning Commission, City and County Managers and Governing Bodies.

**Policy 16.1.1d. Historic Preservation Commission.** The City and County shall continue to support the Durham Historic Preservation Commission as an advisory body to the City and the County.

**Policy 16.1.1e. Appearance Commission.** The City and County shall continue to support the Durham Appearance Commission as an advisory body to the City and the County.

**Policy 16.1.1f. Satellite Annexation Agreement.** The City Council and the County Board of Commissioners shall consider an agreement on satellite annexations.

### Objective 16.1.2. Coordination with Other Jurisdictions

Coordinate with adjacent jurisdictions regarding proposals for new development near common borders in order to foster and maintain a system of sound land use planning and regulation.

**Policy 16.1.2a. Inter-Jurisdictional Coordination.** The City and County shall continue coordination with the surrounding jurisdictions of Cary, Chapel Hill, Morrisville, Raleigh, Orange County, and Wake County in planning efforts, ensuring opportunities to review and comment on land use and development proposals within the defined areas of interest of these jurisdictions. The objectives of the coordination are to:

- i. Seek compatible uses of land and natural resources;
- ii. Achieve a smooth transition between areas of development within each jurisdiction;
- iii. Provide an appropriate entryway into each jurisdiction from the other;
- iv. Encourage orderly development and the efficient delivery of urban services which will maintain and enhance property values in each jurisdiction; and
- v. Provide appropriate connectivity between jurisdictions.

**Policy 16.1.2b. Granville, Person and Chatham Counties.** The City-County Planning Department shall explore and propose planning coordination and information sharing arrangements with Granville, Person, and Chatham Counties.

**Policy 16.1.2c. General Support for the Triangle J Council of Governments.** The City and County shall support and participate in the Triangle J Council of Governments (TJCOG).

**Policy 16.1.2d. TJCOG Regional Planning Projects and Activities.** The City and County shall participate in multi-jurisdictional regional planning projects and activities that are administered by the Triangle J Council of Governments.

### Objective 16.1.3. Coordination on Transportation Issues

Coordinate with regional transportation agencies regarding transportation planning and service provision.

**Policy 16.1.3a. Support for the Metropolitan Planning Organization.** The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO) shall be responsible for carrying out the transportation planning process in the Durham-Chapel Hill-Carrboro Urban Area. The City and County shall continue their participation in the DCHC MPO Metropolitan Planning Organization.

**Policy 16.1.3b. ~~The Triangle Transit Authority.~~** The City and County shall continue their active support for and participation in ~~the Triangle Transit Authority (TTA),~~ providing opportunities for ~~TTA-Triangle Transit~~ to comment on proposed zoning changes and land use amendments regarding their impact on transportation

~~The Triangle GreenPrint project is an initiative to help the Triangle protect a linked network of green space as the region grows. The GreenPrint is helping communities, land management organizations, and helping the general public maximize its investments in green space protection. The TJCOC, the Triangle Land Conservancy, and the NC Dept. of Environment and Natural Resources sponsor the GreenPrint project.~~

issues. The City and County shall continue their active involvement in planning for future regional mass transit phases.

~~**Policy 16.1.3c. Regional Rail System, Phase I.** The City and County shall continue efforts to implement the Regional Rail System by designating appropriate development patterns, including public improvements that are supportive of mass transit in the vicinity of designated transit stations.~~ **Durham County Bus and Rail Investment Plan.** The City and County shall continue efforts to implement the Durham County Bus and Rail Investment Plan by designating Compact Neighborhoods around proposed regional rail transit stations and programming capital improvements that support mass transit in the vicinity of designated transit stations. (See Policy 8.1.3d. Durham County Bus and Rail Investment Plan).

**Policy 16.1.3d. Support for the Raleigh-Durham Airport Authority.** The City and County shall support and participate in the Raleigh-Durham Airport Authority, providing opportunities for the Airport Authority to comment on proposed zoning changes and land use amendments regarding their impact on the Airport.

**Policy 16.1.3e. Bicycle and Pedestrian Advisory Commission.** The City and County shall continue to support the Durham Bicycle and Pedestrian Advisory Commission as an advisory body to the City and the County promoting bicycle and pedestrian opportunities.

**Objective 16.1.4. Coordination on Environmental Issues**

Coordinate with regional agencies and adjacent jurisdictions regarding natural resource and environmental protection efforts.

**Policy 16.1.4a. The Upper Neuse River Basin Association.** The City and County shall continue their active support for and participation in the Upper Neuse River Basin Association.

~~**Policy 16.1.4b. Triangle GreenPrint.** The City and County shall continue their support for the Triangle GreenPrint project.~~

**Policy 16.1.4b. Little River Regional Park.** Durham County shall continue to cooperate with Orange County to develop and operate the Little River Regional Park.

**Policy 16.1.4c. Durham Open Space and Trails Commission.** The City and County shall continue to support the Durham Open Space and Trails Commission as an advisory body to the City and the County promoting open space and trails issues.

**Policy 16.1.4d. Environmental Affairs Board.** The City and County shall continue to support the Durham Environmental Affairs Board as an advisory body to the City and the County promoting environmental issues.

**Policy 16.1.4e. Regional Cooperation on Air Quality.** The City and County shall continue to work with other jurisdictions, governmental agencies, and regional organizations to address air quality issues.

**Policy 16.1.4f. Local Cooperation on Air Quality and Greenhouse Gas Emissions.** The City and County shall continue to work with each other and with other regional partners to address issues related to air quality and greenhouse gas emissions.

### **Objective 16.1.5. Coordination on Public Facilities and Services**

Coordinate with adjacent jurisdictions regarding the provision of public services and facilities at common borders to assure the most effective and efficient service delivery to the residents of Durham and adjacent jurisdictions.

**Policy 16.1.5a. Annexation and Service Area Agreements.** The City Public Works Department shall maintain and update, as needed, the annexation and service area agreements between the City of Durham, the Town of Chapel Hill, the Orange Water and Sewer Authority (OWASA), the City of Raleigh, the Town of Cary, the Town of Hillsborough, and the Town of Morrisville.

**Policy 16.1.5b. Joint Capital Improvements Planning.** The City, County, and Durham Public Schools shall continue their coordination on capital improvements plans, including examining opportunities for co-locating facilities.

**Policy 16.1.5c. Solid Waste Disposal Alternatives.** The City Solid Waste Management Department shall investigate, alone or with other jurisdictions in the Region, alternatives for solid waste disposal.



**Updated, April 2012**

# **Durham Comprehensive Plan**

## **Appendix A Existing Conditions**

### **Part 1 Demographics and Economics**

**Durham City-County Planning Department**

# The Durham Comprehensive Plan

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# Appendix A, Existing Conditions

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# Part 1: Demographics and the Economy

## Introduction

The Existing Conditions Report provides quantitative and qualitative data used as a basis for the goals, objectives, and policies of the Durham Comprehensive Plan. The report examines a wealth of information about Durham's place in the region, its population, economy, and its built and natural environments. The report is divided into three sections:

Part 1: Demographics and Economy  
Part 2: The Built Environment; and  
Part 3: The Natural Environment

Part 1, Demographics and Economy, places Durham in its regional context as part of the Research Triangle and the Durham-Chapel Hill Metropolitan Statistical Area (MSA). The report also utilizes historic demographic and employment data to project population, housing, employment, and land use demand through the year 2035.

## Regional Context

Durham County comprises less than one percent of the total land area of the State of North Carolina. However, in 2010 Durham's population was almost three percent of the state's population, while employment in Durham comprised nearly six percent of total jobs in the state. The City of Durham was the 5<sup>th</sup> largest municipality in the State in 2010.

Durham is a part of the Research Triangle Region. Research Triangle Park is the hub of the region, providing jobs, tax base, prestige and an international reputation for corporate technological innovation. While "the Park" is the identifier in the minds of outsiders, the Region is much more. The Research Triangle Region boasts beautiful rural landscapes, quiet suburban neighborhoods, busy shopping malls, historic in-town neighborhoods, renowned higher education institutions, high tech jobs, parks, and museums. While all share a common cultural and

geographic heritage, Triangle communities each have their distinctive character.

Durham is also part of the Durham-Chapel Hill Metropolitan Statistical Area (MSA), as defined by the U.S. Census Bureau. The other counties of the Durham-Chapel Hill MSA are Chatham, Orange, and Person Counties.

## Communities in the Region

The Triangle Region is over 4,025 square miles with almost 1,465,000 people living and working in rural neighborhoods, small towns and medium-sized cities. On average 74 new residents per day move to the Triangle Region to take advantage of all the area's assets. Almost 750,000 new residents are expected to move into the region over the next generation (by 2030), equal to the combined current populations of Raleigh, Durham, Chapel Hill, and Cary.

The Triangle J Council of Governments (TJCOG) is an important vehicle for regional planning in this area. The TJCOG is a voluntary organization of municipal and county governments in North Carolina's Region J. It includes seven counties: Chatham, Durham, Johnston, Lee, Moore, Orange and Wake. It also includes 23 municipalities: Apex, Benson, Broadway, Carrboro, Cary, Chapel Hill, Clayton, Durham, Fuquay-Varina, Garner, Goldston, Hillsborough, Holly Springs, Knightdale, Morrisville, Pittsboro, Raleigh, Rolesville, Sanford, Smithfield, Wake Forest, Wendell and Zebulon.

Two organizations provide regional planning for transportation. The Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHCMPO) prepares a regional, multi-jurisdictional transportation plan for the western portion of the Region. Likewise, the Capital Area Metropolitan Planning Organization (CAMPO) prepares a regional, multi-jurisdictional transportation plan for the eastern portion of the Region.

In each MPO, a transportation advisory committee, made up of elected officials from each local government and representatives from transit providers, guides planning. These MPOs, along with the NC Department of Transportation (NCDOT) must jointly approve regional transportation plans and regular transportation related capital improvement programs.

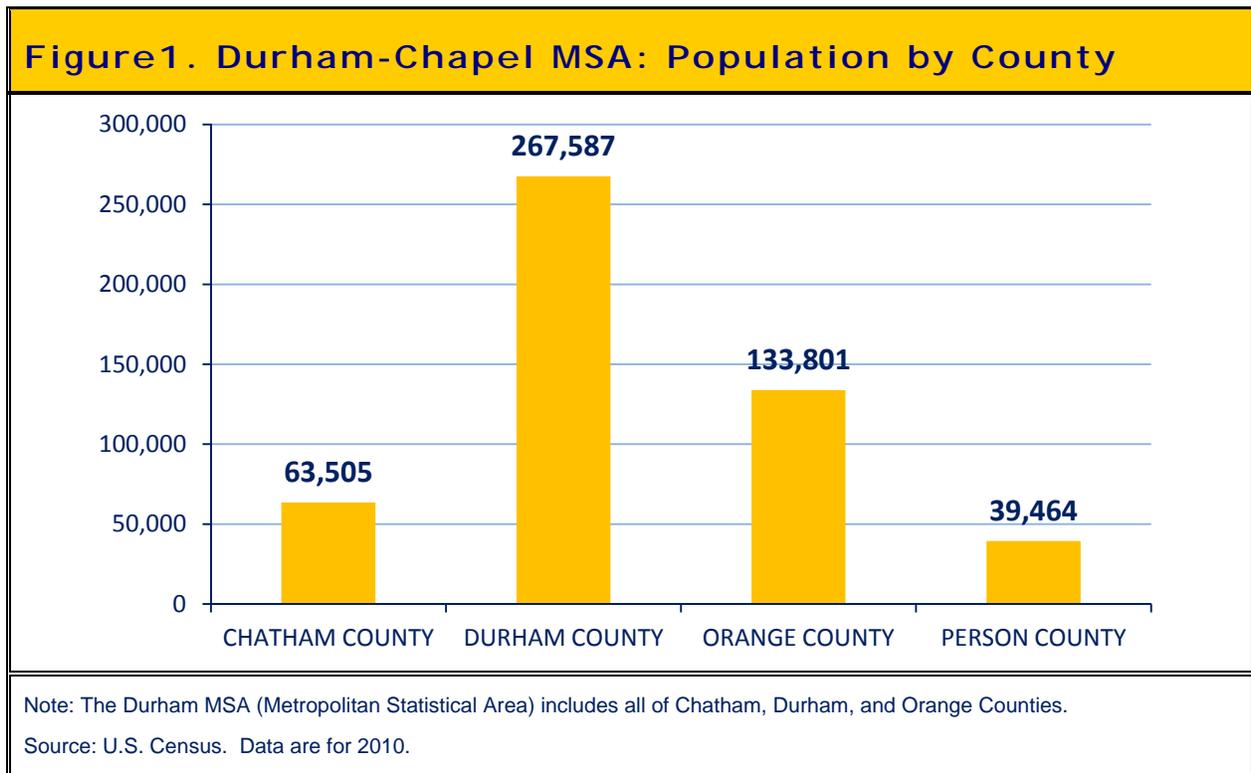
## Durham in the Region

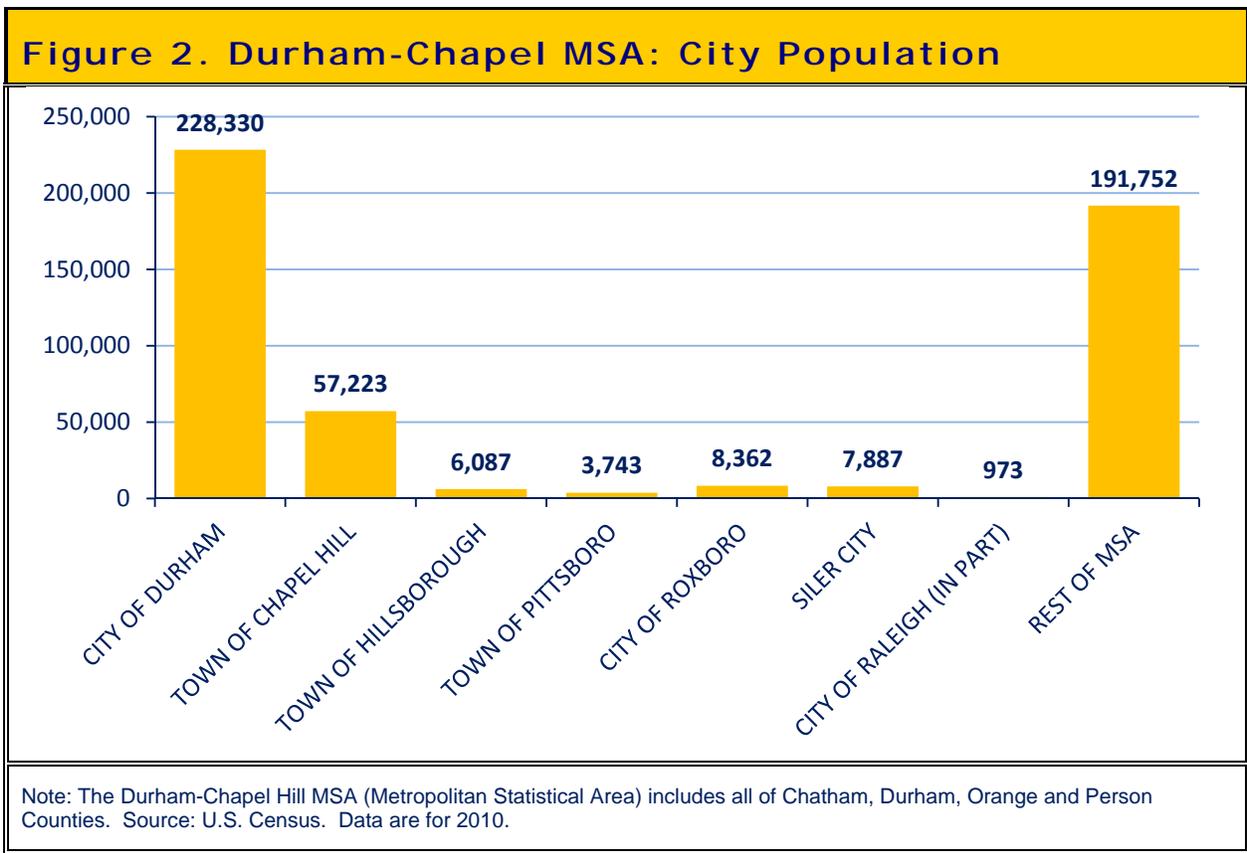
The Durham-Chapel Hill Metropolitan Statistical Area (MSA), which was created after the 2000 U.S. Census, hosted a population of 426,493 in 2000. The MSA's population rose to 504,357 by April 2010, a growth rate of over 18 percent. Of the four counties in the MSA, Durham County's population is the largest, about 53 percent of the total

population of the MSA. Orange County accounts for about 27 percent of the MSA population, while Chatham and Person counties account for 13 percent and eight percent, respectively. See Figure 1, County Population in the MSA. In addition to the City of Durham, the County hosts seven other growing municipalities, including a small portion of the City of Raleigh.

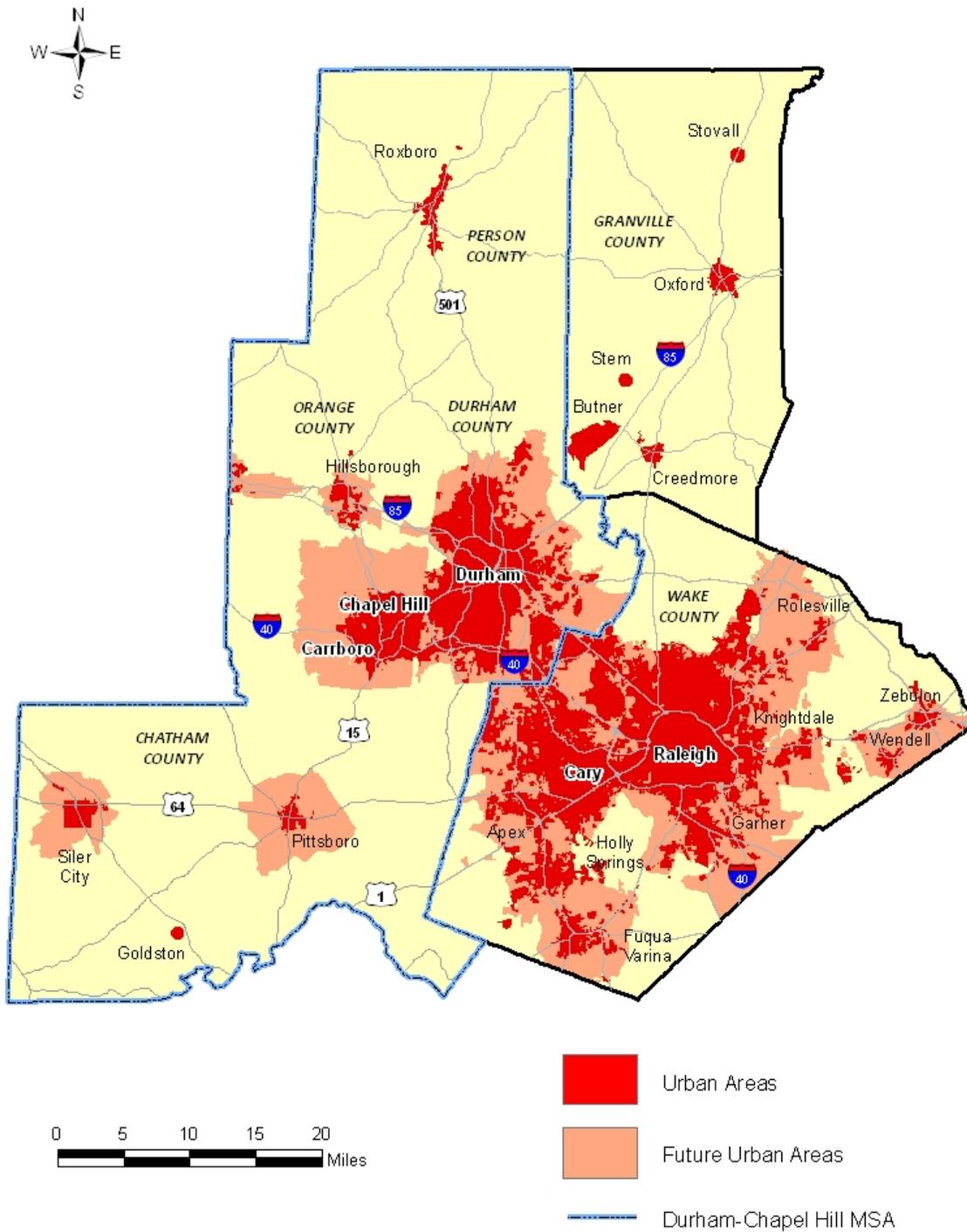
The City of Durham is the MSA’s largest city, with 228,330 people in April 2010. Durham’s population grew by 22 percent from 2000 to 2010, matching the growth rate for the state of North Carolina. The City of Durham’s population was 45 percent of the MSA’s total, and Durham and Chapel Hill together accounted for 57 percent of the population. The remainder was distributed among the MSA’s small towns, its non-municipal suburban area and rural countryside. See Figure 2, City Population in the MSA.

The four counties in the Durham-Chapel Hill MSA cover about 1,765 square miles (See Map 1, Durham in the Region.) The seven cities and towns in the region account for about almost 390 square miles, or 12 percent of the land area. Outside of the municipalities, many have identified extra-territorial areas or urban growth areas into which they expect to expand urban uses.





### Map 1. Durham and the Research Triangle Region



Note: Source is Durham City-County Planning Department, 2011

## Regional Development Principles

In the late 1990s, TJCOG along with the Greater Triangle Regional Council prepared the Regional Development Choices Project. The intent was to develop realistic alternative scenarios for the future development of the Research Triangle Region and spur community dialogue. Three scenarios were unveiled, depicting different ways that the Region might grow. Each scenario was made up of principles related to the design and character of urban and rural communities, transportation, parks and open space and regional cooperation.

After a yearlong public dialogue about these choices, eight principles were distilled from the scenarios and community dialogue. The following set of principles was offered as a framework for improving conservation, development and mobility in the Region.

- **Smart Pattern of Development.** Define land areas that are appropriate for development, as well as environmentally sensitive, historic, natural or recreational land areas that need protection.
- **Walkable Communities.** Design new and preserve existing neighborhoods and communities to foster walkability, safety and a sense of place.
- **Affordable Living.** Ensure that the costs of living in the region are affordable to all.
- **Green Space.** Preserve more natural areas and open space, and provide for their local and regional interconnection.
- **Integrated Transportation.** Provide a seamless, regional, multi-modal transportation system, which interlinks new and existing residential, employment, commercial and recreational areas.
- **Enhanced Civic Realm.** View the civic realm as a legacy to future generations.
- **Mixed Use Activity Centers.** Promote different, mixed-use centers at different scales for each city, town and crossroads in the Triangle to serve as centers of civic, social, educational, cultural and economic life, and as transportation hubs.
- **Shared Benefits.** Share the region's resources to improve the quality of life for all Triangle citizens.

## Regional Issue

Over the past few years, Triangle local governments have made great strides in opening and maintaining communications about matters of mutual interest. However, the Triangle Region needs to engage in more extensive regional planning to better address common problems related to growth and development. Regional cooperation could

expand in the areas of transportation planning, recreation and open space planning, water supply and wastewater treatment, among others.

# Population

## Population Profile



*Population Profile  
Population Growth*

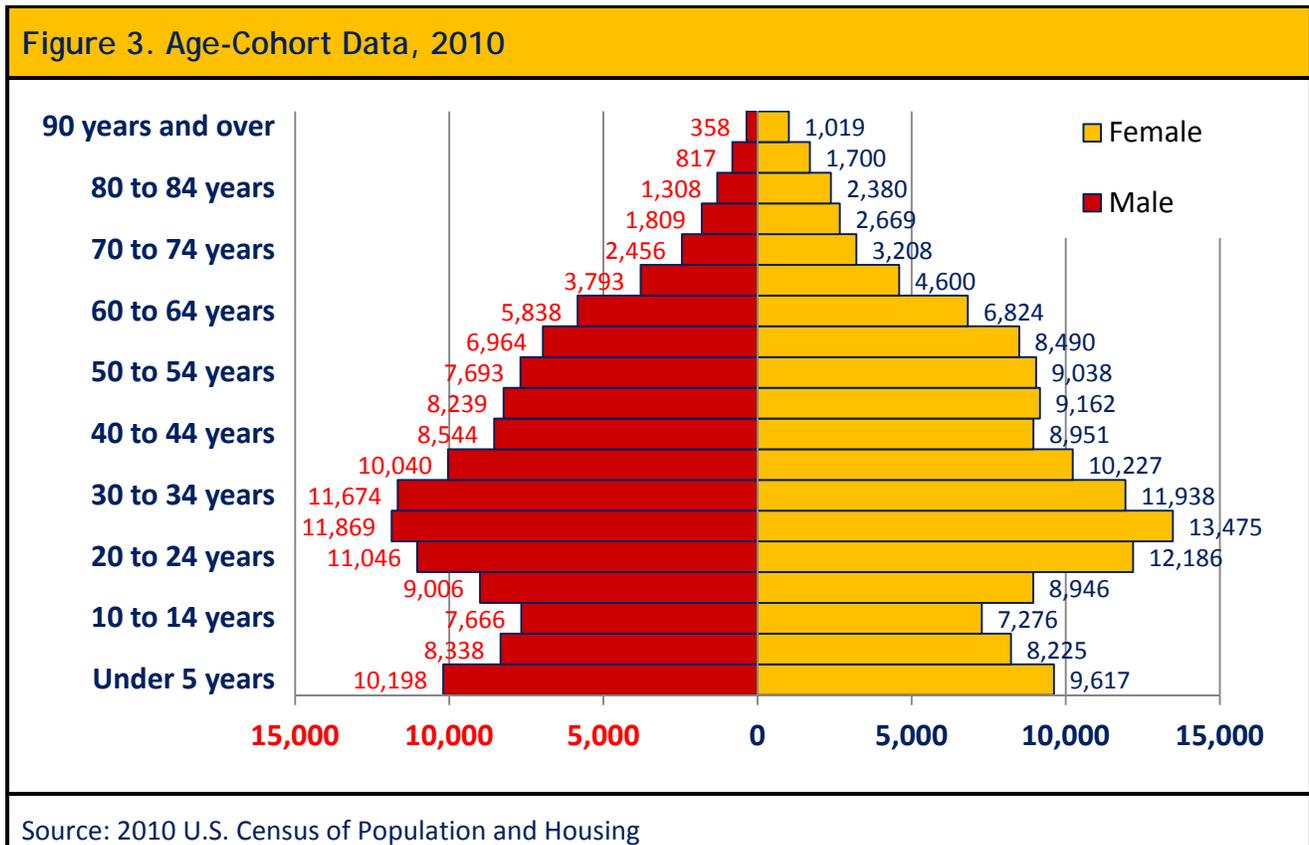
In some ways, Durham’s population is different from the region as a whole. Table 1, Population by Sex and Race/Ethnicity, highlights one aspect of Durham’s population that is unique to the region. Durham, unlike its neighboring counties, is a community of minorities, with no racial or ethnic population holding a majority.

Table 1. Population by Race/Ethnicity										
	MALE	FEMALE	NOT HISPANIC							HISPANIC OR LATINO (OF ALL RACES)
			WHITE	BLACK OR AFRICAN AMERICAN	NATIVE AMERICAN	ASIAN	PACIFIC ISLANDER	SOME OTHER RACE	MULTI-RACE	
CITY OF DURHAM	108,000	120,330	86,446	92,352	611	11,475	129	646	4,230	32,441
DURHAM COUNTY	128,174	139,413	112,697	100,260	722	12,180	135	700	4,816	36,077
CHATHAM COUNTY	31,585	31,920	45,185	8,272	163	694	15	129	819	8,228
ORANGE COUNTY	63,957	69,844	94,671	15,722	383	8,996	35	316	2,661	11,017
PERSON COUNTY	19,384	20,080	26,354	10,599	244	115	4	51	504	1,593
DURHAM-CHAPEL HILL MSA	243,100	261,257	278,907	134,853	1512	21,985	189	1,196	8,800	56,915
CITY OF DURHAM	47.3%	52.7%	37.9%	40.4%	0.3%	5.0%	0.1%	0.3%	1.9%	14.2%
DURHAM COUNTY	47.9%	52.1%	42.1%	37.5%	0.3%	4.6%	0.1%	0.3%	1.8%	13.5%
CHATHAM COUNTY	49.7%	50.3%	71.2%	13.0%	0.3%	1.1%	0.0%	0.2%	1.3%	13.0%
ORANGE COUNTY	47.8%	52.2%	70.8%	11.8%	0.3%	6.7%	0.0%	0.2%	2.0%	8.2%
PERSON COUNTY	49.1%	50.9%	66.8%	26.9%	0.6%	0.3%	0.0%	0.1%	1.3%	4.0%
DURHAM-CHAPEL HILL MSA	48.2%	51.8%	55.3%	26.7%	0.3%	4.4%	0.0%	0.2%	1.7%	11.3%

Durham also has a higher percentage of Hispanic residents than surrounding counties and the growth of its Hispanic population over the past decade has been one of the more significant demographic changes. In 2000, Hispanics made up over seven percent of Durham’s population. The 2010 U.S. Census of Population revealed that Hispanics now

account for over 14 percent of the City of Durham’s population and 13.5 percent of the county’s population.

Durham’s 2010 age-cohort data are shown in Figure 3. A significant shift in Durham’s “population pyramid” occurred during the 2000-2010.



Over the past decade, the fastest growing segments of the population were the 55-59 and 60-64 age-cohorts. The percentage of the population 85 years and older also saw a significant rise (see Table 2). An aging population may have far-reaching impacts on Durham’s economy as the demand for specific goods and services, transportation options, and type of housing, change and the market responds to demand shift.

<b>Table 2. Growth Rates by Age Cohort, 2000-2010</b>		
<b>Age-Cohort</b>	<b>Male</b>	<b>Female</b>
<b>Under 5 years</b>	29.2%	26.6%
<b>5 to 9 years</b>	10.5%	15.5%
<b>10 to 14 years</b>	9.5%	8.8%
<b>15 to 19 years</b>	18.6%	22.0%
<b>20 to 24 years</b>	4.8%	15.7%
<b>25 to 29 years</b>	5.6%	21.8%
<b>30 to 34 years</b>	16.0%	19.8%
<b>35 to 39 years</b>	12.8%	7.4%
<b>40 to 44 years</b>	6.6%	0.4%
<b>45 to 49 years</b>	16.0%	12.0%
<b>50 to 54 years</b>	25.6%	29.8%
<b>55 to 59 years</b>	61.7%	77.2%
<b>60 to 64 years</b>	89.7%	87.1%
<b>65 to 69 years</b>	49.3%	46.6%
<b>70 to 74 years</b>	17.8%	1.7%
<b>75 to 79 years</b>	1.6%	-8.6%
<b>80 to 84 years</b>	22.9%	12.4%
<b>85 years and older</b>	58.1%	33.7%
Source: 2000 and 2010 U.S. Census of Population and Housing		

The characteristics of Durham's households were similar to those of the MSA as a whole but noticeably differed in some ways from the State of North Carolina. Durham had a far higher percentage of non-family households and single-person households than did the state (see Table 3.)

<b>Table 3. Household Characteristics</b>				
<b>HOUSEHOLDS BY TYPE</b>	<b>STATE OF NORTH CAROLINA</b>	<b>DURHAM-CHAPEL HILL MSA</b>	<b>DURHAM COUNTY</b>	<b>CITY OF DURHAM</b>
<b>Family households (families)</b>	66.7%	61.1%	59.3%	56.8%
With own children under 18 years	29.7%	28.7%	28.9%	29.0%
<b>Married-couple family</b>	49.1%	44.1%	39.7%	35.7%
With own children under 18 years	19.5%	18.7%	17.4%	16.3%
<b>Male householder, no wife present, family</b>	4.3%	4.4%	4.9%	5.2%
With own children under 18 years	2.3%	2.3%	2.5%	2.6%
<b>Female householder, no husband present, family</b>	13.2%	12.6%	14.7%	15.9%
With own children under 18 years	7.9%	7.6%	9.0%	10.1%
<b>Nonfamily households</b>	33.3%	38.9%	40.7%	43.2%
Householder living alone	27.7%	30.3%	32.5%	34.6%
65 years and over	8.7%	6.8%	6.4%	6.5%

Source: U.S. Census Bureau, 2010 Census of Population

Durham’s mean household and family incomes exceeded the state averages. However, these Durham’s numbers lagged somewhat behind averages for the MSA (see Table 4.)

<b>Table 4. Income</b>				
	<b>STATE OF NORTH CAROLINA</b>	<b>DURHAM-CHAPEL HILL MSA</b>	<b>DURHAM COUNTY</b>	<b>CITY OF DURHAM</b>
Mean Household Income	\$59,700	\$68,593	\$65,054	\$61,985
Mean Family Income	\$69,958	\$83,288	\$78,168	\$74,676
per Capita Income	\$23,803	\$27,664	\$26,529	\$25,814

Source: U.S. Census Bureau, 2009 American Community Survey

Similarly, Durham educational attainment figures exceeded state average for residents with college degrees but slightly lagged behind the MSA. Interestingly, the City of Durham also exceeded the state average for persons with less than a ninth grade education (see Table 5.)

<b>Table 5. Educational Attainment</b>				
	<b>STATE OF NORTH CAROLINA</b>	<b>DURHAM-CHAPEL HILL MSA</b>	<b>DURHAM COUNTY</b>	<b>CITY OF DURHAM</b>
<b>Population 25 years and over</b>				
Less than 9th grade	5.9%	5.2%	5.9%	6.8%
9th to 12th grade, no diploma	9.7%	7.9%	8.2%	8.0%
High school graduate (includes equivalency)	27.3%	18.7%	17.6%	15.4%
Some college, no degree	22.0%	18.1%	17.5%	17.6%
Associate's degree	8.5%	5.8%	5.7%	5.4%
Bachelor's degree	17.7%	22.5%	24.2%	24.9%
Graduate or professional degree	8.8%	21.8%	20.8%	21.8%

Source: U.S. Census Bureau, 2009 American Community Survey

### Population Growth

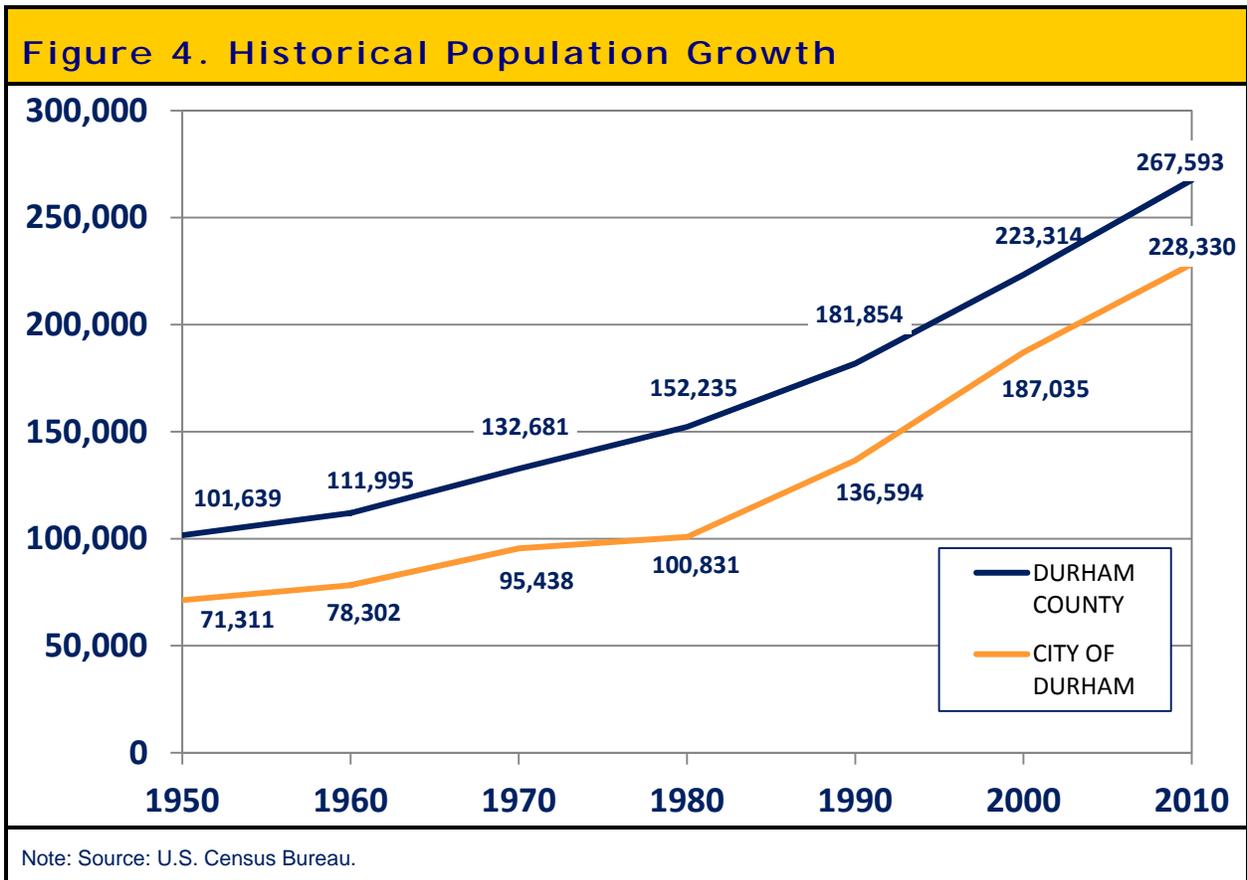
The population of Durham County in 2010 was 267,587. Over the previous decade, the County’s population grew by almost 41,500, representing an increase of about 20 percent. This increase represents eleven new residents and five new households for every day of the past ten years. Natural growth, (births minus deaths) accounted for a little more than one-third of the increase, while net migration (in-migration minus out-migration) accounted for a little less than two-thirds.

Much of Durham County’s growth occurred within the City of Durham. The City population grew over the past decade from 187,035 to 228,330, representing a decade-long increase of 22 percent. The City also expanded in size from about 98 square miles in 2000 to over 106 square miles in 2011.

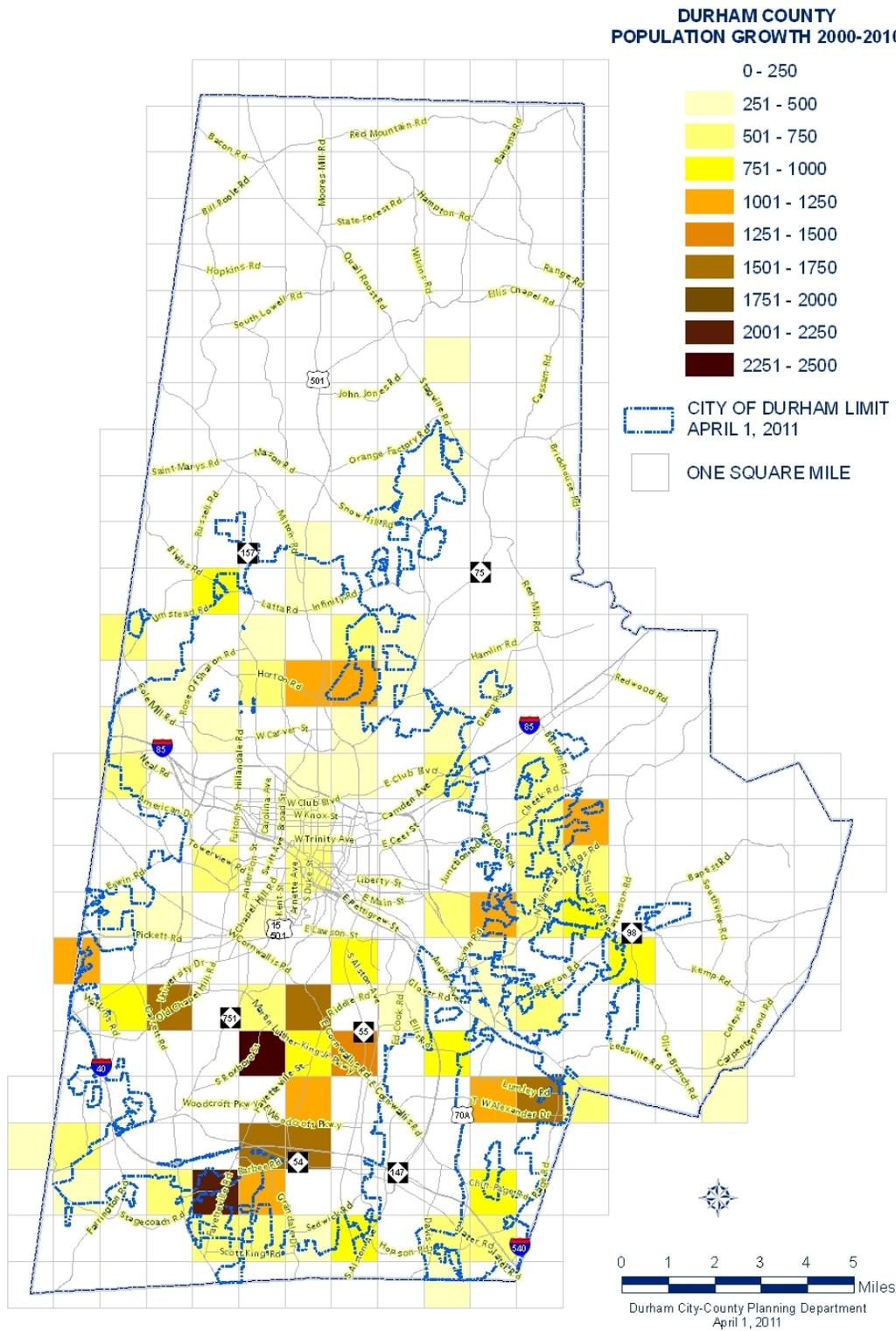
Population growth over the past decade was, of course, not evenly distributed across Durham’s landscape, with some areas within Durham seeing much more growth than others (see Map 2). Areas of relatively high growth included the Interstate 40 corridor in south Durham. Population within the City of Durham’s downtown area also showed significant growth after several decades of decline.

Durham County’s population grew at a moderate rate over the past 30 years. Growth rates for the 1970s, 1980s and 1990s were 15 percent, 19 percent and 23 percent, respectively. The growth rate for the first decade of the 21<sup>st</sup> century was 20 percent. The 3 percent decline in growth rate from 2000 to 2010 reflects the national economic downturn of the past few years, as demonstrated by a comparison of annual growth rates for the periods 2000-2005 and 2005-2010. From 2000 to 2005, the annual growth rate was 2.2 percent. The annual growth rate from 2005 to 2010 declined to 1.8 percent. Growth rate can be

expected to increase as the economy recovers (See Figure 4, Historical Population Growth.)



## Map 2. Distribution of Population Growth, 2000-2010



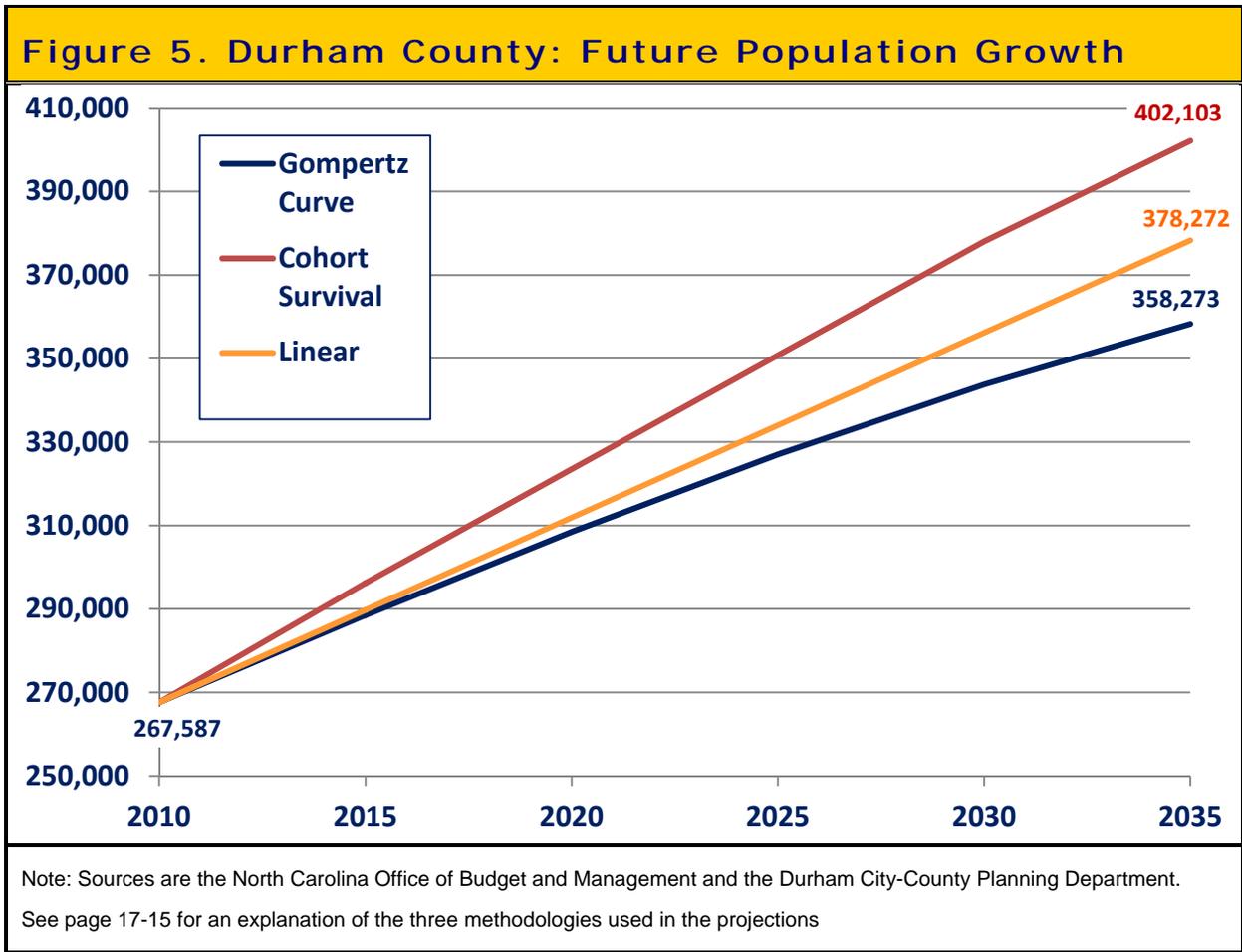
Source: Durham City County Planning Department, 2011.

Population projections are estimates about the size of the population in a future year or years. They indicate what population changes might occur and are based upon a set of assumptions underlying the projections. Three different techniques have been used for the Durham Comprehensive Plan, providing a low, medium and high projection of future population.

The Triangle is projected to continue to be an attractive area for both new businesses and new people. This creates continued demand for new homes, office buildings, shopping centers and industries. Likewise, new business and families impose additional demands on public facilities, especially schools, roads, parks and utilities. How effectively Durham responds to these growth pressures will have a major influence on the quality of life of the community.

Durham County's population is expected to grow significantly over the next three decades. The medium growth projections indicated that Durham County would grow from 223,314 in 2000 to about 328,600 by 2030. (See Figure 5, Future Population Growth and Table 6, Durham County Population Projections.) The increase of almost 105,300 new residents represents about a growth rate of about 47 percent over three decades. It represents an annual average increase of about 1.29 percent. The low growth projection indicates an annual average rate of 1.14 percent while the high growth projection indicates an annual average rate of 1.58 percent.

Durham County's population density increased significantly during the past two decades, reflecting population growth of the City and County. Population density for the County in 1980 was 512.3 persons per square mile (or 0.80 persons per acre). By 2000, the density had increased to 748.9 persons per square mile (or 1.17 persons per acre). Higher population density indicates that the County is becoming more suburban and less rural in character. (See Table 7, Change in Population Density.)



**Table 6. Durham County Population Projections**

	2010	2015	2020	2025	2030	2035
<b>Method A: Linear</b>	267,587	289,724	311,861	333,998	356,135	378,272
<b>Method B: Cohort-Survival</b>	267,587	296,200	323,474	350,749	378,024	402,103
<b>Method C: Gompertz Curve</b>	267,587	288,497	308,450	327,013	343,758	358,273

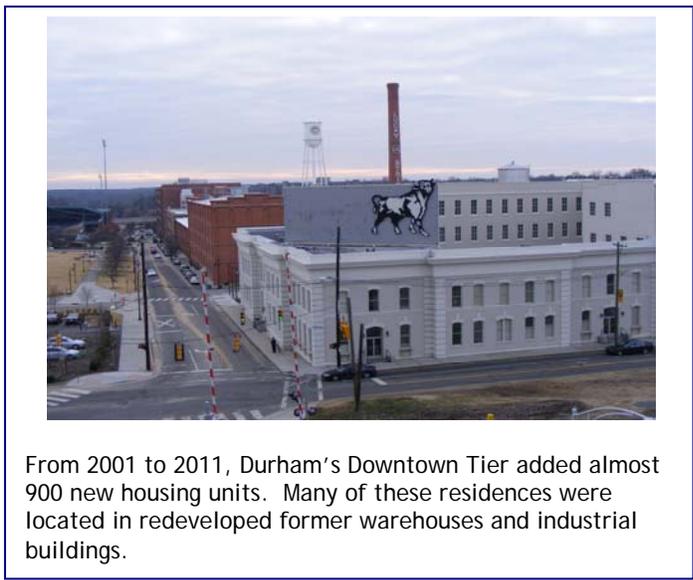
Note: Sources are the NC Office of State Budget and Management and the Durham City-County Planning Department.

Over this period, the City’s population density has declined, reflecting the development pattern of suburban areas that the City has annexed. The City population density in 1980 was 2,388.3 persons per square mile (3.73 persons per acre) but had dropped to 1,883.8 persons per square mile (2.94 persons per acre) by 1990. By 2000, the population density increased to 1905.6 persons per square mile (2.98 persons per acre).

<b>Table 7. Change in Population Density</b>				
	<b>Year</b>	<b>Population</b>	<b>Area (Square Miles)</b>	<b>Population Density (Persons per Square Mile)</b>
<b>Durham County</b>	1980	152,785	298.2	512.3
	1990	181,835	298.2	609.7
	2000	223,314	298.2	748.9
	2010	267,593	298.2	897.4
<b>City of Durham</b>	1980	100,535	42.1	2,387.5
	1990	136,611	72.5	1,883.8
	2000	187,035	98.2	1,905.6
	2010	228,330	107.5	2124.0

Note: Source: Durham City-County Planning Department.

As indicated earlier, net in-migration accounted for about 63 percent of Durham’s growth during the 1990s. Many new residents found homes in an expanding ring of suburban subdivisions within the City but outside the urban core. Population density, indicated in persons per square mile, increased in east and south Durham. Population density rose as formerly rural lands were converted to suburban residential uses.



From 2001 to 2011, Durham’s Downtown Tier added almost 900 new housing units. Many of these residences were located in redeveloped former warehouses and industrial buildings.

During the period 2001-2011, the trend toward suburbanization was partially offset by redevelopment of former commercial and industrial structures within Durham’s downtown as medium to high density residential. By June 2011, there were 1,672 housing units within the Downtown Tier, compared to 879 housing units in 2001. The growth rate for housing in the Downtown Tier during the decade was over 90 percent. Many of these new units were condominiums and apartments in former warehouses.

The desire of people to move into Durham reflects well on the community’s quality of life; however, large population increases

place new demands on the community. New housing, shopping centers and business parks to support new residents can stress Durham’s natural environment. The public sector’s ability to provide all the necessary public facilities and services is challenged. How Durham

responds to these pressures will largely determine the future quality of life in the community.

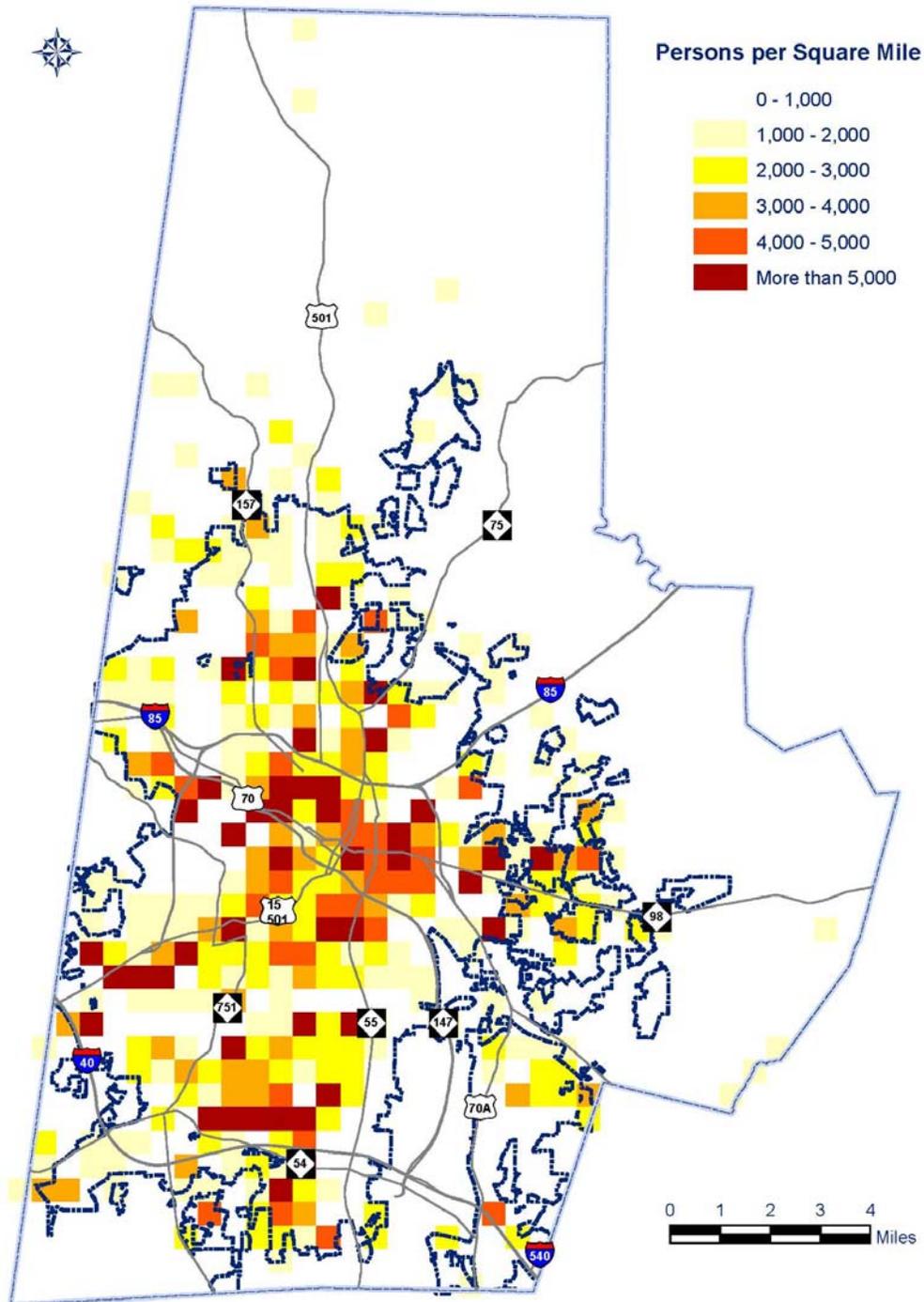
### Population Projection Methods

Three methods were used to project Durham County's population through the year 2035. The simplest was **Method A, Linear Projection**. This method utilizes an average number of persons added over a given time period. In this case, average number of persons added between 1990 and 2010 was used to project population as a straight line. Linear projection yielded a population of approximately 378,000 in 2035. The major weakness of this method is that population rarely grows in a straight line for any significant period of time.

**Method B, Cohort-Survival** projections utilize the existing age profile of a community, as well as live birth and death rates to project population. The first step is to age each cohort or age group (e.g. age 0 to 4, age 5 to 9, age 10 to 14, etc.) ten years. Rates of live birth for specific female age-cohorts and mortality rate by age cohort are used to derive the natural population increase during the 2000 to 2010 period. Migration rates by age-cohort are used to project population increase through immigration. The process is then repeated for the 2010 to 2020, 2020 to 2030 and 2030 to 2035 time periods. The method projected Durham's population as approximately 402,000 in 2035. Cohort-survival is one of the more sophisticated methods used in projecting population and can often prove quite accurate. The method holds migration rates constant and this can sometimes be a problem if migration rate is rapidly evolving.

**Method C, Gompertz Curve** is a form of geometric curve that uses past rates of growth to project population. Unlike a geometric curve, a Gompertz curve recognizes that growth has finite limits and assumes a slowly declining rate of growth as "buildout" is approached. In this case, the growth rate from 1990 to 2010 was used to derive an average decline in growth rate. This method yielded a population of 358,273 in 2035, the lowest figure calculated. In a sense, the Gompertz curve projection can be considered a pessimistic view of Durham's future growth because the economic slowdown pertaining from 2006-2010 skewed the average decline in growth rate.

### Map 3. Population Density



Note: Source is the US Census, 2010

# Economy



*Overview  
Economic Profile  
Structure of the  
Economy  
Change in Economic  
Structure*

Changes in the economy are as important as changes to the population for guiding a community’s development. Economic changes can help determine the types of land use patterns that are required to accommodate employment. They can also suggest forms of infrastructure required to support economic growth, as well as provide an indication of the nature of housing required in the community.

Durham is at the center of the region, geographically and in terms of employment. The location of Research Triangle Park and Duke University within Durham provides a strong employment base for the community, providing employment opportunities for residents of the community as well as for residents of other counties in the surrounding region. This suggests that Durham provides economic growth to accommodate its own population as well as the employment needs of surrounding communities.

The following section provides a general overview of Durham’s economy, beginning with an economic profile of Durham. An examination of the employment base of the community is presented, both in relation to the larger region and to the state. Changes in Durham’s economy over the past ten years are discussed, along with the wage structure of the community and recent economic trends. At the conclusion is an identification of general land use issues that are suggested by Durham’s economy.

## Economic Profile

Durham County had a workforce of 141,849 in 2010. (See Table 8, Economic Profile.) This represents about 54 percent of the Durham-Chapel Hill Metropolitan Statistical Area’s employment and about 3 percent of the employment in the state. The unemployment rate for Durham County was 8.0 percent in late 2010. This rate is significantly lower than the 10.6 percent rate for the state. However, the rate was much higher than Durham County’s rate of 4.4 percent in 2005. The jump in unemployment reflects the lingering effects of a nationwide economic downturn that began in 2006.

The median family income for Durham County in 2010 was over \$61,000. This income was greater than the median family income for the Durham-Chapel Hill MSA and North Carolina, and was virtually the same as for the U.S. as a whole, reflecting the general prosperity of the County.

<b>Table 8. Economic Profile</b>					
	<b>City of Durham</b>	<b>Durham County</b>	<b>Durham-Chapel Hill MSA</b>	<b>North Carolina</b>	<b>United States</b>
Workforce, 2010	na	141,849	263,299	4,512,770	156,044,453
Unemployment Rate, 2010	na	8.0%	7.7%	10.6%	9.9%
Median Family Income, 2009	\$57,200	\$61,030	\$59,405	\$54,288	\$61,082
Per Capita Income, 2009	\$25,814	\$26,529	\$24,698	\$23,576	\$26,409

Note: The Durham-Chapel Hill, NC Metropolitan Statistical Area (MSA) includes all of Chatham, Durham, Orange, and Person Counties. Sources: US Census, 2009 American Community Survey; NC Employment Security Commission.

### The Structure of the Economy

A fundamental tool for the examination of an area’s economic structure is economic base analysis. This statistical tool evaluates employment in a defined area as a component of the employment in a larger area, generally assuming that the employment in the smaller area should naturally reflect the employment pattern in the larger area. The comparison is typically based upon the percentage of employees within a particular industry in a defined region measured against total employment in the region. That percentage can then be compared to a larger geographic area which encompasses the region of interest to ascertain whether the smaller area simply reflects the pattern of the larger area or enjoys perceived competitive advantages with regard to some components of the economy.

If the smaller area simply reflects the larger area, its economic structure should mirror that of the larger area; differences between the two are suggestive of local advantages. Industries in which the ratio of employment within the smaller area exceeds that of the larger area are considered basic industries. Basic industries are those that bring capital into the smaller area due to their production of goods and services in excess of what the smaller area might be expected to require.

In order to analyze Durham’s economic base, 2009 data provided by the U.S. Department of Commerce, Bureau of Economic Analysis for North Carolina and Durham County was compared. The data included the number of employees within each of the industries identified by North American Industrial Classification System (NAICS) codes. Table 9 indicates the results of the comparison. Each industry in which the ratio of employment within Durham exceeds that of the state is identified in the last column of the table; these industries are represented by a value of 1.00 or more.

As shown in Table 9, Durham's economy is in some ways quite different from the state's economy as a whole. In four areas (educational services; professional, scientific, and technical services; administrative, support, waste management, and remediation services; and manufacturing), employment in Durham exceeds the level that would be anticipated considering the employment pattern in the state as a whole. These industries, then, may be considered as the driving forces in Durham's economy and economic growth.

The significance of these industries to Durham's economy is reflected in the presence of the County of several of the most significant non-governmental employers within the Triangle region. These employers include:

- Duke University and Health System, with 33,750 employees. In addition to being the largest non-governmental employer in the region, Duke is the largest non-governmental employer in North Carolina.
- IBM, with 10,000 employees. IBM is the third largest non-government employer in the state.
- Glaxo Smith Kline, with 4,500 employees.
- Blue Cross & Blue Shield of North Carolina, with 2,437 employees.
- RTI International, with 2,200 employees.

Health care is an economic cornerstone to Durham, contributing to a significant employment base. Durham's nickname, "City of Medicine," is reflective of the presence of Duke University Hospital, the largest hospital in the state, with 1,124 beds and approximately 1,400 medical doctors in Durham.

Though health care is not readily identified as a basic industry in Durham County, it should not be dismissed as a major contributor to the region's economy. The Economic Census only captures paid employees, and as a result, sole practitioners and some medical professionals are not included in its numbers. In addition, some of the medical employment in the County is associated with Duke University, and

thus contributes to the importance of educational services in the community's economy.

The health care industry's importance to Durham's economy may also be seen in the presence in the community of many biotechnology companies, pharmaceutical industries, and research organizations. The pharmaceutical firm, Glaxo Smith Kline with approximately 4,500 employees, chose to maintain dual headquarters in Durham and



The Duke University Medical Center provides excellent health care and employment opportunities for Triangle residents.

Philadelphia suggesting the importance of the community in the industry. The firm is complemented by the presence of the world’s largest contract research company, Quintiles, which employs approximately 1,500 people. This company specializes in doing product research for drug companies. In addition, many smaller companies involved in medical research and technology are located in the Triangle area.

Personal income can also be used to measure economic trends. By evaluating the extent to which different industries contribute to the income of the area, rather than the number of employees, additional information about the relative importance of different industries to the economy can be ascertained.

Table 9. Economic Census of NC and Durham County						
Industry	NAICS Code	North Carolina		Durham County		Basic Industries
		Employees	Percent of Total	Employees	Percent of Total	
Manufacturing	31-33	465,971	11.0%	29,880	14.9%	1.35
Wholesale Trade	42	185,451	4.4%	7,563	3.8%	0.86
Retail Trade	44-45	529,988	12.5%	15,671	7.8%	0.62
Real Estate and rental and leasing	53	218,879	5.2%	8,103	4.0%	0.78
Professional, Scientific, and Technical Services	54	289,401	6.8%	26,430	13.2%	1.93
Admin., Support, Waste Management, and Remediation Services	56	312,815	7.4%	12,502	6.2%	0.84
Educational Services	61	107,102	2.5%	15,424	7.7%	3.04
Health Care and Social Assistance	62	531,224	12.5%	37,787	18.8%	1.50
Arts, Entertainment, and Recreation	71	104,928	2.5%	3,818	1.9%	0.77
Accommodation and Food Services	72	360,731	8.5%	13,066	6.5%	0.77
Other Services	81	283,792	6.7%	10,157	5.1%	0.76
Government and Government Enterprises		855,628	20.2%	20,566	10.2%	0.51
Total	--	2,425,720	--	200,967	--	--

Note: Source is the U.S. Department of Commerce, Bureau of Economic Analysis. Data are for 2009.

Table 10, Source of Durham County Personal Income presents a view of the how various industries contribute to the total earned income within Durham County, using information from the Bureau of Economic Analysis’s Regional Economic Information System.

In Durham County in 2009, about 36 percent of all wage income was from workers in the service industries, making this the single most significant sector of the economy in terms of income. It should be noted that the service Industry sector includes a range of activities such as health care, legal services and other professional services as well as hotel workers, and repair services. The manufacturing of durable goods is the next largest at 30%. These two sectors dominate the Durham economy.

<b>Table 10. Source of Durham County Personal Income</b>		
	<b>Income, 2009 (x 1,000)</b>	<b>Percent of Total Income, 2009</b>
Government	\$ 1,367,607	13 %
Service industries	\$ 3,759,300	36 %
Retail trade	\$ 400,900	4 %
Finance, insurance, and real estate	\$ 860,604	8%
Construction	\$ 380,572	4 %
Transportation and public utilities	na	Na
Wholesale trade	\$ 785,896	8 %
Durable goods manufacturing	\$ 2,950,871	28 %
Non-durable goods manufacturing	\$ 1,248,053	12 %
Agricultural services	na	na

Source: U.S. Department of Commerce, Bureau of Economic Analysis Regional Economic Information System. Data are for 2009.

### Changes in Economic Structure

Information about growth and change in Durham’s economy is important in planning for the community’s future. Changes provide further information about the perceived competitive advantage of the community in the larger community, especially when evaluated against similar changes in the larger economy.

The relative strength of an area’s economy can be measured through a shift-share analysis. This type of analysis indicates whether economic growth in a community reflects its capture of its share of the larger region’s growth. It can also indicate whether growth represents an

economic change greater than that of the region, suggesting a shift in favor of the community and a competitive advantage for the smaller area.

Data were collected to measure Durham’s growth in the first decade of the 21<sup>st</sup> century against the economy of North Carolina. A comparison of data from 2001 and 2009 indicate that the economies of Durham County and the state of North Carolina were measurably impacted by the recession that affected national growth during the period 2006-2009. However, employment figures shown in Table 11, Shift-Share Analysis, reveal that Durham was less severely affected by the recession than the state as a whole. Durham saw considerable growth of employment wholesale trade and finance, insurance and real estate over the past ten years but these gains were partially offset by a significant decline in manufacturing jobs.

<b>Table 11. Durham Shift-Share Analysis</b>					
	<b>2001 Employment</b>	<b>2009 Employment</b>	<b>County Growth 2001-2009</b>	<b>North Carolina Growth</b>	<b>Difference</b>
Total Employment	201,956	229,690	13.7%	7.5%	6.2%
Government	17,562	20,566	17.1%	14.7%	2.4%
Services	96,588	120,514	24.8%	25.5%	-0.7%
Retail Trade	16,188	15,671	-3.2%	-1.1%	-2.1%
Wholesale Trade	4,092	7,563	84.8%	6.0%	78.8%
Finance, Insurance & Real Estate	10,552	19,479	84.6%	32.0%	52.6%
Construction	8,249	8,227	-0.3%	-4.6%	4.3%
Manufacturing	39,534	29,880	-24.4%	-35.0%	10.6%

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Nortel Networks reduced its Durham labor force by 2,500 and IBM dropped more than 300 jobs during the decade. The Triangle took a smaller proportion of job cuts compared with other parts of the world. For example, Nortel laid-off approximately 50 percent of its work force worldwide but only 30 percent of workers in the Triangle, perhaps recognizing the long-term vibrancy of the Durham economy.

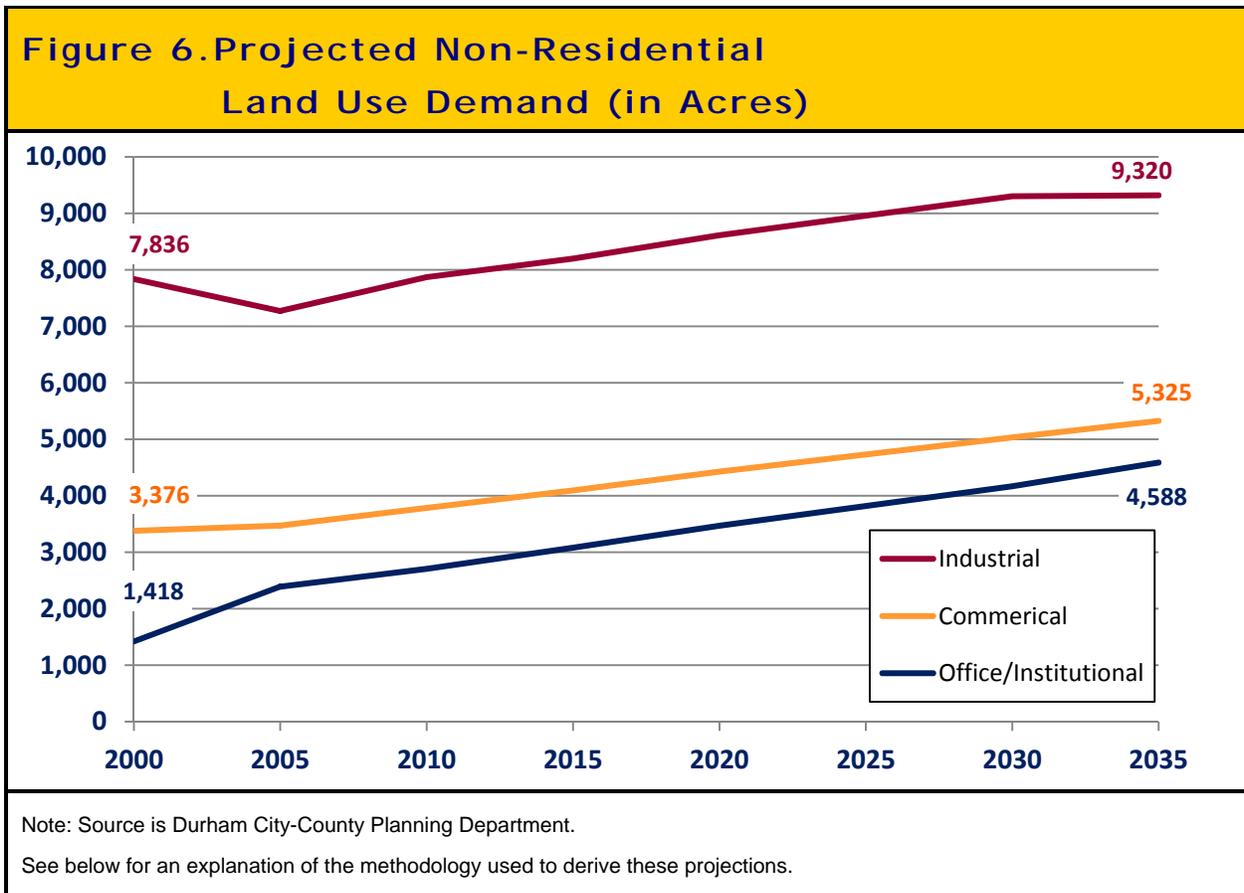
Analysis of Durham’s economy suggests that the long-term need is not for retail space, since Durham is not a regional retail leader. For the moment, retail space may simply be calculated based upon resident demand without consideration of regional retail demands.

In the future, there is likely to be a growing need for industrial and office space. These segments of the local economy are not dependent upon demand solely within Durham but provide employment opportunities as well as produce goods for consumption in a larger market. The supply of office and industrial land should be re-evaluated based upon these factors as well as the specific location factors, including access of industries within the community. New employment centers may need to be provided but should be placed in locations that will not undermine downtown renewal efforts.

### Economic Issues

The presence of the universities in the community has enabled Durham to enjoy high levels of technology-related employment, particularly in the health care field. This employment sector is “knowledge based” and typically demands first class educational facilities at all levels. What can Durham do to maintain and reinforce the excellence and reputation of its institutions of higher learning?

Durham faces a growing need for land located and zoned for non-residential uses. Estimated demand by land use is shown in Figure 6.



How much demand for commercial, office and industrial land should Durham expect and accommodate? Where are the best locations in Durham for expansion of commercial, office and industrial activities? How can these land uses be accommodated without adverse impact on surrounding neighborhoods?

## Summary

Durham County accounts for over 50 percent of the population within the Durham-Chapel Hill MSA, 53 percent of the workforce, and 64 percent of the jobs within the region. The county is therefore a net importer of labor.

Population and employment grew by average annual rates of 2.2 percent and 1.2 percent, respectively, from 2000 to 2010.

The fastest growing segment of the population is persons between the ages 55-64. An aging population appears to be a long-term trend.

Professional, scientific and technical services, educational services, and health care accounted for a far larger percentage of employment in Durham than in these sectors did within the state's economy as a whole.

### Projecting Non-Residential Land Use Demand

Planning staff projected employment by land use through 2035 by using historical employment data for Durham County to derive trend lines. Staff then used current employment by land use, occupied square feet by land use (industrial, office, and institutional), and acreage by land use to calculate square feet demand per employee (sf/employee) and average floor-area ratio (FAR) for industrial, office and institutional uses. The employment projections were then multiplied by sf/employee and FAR to derive the acres needed to accommodate employment.

The method for projecting commercial demand was similar. Average FAR for commercial land use was calculated using data on occupied commercial space in Durham and acreage dedicated to commercial uses. Commercial uses vary greatly in square feet per employee demand, so per capita demand for commercial square feet was derived by dividing occupied commercial square feet by current population. Population projections were then multiplied by per capita demand (80 square feet of commercial space for each resident of Durham) and FAR to derive commercial land use demand in the future.





Updated, April 2012

## Durham Comprehensive Plan

# Appendix A Existing Conditions

## Part 2 The Built Environment

Durham City-County Planning Department

# The Durham Comprehensive Plan

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- Chapter 1. Introduction and Administration Element
- Chapter 2. Land Use Element
- Chapter 3. Housing Element
- Chapter 4. Community Character and Design Element
- Chapter 5. Historic Preservation Element
- Chapter 6. Economic Development Element
- Chapter 7. Conservation and Environment Element
- Chapter 8. Transportation Element
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- Chapter 10. Parks and Recreation Element
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# Appendix A, Existing Conditions Part 2: The Built Environment

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# Part 2: The Built Environment

## Land Use



- Overview*
- Land Use Profile*
- Location of Housing and Employment*
- Zoning*
- Pace of Development*
- Land Supply*
- Future Land Demand*
- Issues*

How people in Durham use land is a significant contributor or detractor to the community’s quality of life. Land is used for homes, businesses, community facilities and farming. Land that most people would consider “un-used” can also be important for passive recreation, wildlife habitat and aesthetic enjoyment. While Durham is one of North Carolina’s smallest counties, it houses the state’s fifth largest city.

Table 1, Present Land Uses, provides information about how land is used in the City and County. Durham County is approximately 191,300 acres in size, or a little less than 300 square miles. (Approximately 980 acres of Durham County is within the Town of Chapel Hill and is not included in this discussion.) About 88 percent of the land in Durham County is classified as “developed,” although some developed land is dedicated to open space and recreation and may not look developed to the casual observer. Developed land also includes land used for public rights-of-way.

Agricultural land uses represent about one-quarter of the County’s developed land area, while residential uses constitute about 30 percent. Most of the residential land is used for either very low density or low-density housing. Commercial, office, industrial and utility uses together account for a little more than 11 percent of developed County land, including Durham’s portion of Research Triangle Park.

Open space and recreation lands comprise almost one-fourth of Durham’s land area. These lands include the Corps of Engineers land around the Falls of the Neuse and Jordan Reservoirs, the NC State University Hill Forest, the NC National Guard’s Camp Butner, Eno River State Park, Duke University and Duke Forest.

The City of Durham encompasses about 69,187 acres or a bit over 108 square miles, representing more than one-third of the County. About 89 percent of this land is classified as “developed.” Residential uses accounted for about one-third of developed land in the City, with land developed at low density residential accounting for half of that. Land developed for commercial, office, industrial and utility uses comprises about 7,110 acres or 12 percent of total developed land in the City.

Table 1. Present Land Use				
Land Use	City (Acres)	Proportion of Developed	Durham County (Acres)	Proportion of Developed
Agriculture	4,243	6%	39,767	21 %
Residential	22,930	33%	51,342	27%
Very Low Density	6,846	10%	30,423	16%
Low Density	11,273	16%	16,003	8%
Medium Density	4,005	6%	4,090	2%
High Density	806	1%	826	0%
Commercial	2,880	4%	4,201	2%
Office/Institutional	1,080	2%	1,454	1%
Public/ Recreation and Open Space	16,573	24%	45,806	24%
Industrial and Utility	3,108	5%	13,129	7%
Rights of Way	8,363	12%	15,524	8%
Total Developed	59,177	88%	155,699	82%
Vacant	7,983	12%	19,392	10%
Total	69,187	--	190,615	--

Note: Source is Durham County Tax Assessor’s records, July 2011. For residential land uses, very low density means, less than 1.0 dwelling unit per acre, low density means from 1 to 4 dwelling units per acre, medium density means from 4 to 8 dwelling units per acre and high density means greater than 8 dwelling units per acre. Does not include Town of Chapel Hill land in Durham County.

The relative location of housing and employment activities in a community is a major factor in travel demand. Well-integrated land uses can reduce travel demand from work trips, while dramatically segregated land uses increase work related travel demand. Map 1, Non-Residential Land Uses, shows where jobs are located in the Durham community. Several areas of employment concentration are evident. The map clearly shows the industrial and research land uses associated with the Research Triangle Park and environs in southeast Durham. The vicinity of Duke University, Duke University Medical Center and the Veterans Administration Hospital show up as another employment concentration. Downtown Durham and various retail concentrations are also evident.

Likewise, Map 2, Housing Land Uses shows generally by density where housing is located. Very low density housing is prominent in rural areas of Durham County. Low density and medium density areas are well distributed in the built-up portions of Durham. High density housing is located along I-40 in south Durham, along University Drive and Chapel

Hill Boulevard area in southwest Durham, west of Duke University, along NC 147, in north Durham along Carver Street and Horton Road and in other isolated sites in southeast Durham.

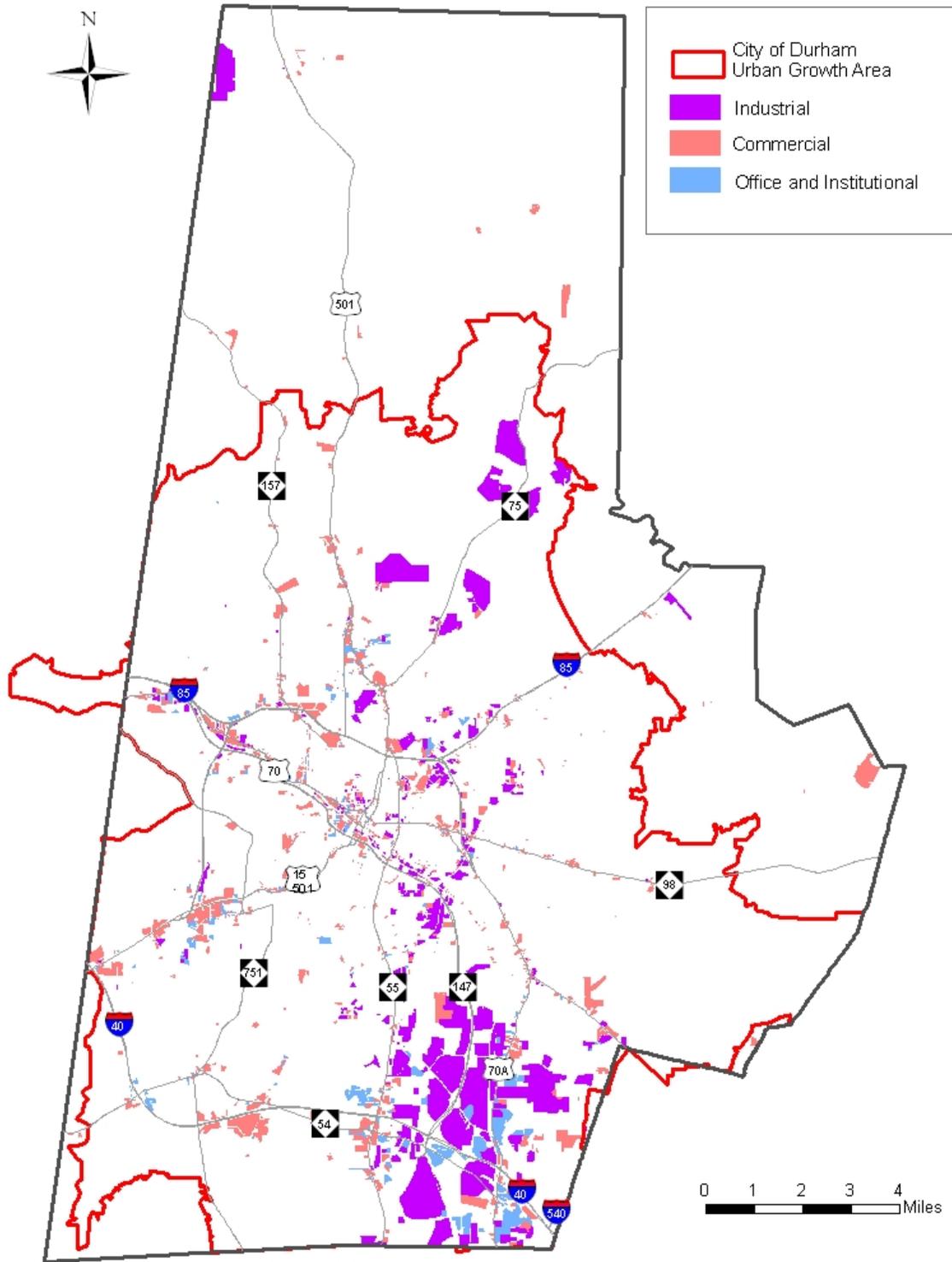
Table 2, Non-Residential Building Area by Land Use provides another picture of how land is used. Building area in square feet is shown for commercial, industrial and office land uses. In Durham County, commercial land uses fill a little more than one-third of the total building space, while office land uses fill about one-quarter of total building space. Industrial uses also consume more than one-third of building space. Note that over 90 percent of the square footage in each of these three land use categories is located in the City of Durham.

Zoning is the set of rules and procedures by which local governments regulate how land is used. Local governments adopt zoning ordinances to implement their long range land use plans and to direct development and redevelopment into areas that minimize conflict between land uses. The City and County of Durham merged their Zoning Ordinance in 1993. This Zoning Ordinance was superseded by the Unified Development Ordinance (UDO) in 2006. The UDO governs development in both the City and County jurisdictions.

<b>Table 2. Non-Residential Building Area by Land Use</b>		
<b>Land Use</b>	<b>County (Sq. Ft.)</b>	<b>Proportion</b>
Commercial	22,699,863	31%
Office	15,884,181	22%
Institutional	10,969,735	15%
Industrial	23,412,279	32%
Total	59,410,000	100%

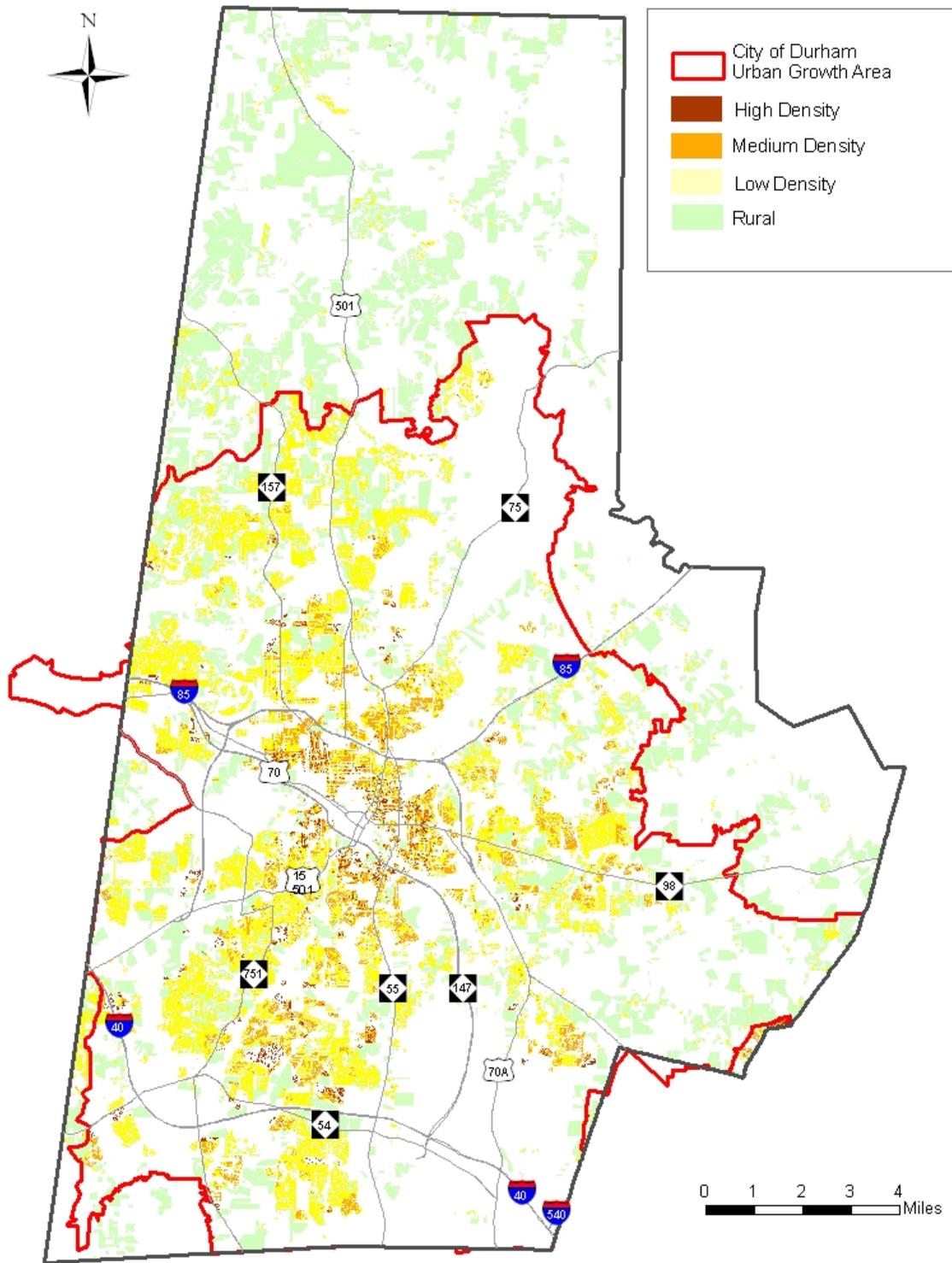
Note: Source is Durham City-County Planning Department, July 2009.

### Map 1. Non-Residential Land Uses



Note: Source is Durham City-County Planning, August 2011

### Map 2. Housing Land Uses



Note: Source is Durham City-County Planning, August 2011

Table 3, Present Zoning, displays how land is zoned in Durham City and County. The table combines Durham’s 22 zoning districts into nine categories and indicates the amount of acres zoned for each. For Durham County, the most prominent zoning category is Rural, constituting more than half of the total land. Almost one-third of the land in Durham County is zoned for residential uses. A little less than 10 percent is zoned for industrial and research uses, most of which is the Research Triangle Park and the Treyburn development. Generalized zoning for Durham County is shown in Map 3.

<b>Table 3. Present Zoning</b>				
<b>Land Use</b>	<b>City (Acres)</b>	<b>City Proportion</b>	<b>Total County (Acres)</b>	<b>County Proportion</b>
Rural	3,403	5%	100,437	54%
Residential, Total	47,916	71%	60,758	32%
Commercial	3,780	6%	4,719	3%
Office	2,768	4%	2,978	2%
Industrial and Research	7,700	12%	17,200	9%
Mixed Use	510	1%	673	0%
Design District	730	1%	730	0%
<b>Total</b>	<b>66,835</b>	<b>100%</b>	<b>187,495</b>	<b>100%</b>

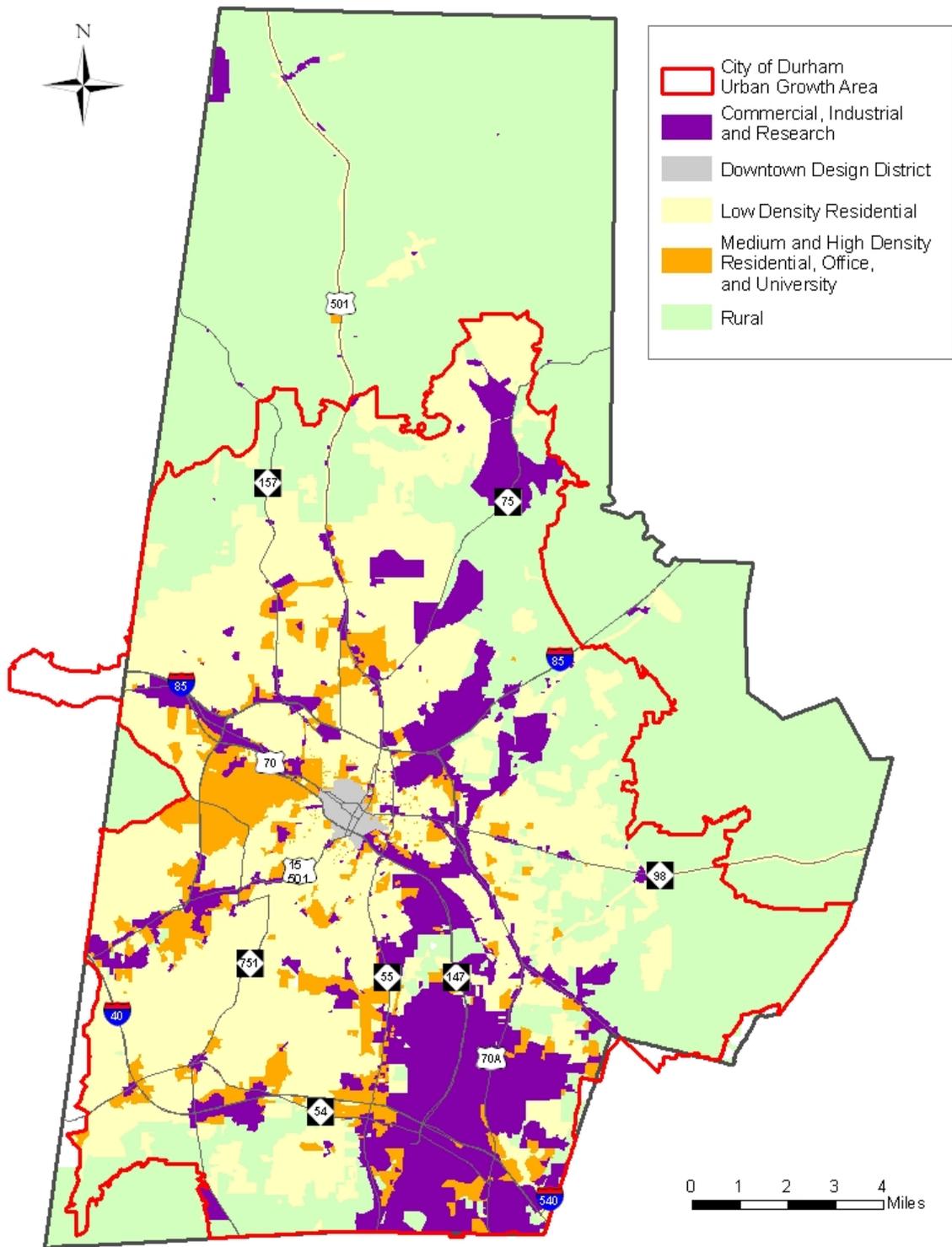
Note: Rural includes Rural Residential, RR, which allows agricultural and residential uses. Does not include Town of Chapel Hill land in Durham County.

The most common zoning in the City is residential, representing a little less than three-quarters of the City area. Of this, almost one half is devoted to zoning that allows development at one to four dwelling units per acre. Commercial and office zoning accounts for about 11 percent of the total area, while industrial and research accounts for about 12 percent. Rural Residential zoning applies to most of the County area outside of the Urban Growth Area. Rural Residential zoning also applies to some of the land inside the Urban Growth Area, indicating that this land is likely to be subject to requests to change the zoning to a higher intensity.

The most prominent type of zoning in the Urban Growth Area is low density residential (defined as zones that allow between one and four dwelling units per acre). The ragged edge of rural and low density uses on the outskirts of Durham defines the gradual suburbanization of the County. Areas of commercial, industrial and research zoning are shown on the map with the darkest shading pattern. The concentration of these uses in the southeastern corner of the County suggests the impact

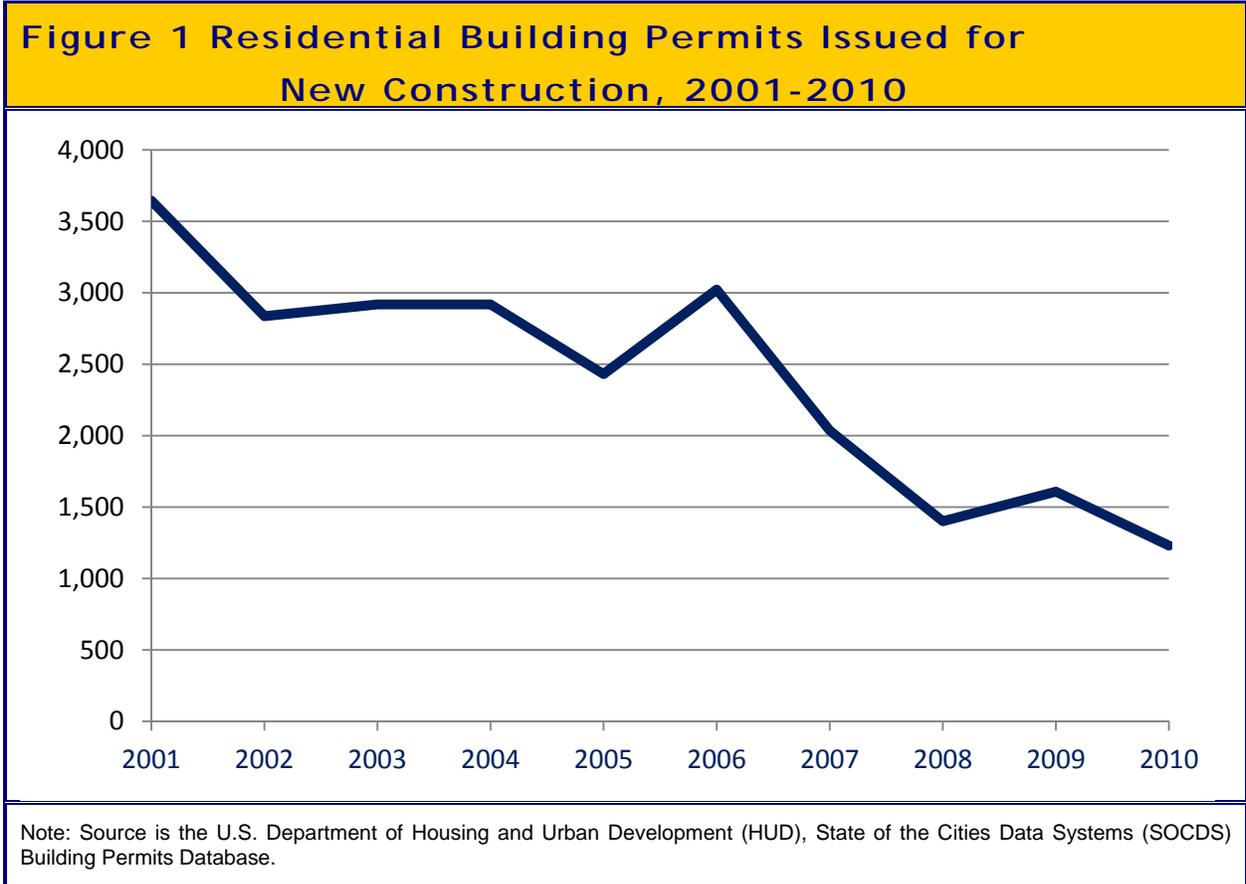
on Durham of growth within the Region but outside the County. East and northeast Durham also show large areas zoned for these uses.

### Map 3. Generalized Zoning



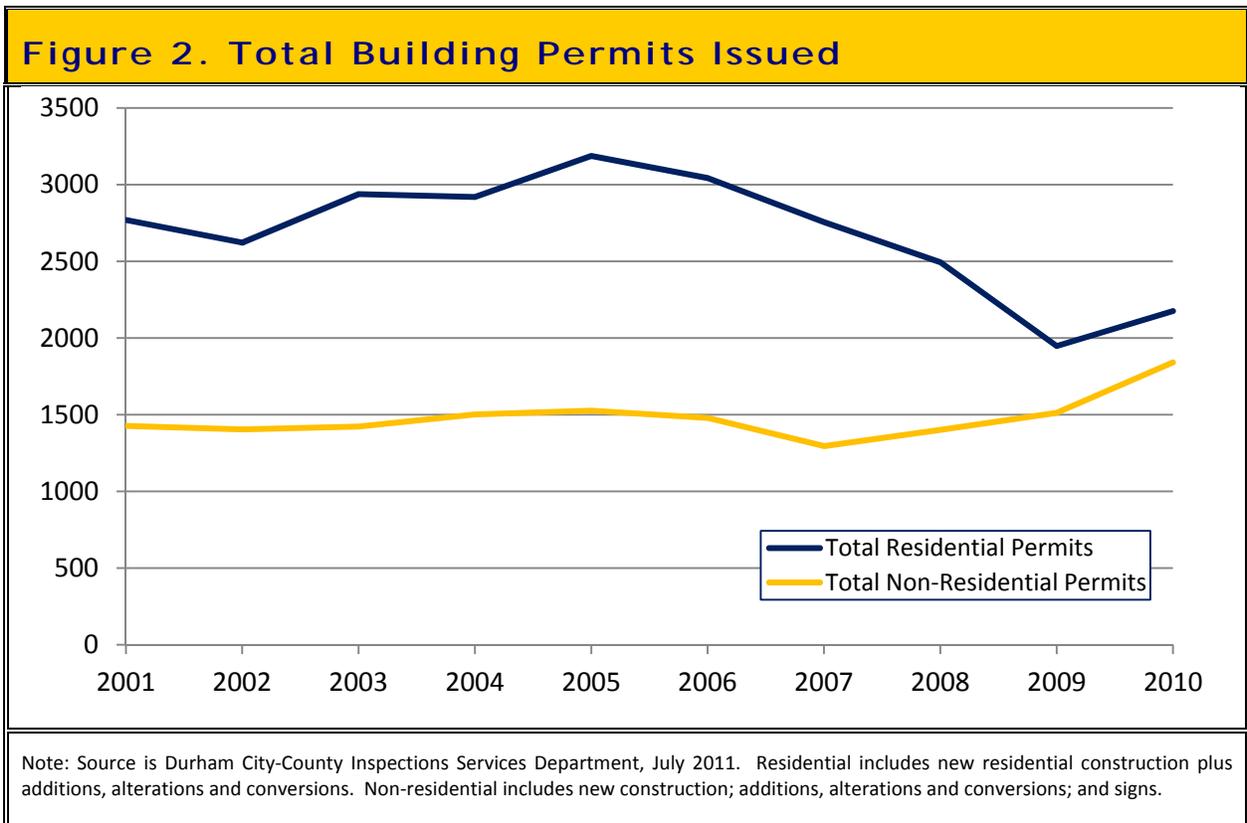
Note: Source is Durham City-County Planning, July 2011.

Development activity declined during the nationwide economic recession that began in 2006 and has not rebounded to levels of activity seen in the earlier half of the decade. The effects of the slowdown are clearly reflected in a graph of residential building permits for new construction, issued during the period 2001-2010 (See Figure 1.) The rate of decline averaged 1.2 percent annually.



An important purpose of land use planning is to ensure that a community provides sufficient land to meet future needs. The additional population Durham expects over the coming decades will require land for new housing, businesses, schools and other public facilities. Prudent planning involves projecting how much land Durham will need for various land uses and identifying appropriate locations for those land uses within our community.

One method of projecting land needed for residential purposes uses historical rates of growth. During the 1990s, acreage used for residential purposes grew by over 5,200 acres. This represents a growth rate of about 11.8 percent. The rate of growth for low density residential land uses during that period was 11.1 percent, while the rate of growth for medium and high density residential land uses was significantly higher at 17.1 percent.



If these rates of growth in residential land use apply to the next three decades, Durham will need about 20,500 additional acres in residential land by 2035. (See Table 4, Residential Land Demand.) Low density residential development will need about 16,600 acres, while medium and high density residential development will need about 3,900 acres. This projection methodology relies on the demand for residential land uses over a single decade that saw relatively rapid growth and should be used with caution.

An alternative method of projecting future residential land demand more consistent with Smart Growth principles would be to base the demand for land on population growth. This is the methodology recommended by the Smart Growth Network and the National Association of Counties.

<b>Table 4. Residential Land Demand</b>						
	<b>2000 Land Use (Acres)</b>	<b>2010 Land Use (Acres)</b>	<b>1990 to 2000 Rate of Increase</b>	<b>2000 to 2010 Rate of Increase</b>	<b>2035 Projected Land Use (Acres)</b>	<b>Needed Increment (Acres)</b>
Low Density Residential	44,800	46,427	11.1 %	3.6%	61,400	16,600
Medium and High Density Residential	3,499	4,916	17.1 %	40.5%	10,300	3,900
Total Residential Demand	51,200	51,343	--		71,700	20,500
Note: Source is Durham City-County Planning Department, July 2011.						

Durham’s population in 2010 was 267,587. It is projected to increase over the next 25 years by about 30 to 50 percent, depending upon the projection methodology used. The trend suggests a need to accommodate between 91,000 and 135,000 more people than lived in the City and County in 2010. For planning purposes, a linear population projection that yielded a 2035 population of approximately 379,000 (an increase of nearly 110,000 people) was selected as the most appropriate tool to use, given that it suggested a rate of growth between the extremes of the other projection methodologies (see Existing Conditions Report, Part 1, Table 6).

Smart Growth principles would dictate that long range plans show how that additional increment of population would be accommodated. This effort would entail converting population increases into an increased demand for land. To do that, it is necessary to consider how the increased population may be reflected in households. Knowing the number of expected households can lead to a projection of the total acreage required for residential development, making basic assumptions about the relative densities that may be seen in the future.

The 2000 Census reported an average household size of 2.4 persons per household for Durham County. Assuming that this figure holds true over the next 30 years, Durham must modify its long term plans to designate land to accommodate approximately 43,900 additional dwelling units.

The actual acreage required to accommodate this increase in population is a reflection of the densities that the City and County determine are appropriate. For example, if the decision is made to emphasize low density development (no more than 4 units per acre), a midpoint density in this range would yield a demand for almost 22,000 acres of low density residentially designated land. Conversely, if the decision is made to accommodate the bulk of that increase through high density development (development greater than 8 units per acre), an average high density of 10 units per acre would yield a demand for 4,390 additional acres of land with a high density designation.

Other policy factors will also impact the manner in which the demand for residentially designated land can be met. For example, if the definition of low density development is decreased from its current provisions (no more than 4 units per acre) to permit densities no greater than 2 units per acre, the demand for additional land with a residential designation will dramatically increase. This is a reflection of the fact that, at present, two-thirds of the residentially designated land in Durham is shown as low density, suggesting that such a change would dramatically reduce the number of people who could be accommodated under existing designations. The failure to approve zonings changes that are consistent with the long range Plan could also impact Durham’s ability to absorb expected population.

While these factors must all be evaluated in determining how to meet the demand for additional residentially designated land as the Plan progresses, it is safe to acknowledge that there is a need for more land to be designated and subsequently developed in a residential pattern.

Projection methodologies for non-residential land uses generally attempt to forecast demand for different types of space considering population growth, consistent with Smart Growth principles. As a general rule, this entails consideration of the past employment trends within various sectors of the economy and making assumptions about future growth within each sector (see Table 5).

<b>Table 5. Employment by Land Use, 2001-2010</b>										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Agriculture	285	269	267	265	256	261	251	246	242	237
Industrial	55,228	49,661	48,364	49,664	50,463	52,192	55,165	54,943	53,610	54,614
Commercial	37,902	39,787	39,508	40,069	41,168	42,073	43,848	44,335	43,260	44,070
Office	71,253	70,877	70,199	72,521	73,306	77,324	82,184	85,399	83,328	84,888
Institutional (Including Government)	37,217	39,258	41,931	44,542	46,534	48,289	50,488	50,999	49,762	50,694
<b>Total:</b>	<b>201,885</b>	<b>199,852</b>	<b>200,269</b>	<b>207,061</b>	<b>211,727</b>	<b>220,139</b>	<b>231,936</b>	<b>235,922</b>	<b>230,201</b>	<b>234,504</b>

Source: U.S. Department of Commerce, Bureau of Economic Analysis and Durham City-County Planning Department.

It should be noted that commercial and industrial land uses typically include some employees in offices. To address this, the office/non-office employment ratios established by the Urban Land Institute were applied to estimate the percentage of commercial and industrial employees that should be assigned to the office category. A similar adjustment was made to account for the governmental employees who cannot be included in with office employment. Both Tables 5 and 6 reflect this adjustment.

<b>Table 6. Employment Projections by Land Use</b>				
	<b>2001</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>
Agriculture	285	237	187	141
Commercial	37,902	44,070	52,517	59,560
Office	71,253	84,888	107,083	126,409
Institutional (Includes Govt.)	37,217	50,694	70,373	86,115
Industrial	55,228	54,614	59,272	63,711
<b>Total</b>	<b>201,885</b>	<b>234,503</b>	<b>289,432</b>	<b>335,936</b>

Note: Sources are US Department of Commerce, Bureau of Economic Analysis and Durham City-County Planning Department.

The Urban Land Institute (ULI) publication *1997 Dollars and Cents of Shopping Centers* suggests that the demand for retail space is a reflection of the sales per square foot of various retail sales categories. In a healthy local economy, the amount of retail space provided should be determined by looking at the amount of space provided on a per capita basis, rather than by growth in retail employment, reflecting that customers drive the amount of space for retail sales rather than the number of employees. The ULI further suggests that, on a national average, the retail square foot demand per capita multiplier is likely to be around 65 square feet per capita on an overall basis.

In order to determine if this multiplier holds true for Durham, Durham County Tax Assessor data for 2010 were reviewed to determine the total square feet of commercial space in Durham and Durham County. The total square footage was multiplied by the most recent available data on occupancy rate and divided by the total population in 2010 to calculate the appropriate retail square foot demand per capita multiplier. As shown in Table 7, Retail Square Foot per Capita Multiplier, the resulting figure was 84 square feet.

<b>Table 7. Retail Square Foot per Capita Multiplier</b>	
2010 Population	267,745
2010 Occupied Retail Square Feet	21,419,600
Retail Square Foot per Capita Multiplier	84

Note: Source is Durham County Tax Assessor and the Durham City-County Planning Department, July 2011.

Development of this multiplier permits a projection of the future demand for retail square footage in Durham, based upon the projected population growth of the community. The resulting square footage can be converted to an estimate of the acreage required, through use of an assumption regarding the Floor Area Ratio (FAR) typically built in

Durham. For planning purposes, the FAR was assumed to be 0.156, or a built floor area of a site equivalent to 15.6 percent of the total site area. Table 8, Commercial Land Demand indicates that approximately 4,200 acres of commercial space will be required to meet the demand through 2030.

<b>Table 8. Projected Commercial Land Demand</b>				
	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>
Population Projection	223,314	267,745	323,474	378,024
Commercial Demand in Square Feet	19,428,300	21,419,600	27,171,816	31,754,016
Acreage Required to Meet Demand	2,859	3,308	3,999	4,673
Note: Source is Durham City-County Planning Department, January 2003. Assumes 84 square feet per capita and FAR 0.156.				

The distribution of that acreage should be determined based upon the nature of the retail space provided. The Urban Land Institute suggests that retail space be broken down into components of neighborhood, community, and regional space. Each of these types of retail serves a different size market with some variation in uses. Neighborhood commercial centers, for example, typically serves a population of around 10,000 people in centers no more than 100,000 square feet with uses such as grocery stores, drug stores, barber shops, and dry cleaners. Community centers serve a population of around 50,000 in centers of up to 300,000 square feet, which would add uses such as variety stores and florists to the neighborhood uses. Centers larger than 300,000 square feet are considered regional centers and typically include one or more department stores.

Unlike commercial space, office demand is a factor of the number of employees within the office sector of the economy. Accordingly, the demand for additional office space can be calculated through use of a fixed multiplier for the square feet per employee and the projected growth in office employment. The Urban Land Institute reports that the average office space per employee in new office buildings is 200 square feet or less (*Office Development Handbook, Second Edition, June 1998*). Examination of the actual situation for Durham suggests that this multiplier is high, however, with the actual numbers in Durham showing approximately 123 square feet per employee.

Durham will need approximately 2,408 acres of office land through 2030, as shown in Table 9, Office Land Demand. This calculation uses the multiplier calculated specifically for Durham and an average Floor Area Ratio of 0.1865 (which reflects Durham County Tax Assessor data for developed office sites).

<b>Table 9. Projected Office Land Demand</b>				
	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>
Employment Projection	71,253	84,888	107,083	126,409
Office Demand in Square Feet	9,597,683	12,903,032	16,276,652	19,214,209
Acreage Required to Meet Demand	1,390	1,709	2,058	2,408

Note: Source is Durham City-County Planning Department, July 2011. Assumes 152 square feet per employee and FAR 0.1865.

Like office demand, industrial demand is typically a reflection of the number of employees within the sector and the projection of industrial space will use this factor. This procedure ensures that demand for this type of space includes the regional employment provided as well as the local employment.

In order to calculate the demand for industrial space, a multiplier must be developed for the square feet per employee for both warehouse and non-warehouse industrial uses. This was accomplished for Durham by calculating the number of employees in the industrial sector, as shown in Table 8, Employment by Land Use, and dividing that number by the total square footage of industrial buildings identified in the Durham County Tax Assessors’ records. These calculations assume that the square footage per employee identified in 2010 will hold constant through the planning period. The per employee square footage multiplier is 243 square feet for non-warehouse uses and 2,900 square feet for warehouse uses.

Projections of industrial land demand assume that the floor area ratio will be 0.25 for warehouse uses and 0.0461 for non-warehouse uses. These FARs reflect the Durham County Tax Assessor data for developed industrial sites. Table 10, Projected Industrial Land Demand indicates that Durham will need approximately 7,126 acres of industrial land through 2030, which represents an increase of about 1,200 acres.

<b>Table 10. Projected Industrial Land Demand</b>				
	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>
Employment Projection, Warehousing	2,659	3,009	3,665	4,189
Warehousing Demand (Square Feet)	7,690,456	8,701,740	10,600,004	12,113,453
Warehousing Acreage Required to Meet Demand	706	799	973	1,112
Employment Projection, Non-Warehousing	45,628	51,606	55,215	59,523
Non-Warehousing Demand (Square Feet)	12,683,547	12,540,155	13,512,370	14,464,022
Acreage Required to Meet Demand	5,823	5,710	6,153	6,586
<b>Total Industrial Acreage Required to Meet Demand</b>	<b>6,529</b>	<b>6,509</b>	<b>7,126</b>	<b>7,698</b>

Note: Source is Durham City-County Planning Department, July 2011. For warehousing, assumes 2,892 square feet per employee and FAR 0.25. For non-warehousing, assumes 241 square feet per employee and FAR 0.05.

Future increases in population and employment will increase demand for land development. Housing demand will be reflected in proposals for new subdivisions, apartment complexes and adaptive reuse of older structures. Businesses will need land and buildings for retail activities, offices, personal and professional services, research and manufacturing. How Durham plans for the changing uses of land to accommodate our expected growth will significantly influence our community’s future quality of life.

Fundamental questions about growth and development abound. How much building space and land will Durham need for shopping centers and business parks? Where can we locate new employment activities in order to minimize commute to work times? Can infill or redevelopment of existing sites satisfy a significant portion of our land demand?

If we ensure that developments will be attractive, can we mix housing and business land uses more than we have in the past? Can Durham accommodate development while preserving the natural resources that make this an attractive place to live and work? What levels of infrastructure is Durham willing and able to provide to support new development? Projecting future land demand, locating in the community the types of land we will need, and planning for the public infrastructure to support it is the central focus of the Durham Comprehensive Plan.

For years, Durham has used the Urban Growth Area (UGA) boundary as a tool to manage its physical growth. In general, the UGA has been

drawn in northern Durham County to keep urban and suburban development out of Durham's drinking water supply watersheds. In southeast and southwest Durham, the UGA was drawn to reflect utility services and annexation agreements.

Watershed protection policies and adjacent jurisdictions represent real limits to Durham's physical expansion. Some capacity exists to expand in eastern and northwestern Durham, but that may mean the loss of some rural areas to more suburban patterns of development with attendant increases in infrastructure and service delivery costs.

Durham's UGA represents a growth management system where land is either inside the boundary and allowed to be served with public utilities or outside of the boundary where public utilities are not provided. However, Durham determined that a more complex approach better served its growth management needs, and growth tiers and special growth areas were adopted via the 2005 Comprehensive Plan and through the UDO in 2006.

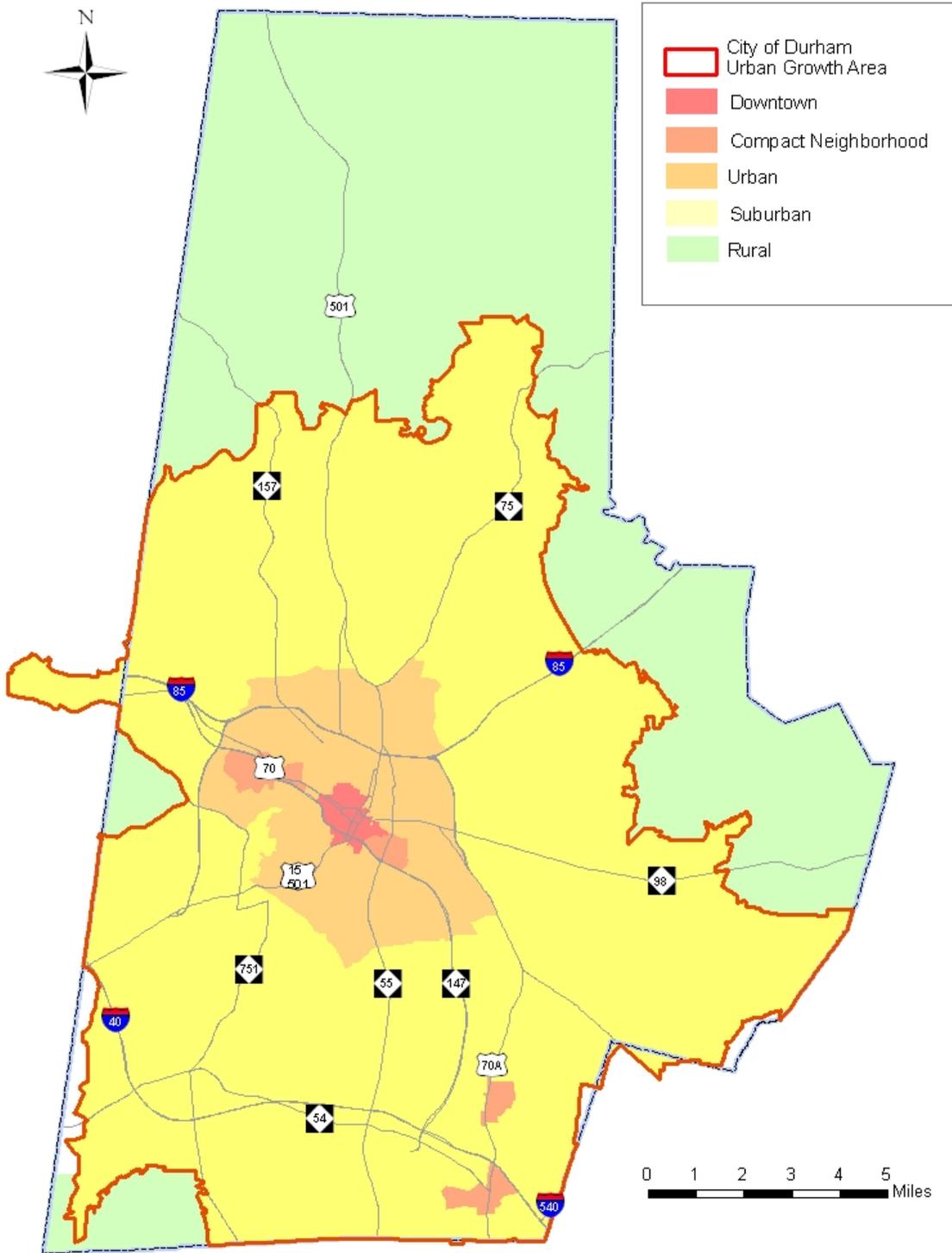
Development Tiers were established to guide growth and development in distinctive parts of the Durham community. New development and redevelopment activities appropriate to each Tier were encouraged through policies and development regulations that recognized the distinct character of each Tier (See Map 4, Development Tiers).

Durham is building its future around distinct community types, such as downtown, urban neighborhoods, suburban neighborhoods, rural areas and natural resource protection areas. Criteria specific to each area for future land use, levels of service for public facilities, and development design standards guide growth. Thus, the Comprehensive Plan defines the specific goals, objectives, and policies most appropriate for each of these communities within the greater community.

Triangle Transit is proceeding with plans to construct a Regional Rail system. The Durham 2020 Comprehensive Plan embraced rail transit as an organizing element for new in-town development, proposing Compact Neighborhoods around regional transit stations. These are characterized by higher intensity and mixed land uses, exceptional pedestrian and bicycle accessibility, interconnections with local transit services, a network of urban open spaces and community design appropriate to their intensity and location.

The Unified Development Ordinance, adopted in 2006, incorporated principles of smart growth and established a regulatory environment favorable to transit-oriented developments. Durham has continued to enhance its regulatory environment with regard to transit-oriented development by adopting 2010's downtown zoning update and other form-based code amendments to the UDO. An update of regulations for mixed use development is currently in progress.

### Map 4. Development Tiers



Note: Source is Durham City-County Planning, November 2011.

As indicated in the previous discussion about regional context, Durham is one of several communities in the Triangle Region. For many years, the various communities in the Triangle were separated by largely undeveloped rural land. Over the past two decades, growth on the edges of the region's communities has brought them into contact with one another.

Today, the City of Durham shares borders with Chapel Hill, Raleigh and Morrisville, and will probably share a border with Cary in the not-too-distant future. Land use and development decisions made by these neighbors directly affect Durham. Likewise, how Durham plans for and approves development affects its neighbors. How should Durham locate shopping and employment centers given land use patterns in neighboring jurisdictions? How can transportation planning between jurisdictions be improved for better efficiency of road or transit improvements?

For areas in east Durham, a formal process is in place for sharing information about current development proposals between Durham and Raleigh. For areas in west Durham, Chapel Hill and Durham are mutually sharing planning information based on a formal agreement. The Planning staffs from Durham and Cary informally share information about future development plans. While these relationships are valuable, they need to be reinforced. Enhanced coordination of long range planning is in the interest of each jurisdiction in the Region, as the communities grow closer together.

# Housing



*Overview  
Housing Profile  
Housing Assistance  
Issues*

## Housing Profile

Provision for health, safety and general welfare is a basic requirement for good governance. Ensuring an adequate supply of safe, affordable shelter for its citizens is a part of the local government’s responsibility in meeting this requirement.

Durham County had 120,217 dwelling units in 2010, about 86 percent of which were in the City. Within the City, renter-occupied housing accounted for about 50 percent of all housing in 2010, compared to 46 percent in the County (see Table 11). It should be noted that the rate of renter-occupied housing for the City of Durham is comparable to similar sized cities throughout North Carolina and the United States. Single-family, detached dwellings make up the majority of owner-occupied dwellings. Rental units tend to be more diverse in character, ranging from older detached single-family homes to recently constructed apartment complexes containing several hundred units.

The residential vacancy rate was 9.5 percent for the City and 9.0 percent for the County in 2010. These vacancy rates are comparable to the MSA’s rate of 9.1 percent but lower than the 13.5 percent vacancy rate for North Carolina and 11.4 percent for the United States.

During the period 2000-2010, Durham witnessed an increase in its housing stock of 28 percent for the City and 26 percent for the County. For both jurisdictions, the proportion of owner-occupied housing increased slightly. The median value of housing was approximately \$173,000 for both the City and the County in 2010. This value was lower than the median value of housing for the MSA of \$179,000 but higher than the median value of housing for the state (\$143,000).

During the same period, household income grew by 42 percent within the County and 52 percent within the City. A comparison between the growth rates for income and housing costs suggests that housing choices available to moderate, low and very low-income households, chiefly in the rental market, may be shrinking at a time when the overall housing supply has expanded to meet a growing population’s demand.

The 1990s saw a construction boom in housing, in Durham and the region as a whole. An economic slowdown that began in 2001 was reflected in a decline of housing starts. Multiple Listing Service statistics for 2001 reflect a strong housing market and Durham Planning Department projections also indicate strong market. The housing market rebounded during the middle of the decade but the national recession that began in late 2008 again slowed the housing market.

### **Metropolitan Statistical Area**

The Metropolitan Statistical Area (MSA) is a geographical area defined by the Federal government for reporting demographic, housing and economic information. The Durham-Chapel Hill, NC MSA includes the counties of Chatham, Durham, Orange and Person.

<b>Table 11. Housing Profile</b>					
	<b>City of Durham</b>	<b>Durham County</b>	<b>Durham-Chapel Hill MSA</b>	<b>North Carolina</b>	<b>United States</b>
Dwelling Units, 2010	103,221	120,217	222,760	4,327,528	131,704,730
Proportion of Owner-Occupied Units	50%	54%	60%	67%	65%
Proportion of Renter-Occupied Units	50%	46%	40%	33%	35%
Vacancy Rate	9.5%	9.0%	9.1%	13.5%	11.4%
Change in Dwelling Units, 2000 to 2010	+ 28%	+ 26%	--	+ 23%	+ 14%
Median Value of Owner-Occupied Housing, 2009	\$173,100	\$173,200	\$179,300	\$143,200	\$185,400
Median Household Income in 2010	\$45,525	\$47,401			
Percent of Housing Units Lacking Complete Plumbing Facilities	0.70%	0.66%	1.0%	1.8%	1.7%

Notes: Source is United States Census Bureau, Census of Population and Housing, 2000 and 2010 and 2009 American Community Survey.

Durham’s housing growth occurred largely within an expanding suburban ring along the City of Durham’s periphery. Much of this growth occurred in proximity to the region’s largest employment center, Research Triangle Park (RTP), and near major transportation arteries connected to RTP.

Median monthly costs for homes with mortgages for the City and County were \$1,116 and \$1,118, respectively (see Table 12, Housing Cost). These figures are lower than for the MSA, at \$1,199, but higher than median monthly costs for homes with mortgages for North Carolina and the United States, at \$985 and \$1,088, respectively. Median monthly rents were \$657 for the City and \$658 for the County. Again, these rents are lower than median monthly rent for the MSA, at \$686, but higher than for the state and nation, at \$548 and \$602, respectively. Housing in Durham is relatively more affordable than in the Region but less affordable than around the state or nation.

<b>Table 12. Housing Cost</b>					
	<b>City of Durham</b>	<b>Durham County</b>	<b>Durham-Chapel Hill MSA</b>	<b>North Carolina</b>	<b>United States</b>
Median Monthly Costs, Mortgaged Units, 2009	\$1,412	\$1,409	\$1,416	\$1,216	\$1,486
Change in Median Monthly Costs, Mortgaged Units, 2000 to 2009	+ 27%	+ 26%	--	+ 24%	+ 37%
Median Monthly Gross Rent	\$780	\$786	\$779	\$702	\$817
Change in Median Monthly Gross Rent, 2000 to 2009	+ 19%	+ 20%	--	+ 28%	+ 36%

Notes: Source is US Census Bureau, 2000 Census of Population and Housing and 2009 American Community Survey.

Housing may be regarded as affordable if the annual costs for housing do not exceed 30 percent of the household’s annual income. In 2000, housing costs represented about 33 percent of annual income for the City of Durham, 31 percent for Durham County and almost 30 percent for the MSA.

Households earning between 60 and 80 percent of the median household income for the community are defined as moderate-income. Households earning between 35 and 60 percent of median household income are defined as low-income. Very low-income households earn less than 35 percent of the community’s median household income.

Table 13, Housing Affordability shows the median household income for the City and County. It also shows the number of housing units that were affordable to moderate, low income, and very low income households. In 2000, 39,365 housing units, or approximately 41 percent of Durham County’s housing stock, was affordable to moderate income households. Twenty three percent of Durham County’s housing was affordable to households with low income, representing about 20,269 dwelling units. Only six percent, or less than 5,700 units, was affordable to households with very low incomes.

Affordable housing is not evenly distributed around the Durham community. Map 5, Affordable Housing Location shows that current housing affordable to low-income households is concentrated within a relatively small number of areas within the City of Durham. Inner city neighborhoods to the south and east of downtown were areas where in 2000 affordable housing constituted 62 percent or greater of the area’s housing stock.

<b>Table 13. Housing Affordability</b>		
<b>Median Household Income</b>		
City of Durham		\$47,384
Durham County		\$49,928
<b>Estimated Number of Affordable Housing Units</b>	<b>Number of Units</b>	<b>Proportion of Total County Dwelling Units</b>
Units Affordable to Moderate Income Households	49,289	41%
Units Affordable to Low Income Households	27,650	23%
Units Affordable to Very Low Income Households	7,213	6%
Notes: Source is US Census Bureau, 2009 American Community Survey and the Durham City-County Planning Department. .		

Much of Durham’s subsidized housing is concentrated within the inner City neighborhoods. All subsidized housing is located within the City limits. Map 6, Location of Subsidized Housing shows the location of housing that is publicly subsidized. The City adopted a subsidized location policy in 2003. The policy was incorporated into the Comprehensive Plan adopted in 2005.

Approximately 0.5 percent of homes in Durham County, or 430 units, had incomplete plumbing facilities and/or kitchen facilities in 2000. The percentage of units with incomplete plumbing was similar to the percentage found in the MSA. Somewhat surprisingly, 87 percent of Durham County’s units with incomplete plumbing occurred within the City.



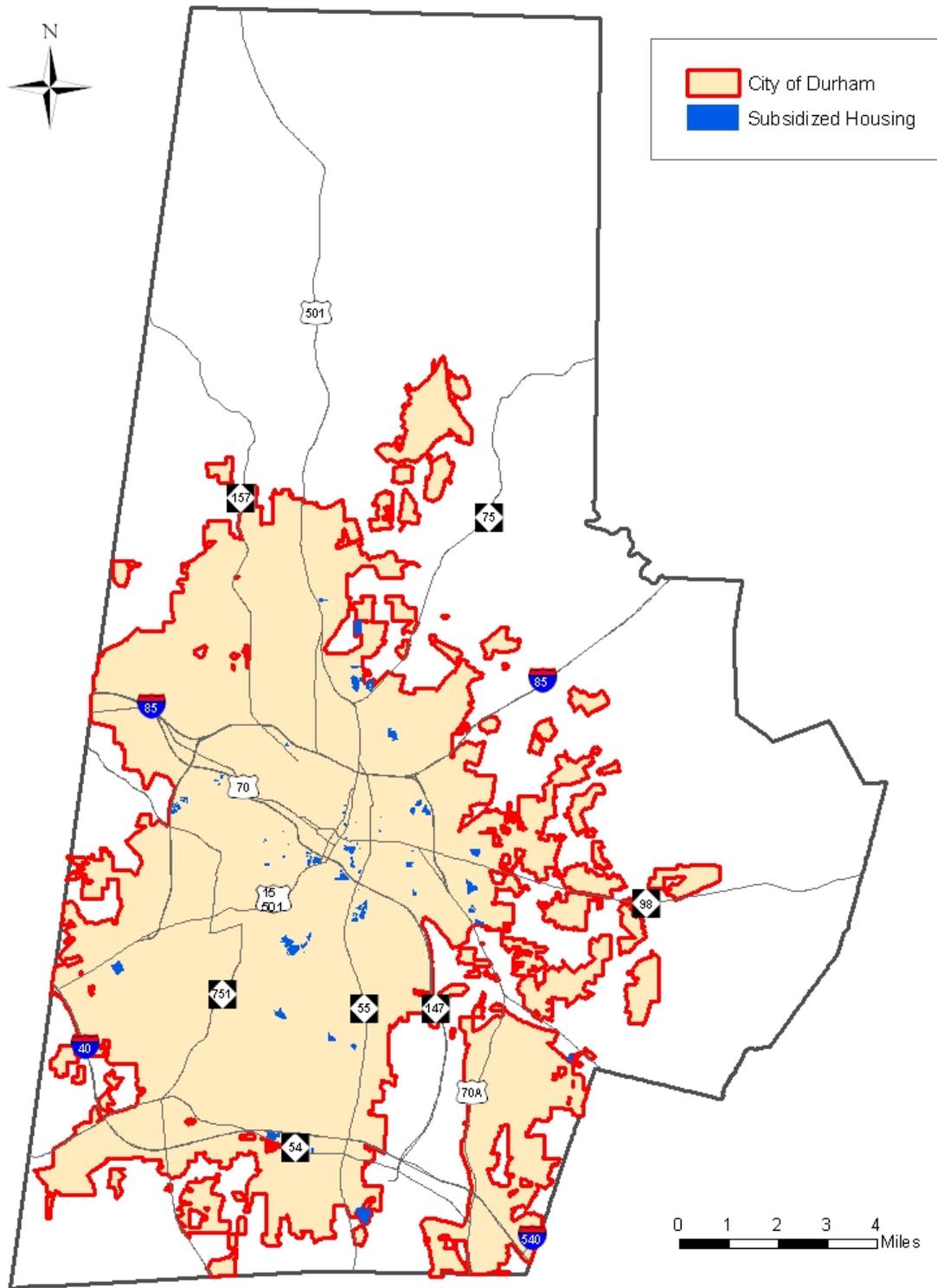
## Housing Assistance

Numerous community organizations, both public and private, provide support for housing in Durham. These organizations provide affordable housing for low-income families, assistance programs for first-time buyers and assistance with housing rehabilitation and repair.

The Durham Housing Authority (DHA) is a nonprofit municipal corporation created to address the housing needs of persons with limited income. DHA strives to increase the level of resident self-sufficiency and break the cycle of poverty by providing traditional public housing as well as Section 8 housing choice vouchers.

The City of Durham operates several programs to increase the supply of affordable housing in the community. Federal funding sources include the Community Development Block Grant Program and the HOME Investment Partnership Program. Local funding sources are primarily general funds and housing bond program income. Locally administered funds are often used to leverage other resources, such as Low Income Housing Tax Credits and other programs administered by the North Carolina Housing Finance Agency.

### Map 6. Location of Subsidized Housing



Note: Source is Durham City-County Planning Department., July 2011.

# Community Design and Character

## Existing Community Character

The Durham community is characterized by a diversity of landscapes and neighborhoods. Downtown is the civic and geographic center, featuring employment, cultural attractions and government offices. Urban neighborhoods have grid streets, smaller lots and older homes, along with limited new construction on previously passed over lots. Urban neighborhoods provide the households to support established commercial areas along major arterials.

Suburban neighborhoods feature curvilinear streets and cul-de-sacs, newer homes on larger lots. At strategic locations on major roadways around suburban neighborhoods, residents will find strip shopping centers, fast food restaurants and office buildings. Rural areas represent portions of Durham County where farms and forests are more common than subdivisions and shopping centers. All through these distinctive neighborhood types are precious natural resource areas, with stream corridors and important wildlife habitats. This diversity of community and neighborhood types makes Durham a special place.

Durham's rural character is still clearly displayed in locations far from the push of urban development. Farms in northern Durham bring to mind the agrarian way of life that was predominant decades ago. Historic homesteads show the lifestyle that was once common among County residents. Isolated rivers and streams exhibit indigenous plant and animal habitats. Remnants of gristmills tell the story of early economic activity that was once the center of rural community life.

Durham residents have expressed the desire to identify and preserve the rural resources and landscapes that are the County's heritage. Historic districts and landmarks provide tools to encourage preservation of historic resources in rural communities. Farmland preservation efforts, still in their infancy in Durham, hold promise for long-term care of farms and farming. Durham's open space plans attempt to coordinate public and private actions in rural preservation. They set priorities and focus attention on preservation efforts.

The public realm of residential neighborhoods and commercial districts is the streetscape. The front facades of buildings along the street delineate the streetscape, so it includes private property visible from the street as well as the public right-of-way.

Alterations of the streetscape can come from renovation or new development on private property adjacent to the right-of-way. Likewise, alteration can come from public actions. Some may be designed to consciously enhance the visual appearance, such as the installation of new benches, lighting or landscaping. Other alterations may be the unintended consequences of street maintenance or utility

repair.

Infill is a planning term meaning the development of vacant land, usually individual lots or leftover properties, within areas that are already largely developed. Infill is an important way to accommodate future increases in population without pushing new development into the rural fringe. Infill sites utilize developable land that “fills in” the fabric of an urban or suburban neighborhood. In many cases, infill sites benefit from existing public infrastructure, requiring little capital improvement.

Infill development can become a design problem. New development on infill sites works well if it is architecturally compatible with its existing context. Existing residents resist infill when the size and scale or architectural details are out of character with the neighborhood. Development standards for infill sites must recognize the context in which infill development will occur.

## Design of New Development

New development poses the most noticeable and dramatic change to community appearance. The design of new development is influenced by national and local market trends, and by Durham’s development regulations. In some cases, new development design is a function of design standards of national franchise retail stores. Durham’s development regulations contain standards for the number of parking spaces, parking lot landscaping, tree preservation and replacement, vegetated buffers between incompatible uses and signage.

Durham’s development regulations require buffers between incompatible land uses. Buffers provide a space to separate uses, reduce the visual impact of development, and retain natural plant materials on site. Buffers can be areas of natural vegetation, earthworks and fences. They can be designed to block access, noise, light and glare and air pollution as well as to provide aesthetic benefits.

In 2010, Durham amended its development regulations to significantly enhance tree protection.

Also included in the UDO are standards for the provision of street trees and protecting existing trees. Street trees are to be provided in new developments, with one tree planted for every 30 feet of right-of-way. This standard applies to non-residential developments throughout the County and to residential developments inside the Urban Growth Area (UGA).

Tree protection standards include protection of the root zone of any tree to be preserved. The root protection zone is a circle around the trunk with the diameter determined to be 1 foot for every inch of tree trunk diameter. Tree protection fencing must be provided. Storage of materials and equipment, and vehicle parking is prohibited in the root protection zone.

The design and use of the built environment affects human behavior.

How the public spaces are designed influences the perception of safety as well as the perception of opportunity for criminal activity. Crime prevention through environmental design (CPTED) is defined as the proper design and effective use of the built environment that can lead to a reduction in the fear and incidence of crime, and an improvement in the quality of life. (National Crime Prevention Council)

CPTED is based on three principles: natural access control, natural surveillance, and territorial reinforcement. Natural access control employs design elements and landscaping to deny admission to a crime target. It enhances the perception of risks associated with criminal behavior. Natural surveillance uses design features to increase the visibility of a property or building. The proper placement and design of windows, lighting and landscaping increases visibility and deters criminal behavior. Territorial reinforcement uses design features and landscaping to define public and private spaces. This helps users establish ownership of spaces and sends a “hands off” message to would-be offenders.

Durham is in the process of crafting a Unified Development Ordinance (UDO) to merge the Zoning Ordinance and the Subdivision Ordinance. The UDO will modernize Durham’s development regulations, upgrading standards, increasing flexibility and enabling digital access to its users. The UDO will be an important tool for implementing the goals and objectives of Durham’s new Comprehensive Plan.

## Issues

Durham’s development regulations have a direct influence on the design of new development. Because much new development over the past decades has been suburban in character, Durham’s development standards are geared toward suburban development standards. Increasingly, community leaders have called for amendments to the development regulations that will produce more attractive new development that is appropriate to its context. How should Durham regulate new development in order to secure attractive and functional built environments?

While the appearance of new development is a central focus of community design and character, the on-going maintenance of Durham’s built environment makes a greater visual impression. Public agencies and private citizens have a responsibility to maintain the community’s housing stock, commercial buildings, and many types of public facilities. How can Durham best encourage private property owners to maintain their buildings and land? How can the City and County maintain their public rights-of-way, buildings and grounds to enhance the visual appearance of the community?

Citizens are concerned that Durham’s rural areas are threatened by encroaching urban and suburban development. Which aspects of its rural character should Durham preserve and where should preservation activities be focused? How can Durham preserve some of its valuable

rural character in an increasingly urban county?

City and County leaders have expressed interest in improving the appearance of major entryways into the Durham community. The visual images of US 70, NC 98, I-85, Roxboro Road, Chapel Hill Boulevard, NC 54 and other major thoroughfares contribute in part to visitors' impressions of the Durham community. What steps can Durham take to improve the appearance of road corridors and entryways into Durham? How much is Durham willing to invest in physical improvements necessary to create positive images of the community for residents and visitors alike?

Durham's development ordinances presently require a certain amount of vegetation retained or planted on site. However, community leaders have expressed concerns that the regulatory requirements are not achieving the objective of securing new development with greater tree coverage. How can Durham increase its incentives or decrease its disincentives for developers to preserve natural vegetation and existing tree canopy on new development sites?

Crime prevention through environmental design involves site design with safety in mind. How can Durham best integrate CPTED principles in the design of new development? What regulatory provisions should be established to ensure that safety is appropriately considered in development design? What is the right balance between landscaping to enhance the visual appearance of new development and limiting landscaping in order to improve safety?

Durham's existing street trees are a pleasant and attractive amenity for many of its older neighborhoods. Graceful oaks along City streets add to the visual quality and environmental health of the area. Yet many of Durham's majestic street trees may reach the end of their natural life over the next two decades. How should Durham address this potential loss of street tree canopy?

# Historic Preservation

Durham is a community rich in history. Its heritage of tobacco processing is displayed in the progression of historic industrial buildings in the American Tobacco campus in downtown. Durham's antebellum history is presented in its older historic homes and the Stagville Preservation Center, a State Historic Site. The Trading Indian Path that traverses the County represents its colonial and pre-colonial history. Excellent examples of preserved downtown commercial buildings and simple homes testify to Durham's appreciation of its vernacular architecture.

## Historic Inventories

In the late 1970s, the City of Durham and the Historic Preservation Society of Durham, with the help of Community Development Block Grant funds, undertook a historic architectural inventory in its jurisdiction. The inventory was published as The Durham Architectural and Historic Inventory. With the inventory information, the City nominated thirteen districts and eighteen individual properties to the National Register of Historic Places.

The Indian Trading Path was a major thoroughfare for trade between the James River area of Virginia to the Indian towns in the Carolinas, Tennessee and Georgia. The Path was used before as well as after the colonization of this country. It snaked through what is now Durham County from the northeast to the west. Various encampments and towns were located along this corridor and their remains are historically valuable archaeological sites and reflect the cultural heritage of Native Americans and early settlers of the southeast.

The County undertook a county-wide inventory in 1987 with the help of federal funds from the Certified Local Government Program. Today there are fifty-five National Register listings of districts and properties throughout the City and County representing thousands of historic structures. There are over 425 historically significant properties identified in the Durham County Architectural Inventory. The Inventory includes two potential National Register Historic Districts, Bahama and Rougemont.

In Durham, sections of the trail are visible and located within major developments, such as Treyburn, where the sites are protected by covenants. Making the other sites known to the general public opens up the potential for the areas to be vandalized or otherwise disturbed. On the other hand, keeping the sites secret may cause their disturbance as well through new development and construction.

## Historic Districts

Property owners and developers often regard historic preservation as a hindrance to planned development projects. In reality, economic and societal benefits accrue from projects that preserve Durham's history. Both the City of Durham and Durham County have long used critical tools to preserve and protect our historic architectural resources.

Local historic districts are special zoning overlay districts used by Durham to preserve and protect historic heritage. The historic district designation is applied to a residential neighborhood or commercial area that has special prehistoric, historical, architectural or cultural significance.

In a historic district, property owners cannot make changes to the exterior of buildings that are not in keeping with the historic character of Durham. Durham has seven local historic districts: Cleveland Street, Downtown Durham, Fayetteville Street, Holloway Street, Morehead Hill Trinity Heights, and Watts-Hillandale. These are shown on Map 7, Local Historic Districts. Local historic districts are common in North Carolina; local governments have found them to be useful tools to preserve historic resources.

## Local Historic Landmarks

Local historic landmarks are similar to historic districts but the area designated is a single building or site, rather than a neighborhood or commercial areas. Like districts, Durham's elected bodies bestow historic landmark status on properties for their special prehistorical, historical, architectural or cultural significance. And like districts, an owner of a historic landmark cannot make exterior changes without review and consent of the Historic Preservation Commission.

Unlike historic districts, historic landmark status is voluntary and landmarks receive special property tax treatment. Fifty percent of the property tax assessment for historic landmarks is deferred as long as the historic landmark status remains in effect. Owners of historic landmark properties receive this benefit in return for the additional cost in maintaining a historic landmark.

The National Register of Historic Places was created to recognize and protect properties of historic and cultural significance. National Register listing is primarily an honor. For a private owner, the chief practical benefit of National Register listing is eligibility for a 20 percent federal investment tax credit that can be claimed against the cost of a certified rehabilitation of an income producing historic building. The listing of a property places no obligation or restriction on a private owner using private resources to maintain or alter the property.

Numerous properties in Durham have been listed in the National Register of Historic Places. Along with individual properties, a number of districts in Durham have been listed as on the National Register.

## Historic Restoration Tax Credits

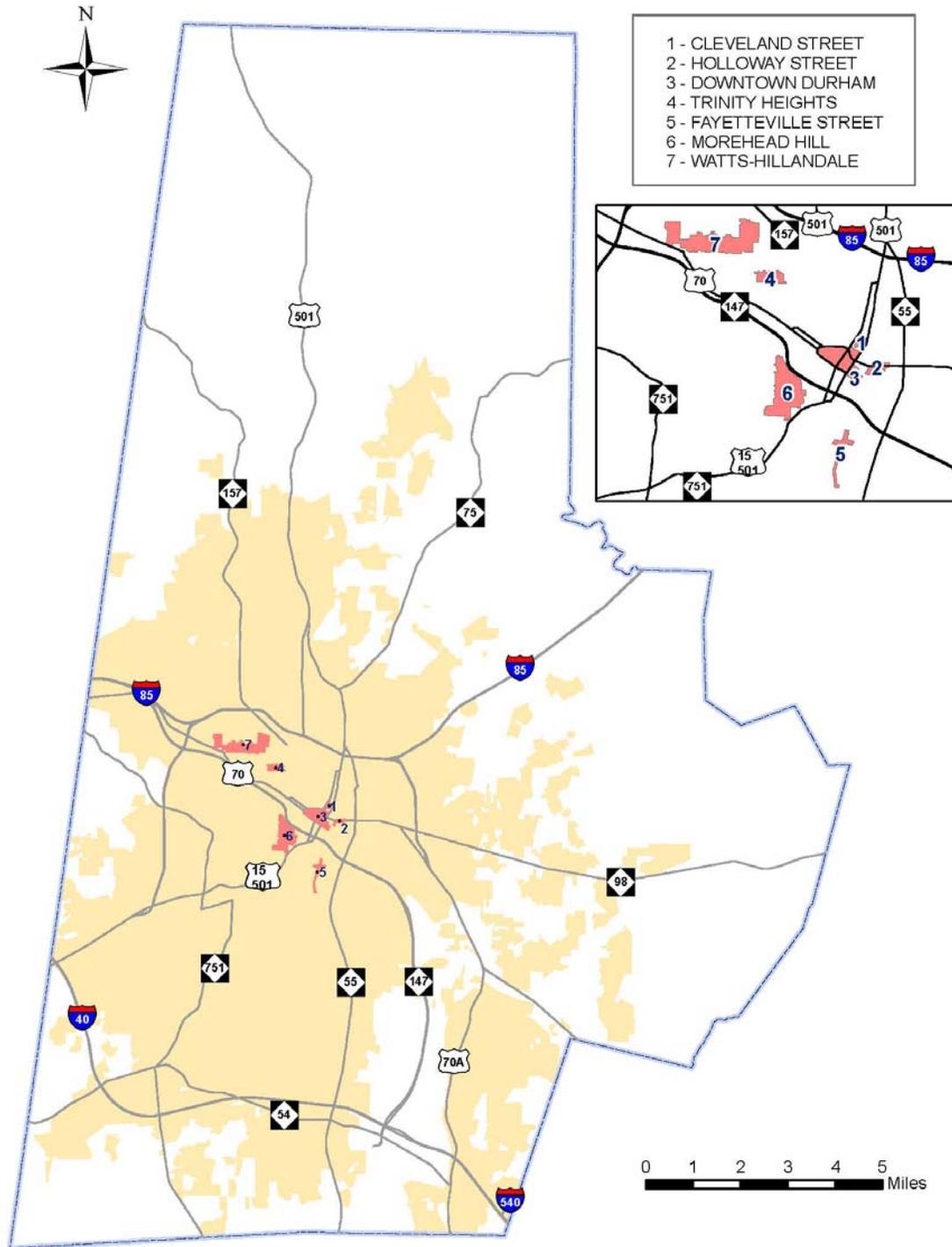
Federal and State historic restoration tax credits have over the years played an increasingly important role in Durham. Brightleaf Square and the West Village complex are just two of the many projects that have been made possible by these tax credits for restoring historically significant structures for income producing uses.

Another important tax credit for historic structures is available today as well. The advent of the State's 1998 law establishing a non-income producing tax credit for home owners of historically significant residences has had a major impact on the requests for National Register designations (part of the criteria for receiving the credits).

Over the years, Durham has seen an increase in tourism dollars spent in our community. The number one reason cited for visitation in the state is historic preservation, and Durham is no exception. The three State historic sites in Durham are visited by thousands of people each year. Downtown attractions include the restored County Courthouse, the Arts Council Building and the Carolina Theater.

While the renovations of Brightleaf Square, West Village, the American Tobacco campus and the surrounding developments created from former tobacco buildings house many successful businesses, they also draw visitors simply because of their history and architecture.

### Map 7. Local Historic Districts



Note: Source is Durham City-County Planning Department.

<b>Table 14. Local Historic Landmarks</b>			
<b>SITE ADDRESS</b>	<b>NAME</b>	<b>LOCAL DISTRICT</b>	<b>NATIONAL DISTRICT</b>
1012 W KNOX ST	HACKNEY HOUSE & ERWIN COTTAGE		TRINITY
105 W KNOX ST	WRIGHT HOUSE		OLD NORTH DURHAM
1702 VISTA ST	MASON-JONES HOUSE		
1204 W MARKHAM AVE	WHITTED HOUSE	TRINITY HEIGHTS	TRINITY
101 W MARKHAM AVE			OLD NORTH DURHAM
1307 N MANGUM ST	GAMBLE HOUSE		OLD NORTH DURHAM
112 W LYNCH ST	WILLIAM AND MARGARET LYNCH HOUSE		OLD NORTH DURHAM
119 W LYNCH ST	MABEL & G. FRANK WARNER HOUSE		OLD NORTH DURHAM
117 W LYNCH ST	DR. HICKMAN & ETHEL RAY HOUSE		OLD NORTH DURHAM
410 N BUCHANAN BLVD	BASSETT-BROWN HOUSE		TRINITY
504 WATTS ST	CROWELL HOUSE		TRINITY
1503 PETTIGREW ST	POWE HOUSE		
911 N MANGUM ST	J. S. MANNING HOUSE		OLD NORTH DURHAM
220 W GEER ST	EPHPHATHA CHURCH BUILDING		
501 WASHINGTON ST	CITY GARAGE AND FIRE DRILL TOWER		
300 LIGGETT ST	BRODIE L. DUKE WAREHOUSE		BRIGHT LEAF
210 N DUKE ST	WEST VILLAGE COMPLEX		BRIGHT LEAF
809 CLEVELAND ST	LEARY-COLETTA HOUSE	CLEVELAND STREET	CLEVELAND STREET
401 N MANGUM ST	WILSON REINHARDT BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
0 MAIN ST	FORMER HERALD SUN COMPLEX	DOWNTOWN DURHAM	DOWNTOWN DURHAM
331 W MAIN ST	SNOW BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
302 W MAIN ST	TEMPLE BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM

SITE ADDRESS	NAME	LOCAL DISTRICT	NATIONAL DISTRICT
212 W MAIN ST	TEERMARK BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
111 N CORCORAN ST	HILL BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
315 W MAIN ST	KRONHEIMER BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
307 W MAIN ST	OLD HILL BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
104 W PARRISH ST	CLEMENTS BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
213 W MAIN ST	1915 COMMERCIAL BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
123 W MAIN ST	FIRST NATIONAL BANK BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
111 W MAIN ST	111 W MAIN ST COMMERCIAL BLDG	DOWNTOWN DURHAM	DOWNTOWN DURHAM
107 W MAIN ST	BALDWIN BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
513 HOLLOWAY ST	CREIGHTON HALL	HOLLOWAY STREET	HOLLOWAY STREET
101 W MAIN ST	KRESS BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
104 E MAIN ST	MANGUM-WILSON BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
514 S DUKE ST	JOURDAN HOUSE		
510 HOLLOWAY ST	PERCY READE HOUSE	HOLLOWAY STREET	HOLLOWAY STREET
311 E MAIN ST	FORMER LIBRARY BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
206 N DILLARD ST	C. C. THOMAS HOUSE	HOLLOWAY STREET	HOLLOWAY STREET
310 E MAIN ST	FORMER PUBLIC SERVICE BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
914 VICKERS AVE	COBB-TOMS HOUSE	MOREHEAD HILL	MOREHEAD HILL
1552 HERMITAGE CT	BRANSON-UMSTEAD HOUSE		
900 E MAIN ST	GOLDENBELT MANUFACTURING COMPLEX		GOLDEN BELT
804 HERMITAGE COURT DR	C. R. HARRIS HOUSE		
318 S DRIVER ST	FORMER FIDELITY BANK BUILDING		EAST DURHAM
7222 FAYETTEVILLE RD	MASSEY CHAPEL		

SITE ADDRESS	NAME	LOCAL DISTRICT	NATIONAL DISTRICT
905 W MAIN ST	WATTS & YUILLE TOBACCO WHSE		
1005 CALVIN ST	WRIGHT'S AUTO MACHINERY BLDG		
1017 W TRINITY AVE	BASSETT HOUSE		TRINITY
1401 FORESTVIEW ST	EVANS HOUSE		
0 N DUKE ST	BULLINGTON WAREHOUSE		BRIGHT LEAF
1622 UNIVERSITY DR	S. PARKS ALEXANDER HOUSE		
1817 CHAPEL HILL RD	SESSOMS-MARKHAM HOUSE		
918 N MANGUM ST	OREN BELVIN HOUSE		OLD NORTH DURHAM
6404 AMED RD	AMED TILLEY FARM		
219 HARDSCRABBLE DR	HARDSCRABBLE		
600-710 W MAIN ST	FORMER LIGGETT AND MYERS TOBACCO CO COMPLEX		BRIGHT LEAF
1415 NORTH GREGSON STREET	PLYLER-RABA HOUSE		TRINITY
305 EAST CHAPEL HILL ST	FORMER PALMS RESTAURANT BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
2024 W MAIN ST	ERWIN SQUARE MILL BUILDING	WEST DURHAM	
2020 W MAIN ST	GREY BUILDING	WEST DURHAM	
115 N DUKE ST	PASCHALL'S BAKERY and STUDEBAKER BUILDING		
807 HERMITAGE CT DR	SIMPSON-UMSTEAD HOUSE		FOREST HILLS
302 WATTS ST	ORIGINAL WATTS HOSPITAL		TRINITY
1009 BURCH AVE	M WEBB THOMPSON HOUSE		
111 E CHAPEL HILL ST	PENNY FURNITURE BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
209 N CHURCH ST	DURHAM LAUNDRY	DOWNTOWN DURHAM	DOWNTOWN DURHAM

SITE ADDRESS	NAME	LOCAL DISTRICT	NATIONAL DISTRICT
107 E PARRISH ST	L D ROGERS FURNITURE STORE	DOWNTOWN DURHAM	DOWNTOWN DURHAM
200 N MANGUM ST	ROBGERS DRUGS BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
102 CITY HALL PLAZA	TEMPEST BUILDING	DOWNTOWN DURHAM	DOWNTOWN DURHAM
302 E PETTIGREW ST	VENABLE CENTER	DOWNTOWN DURHAM	DOWNTOWN DURHAM
204 N BUCHANAN	KING'S DAUGHTERS HOME		TRINITY
801 GLBERT ST	JOHN O'DANIEL HOSIERY MILL BUILDING		
613 RIGSBEE AVE	LIBERTY WAREHOUSE		
323 FOSTER ST	CLARK & SORRELL BUILDING		
1110 MINERVA AVE	W W CARD HOUSE		
43 BEVERLY DR	DILLARD AND MILDRED TEER HOUSE		FOREST HILLS
1111 N MANGUM ST	MAYNARD MANGUM-RICE DIET HOUSE		NORTH DURHAM/DUKE PARK
2009 W CLUB BLVD	PASCHALL-THOMAS HOUSE	WATTS-HILLANDALE	WATTS-HILLANDALE

### Archeological Resources

The North Carolina State Historic Preservation Office (SHPO) has identified nearly 700 significant archaeological sites in Durham. Some of these sites are on public lands and are protected to some limited degree. Many sites are in private ownership and are vulnerable. In many cases, the property owners are unaware of the existence and importance of archeological resources on their land.

Local governments often struggle over the issue of how to protect these archaeological sites and Durham is no exception. In northern Durham County a State bridge construction crew uncovered an early Indian village or encampment site along a river some years ago. The local print media picked up the story and gave directions to the site on a Friday after archaeologist began their work. During the weekend following the articles, numerous people swarmed the site located on public and private lands. By the time neighbors alerted the Durham County Sheriff's Department, much of the site, including the portions on private land, was destroyed and valuable artifacts and fragments lost.

## Historic Preservation Issues

Durham has a wealth of historic resources in its rural areas. Many historic properties are in particular jeopardy of being overtaken and significantly altered or destroyed by the impacts of new development. What steps should Durham take to protect the most vulnerable of its historic resources? How can Durham marshal the fiscal resources to initiate effective protection actions?

Triangle Transit is planning its Regional Rail transit services through the heart of Durham. Four of its rail stations along the line are located adjacent to some of Durham's most valued historic neighborhoods. Regional transit stations, especially the station in Downtown Durham will be a major draw for new large-scale development. How can Durham attract valuable new higher density transit-oriented development without adversely affecting the historic integrity of nearby neighborhoods? How can the design of new development minimize its visual impact on surrounding historic neighborhoods?

Each year across the state, hundreds of archaeological sites are lost due to rural development, construction projects and unscrupulous collectors. While state law protects cemetery sites, other types of archaeological sites are not as protected, especially those on private lands. Which archaeological sites in Durham are the most important to preserve? How can the existence and importance of archaeological resources be appropriately integrated into Durham's processes for reviewing new development?

Remnants of the Indian Trading Path in north Durham represent a piece of the historic heritage of Native Americans and early settlers in North Carolina. How can Durham best highlight the Path and its importance to the County's heritage? What measures can Durham take to protect the Path from the impacts of development and unauthorized disturbance?

# Water Utilities

## Water Supply

A reliable source of high quality drinking water is critical for a healthy and sustainable community. Durham is fortunate to have two high quality surface water sources to supply most of its raw water needs. Lake Michie, built in 1926, supplied approximately 19 million gallons per day (MGD) of water to the City's service area for over 80 years. To meet the needs of the growing community, the City constructed the Little River Reservoir and Dam in 1988 to provide an additional 18 MGD of water, giving the City a combined capacity (safe yield) of 37 MGD. In 2002, the City of Durham obtained an allocation of approximately 10 MGD per day from Jordan Lake, another local high quality water source. Currently, Durham accesses this water on an as-needed basis via the Town of Cary's water system.

The quality of water from Lake Michie and Little River is generally excellent. Both reservoirs' drainage basins are relatively undeveloped with very few point sources of discharge. In recognition of their value as water supplies, Durham City and County and other jurisdictions in the Region have adopted special land use controls in the drainage basins. Watershed protection rules restrict land uses and require that any development maintain a relatively low density with limited impervious surfaces. Low amounts of impervious surfaces minimize storm water runoff that may impair water quality in the reservoirs. Watershed protection rules have been in place since the mid-1980s.

Durham's two drinking water facilities provide water through 1,241 miles of distribution lines to approximately 246,180 citizens according to the 2010 census. The oldest facility is the Williams Water Treatment Plant on Hillandale Road which was built in 1917. It has been expanded and upgraded a number of times and has a current capacity of 22 MGD. The Brown Water Treatment Plant on Infinity Road was built in 1977 and has a current capacity of 30 MGD. Both plants operate using optimized conventional water treatment processes and are currently undergoing significant upgrades to meet future water quality standards. The Brown Water Treatment Plant is also being expanded to treat an additional 12 MGD, for a total capacity of 42 MGD at this facility.

On-site storage and four other water tanks around the City allow storage of 20 MG of treated water. Another 3 MG elevated tank is in the design phase and is anticipated to be in service within three years.

Interconnections with Cary, Chatham County, Hillsborough, the Orange Water and Sewer Authority, and Raleigh allow each to share water in times of emergency.

The City of Durham is the major provider of water services in Durham County. The Orange Water and Sewer Authority (OWASA) provides services within the Chapel Hill town limits in southwest Durham County. The City of Raleigh provides water services in a small area of

southeastern Durham County.

By 2030, Durham’s service area population is expected to be about 329,421, creating an average daily demand for water of about 37.0 MGD. This projected demand is based on a 60 gallon per capita per day (gpcd) usage, combined with a 41gpcd usage for employees in the industrial/commercial/institutional sector. Per capita usage in the region generally, and Durham specifically, has been trending down for the last decade; this is attributable to a number of factors which include heightened awareness of water supply (drought response), highly visible water conservation/efficiency programs and new construction/plumbing standards for water use devices and appliances.

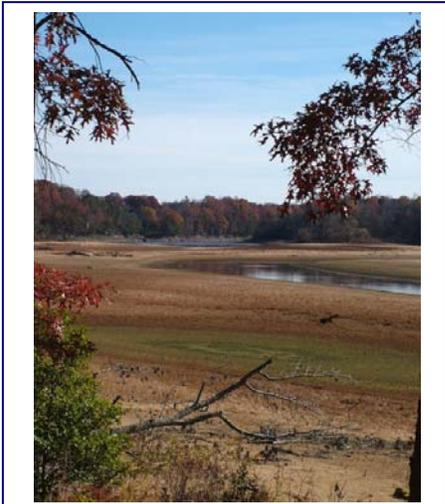
Identifying and developing additional water supplies to meet demand in the coming years will become more critical as safe yields from Lake Michie and Little River have been reduced based on their response(s) to the extreme droughts in 2001-02 and 2007-08. Modeling and evaluation of the two supplies show that the current combined safe yields for the reservoirs is now 34.4 MGD; applying a widely accepted safety factor of 20% reduces the reliable yield to 27.5 MGD. In combination with the Jordan Lake allocation of 10 MGD, the reliable supply for the Durham service area is currently 37.5 MGD.

Durham has several options to address future raw water demand. The City acquired Teer Quarry in northern Durham for use as an off-line storage facility for raw water. The quarry site is relatively watertight and could provide storage of up to 1.5 billion gallons with a safe yield of from 7 to 9 MGD. Permanent facilities to access additional storage are in the design phase. Once construction is complete, Durham will be able to take advantage of high flow in the Eno River, and perhaps in the Flat and Little River basins - during wet weather months for use at later times.

Another option is the collaborative regional planning effort with members of the Jordan Lake Partnership to evaluate additional use/allocation of Jordan Lake. This process includes evaluating a new shared intake in the western portion of the lake and potentially a new water treatment facility in the vicinity.

Increasing the size of Lake Michie has been in Durham’s long range planning for quite a while. A new dam could be constructed immediately downstream of the present dam, resulting in a reservoir with a water surface elevation about 24 feet higher than present. This would increase the safe yield of the reservoir to approximately 37 MGD. Raising the level of Lake Michie would inundate approximately 440 additional acres. The major advantage of Lake Michie expansion would take advantage of its good water quality. The primary disadvantage of expanding Lake Michie would be potential environmental impacts.

Finally, Durham, Raleigh, and Cary have investigated Kerr Lake as a



Severe droughts in 2001-02 and 2007-08 highlighted Durham’s need for additional sources of public water in the future.

potential source of raw water. This 50,000-acre lake extends 39 miles from the dam up the Roanoke River and straddles the Virginia-North Carolina border. It is owned and operated by the US Army Corps of Engineers for flood control, hydroelectric power, water supply and recreation. One of the advantages of Kerr Lake as a water supply is the fact that the reservoir already exists and that by partnering with one or more neighboring utilities, costs may be shared. Disadvantages include its distance from Durham (about 50 miles) and significant interlocal and interstate issues associated with approval of its use.

## Wastewater

The City of Durham is located on a ridgeline that cuts through the heart of the community and separates two major river basins, the Neuse River and Cape Fear River basins. 1067 miles of gravity sewer pipes and 60 pump stations and force mains send wastewater to the City's two wastewater treatment facilities, serving more than 246,000 people in Durham.

The City owns and operates two water reclamation facilities (WRFs). The North Durham Water Reclamation Facility (NDWRF), located on East Club Boulevard, treats wastewater collected from residences, businesses and industries north of the ridge line (roughly along Highway 147). NDWRF's effluent is discharged into Ellerbe Creek, a tributary to Falls Lake in the Neuse river basin. The plant's design capacity is 20.0 MGD; presently it treats just under half of that amount on an average day basis. The maximum monthly flow is about 11.97 MGD or 60 percent of capacity. In order to ensure sufficient capacity and uninterrupted service, upgrades to wastewater treatment facilities are recommended when the maximum month flow reaches about 90 percent of design capacity.

Wastewater treatment facilities in the Cape Fear River basin include the South Durham Water Reclamation Facility (SDWRF) located on Farrington Road and the Triangle Wastewater Treatment Plant, located on NC 55. The SDWRF, which is owned and operated by the City of Durham, discharges effluent into New Hope Creek, a tributary of Jordan Lake. Like its sister facility, is also designed to treat 20.0 MGD, but currently treats about half of that amount on an average day basis. The maximum monthly flow is about 12.91MGD or 64 percent of design capacity.

The Triangle Wastewater Treatment Plant (WWTP) provides services to southeast Durham and discharges into Northeast Creek, also tributary to Jordan Lake (Cape Fear basin). Most of the Research Triangle Park (RTP) is in the plant's sewer drainage basin; the Triangle WWTP also serves about 10,000 residential, business, and institutional users east and west of RTP. After recent upgrades and expansion, the Triangle WWTP is now designed to treat 12.0 MGD. Currently the plant treats approximately 50 percent of the design flow on a daily basis. This facility and the 11 pump stations and 109 miles of sewer system that

deliver flow to the treatment facility is owned and operated by Durham County.

<b>Table 15. Wastewater Treatment Capacity</b>			
	<b>Design Capacity</b>	<b>2010 Wastewater Flows, Average Day Flow</b>	<b>2010 Wastewater Flows, Maximum Month Flow</b>
<b>North Durham Water Reclamation Facility</b>	20.0 MGD	9.0 MGD	12.0 MGD
<b>South Durham Water Reclamation Facility</b>	20.0 MGD	10.0 MGD	13.0 MGD
<b>Triangle Wastewater Treatment Facility</b>	12.0 MGD	5.2 MGD	5.3 MGD
<b>Total</b>	52.0 MGD	24.2 MGD	34.1 MGD
<b>Percent of Total Capacity</b>	--	46 percent	74 percent

Notes: (1) MGD is million gallons per day. (2) Projected wastewater demand shows the cumulative treatment capacity of the three wastewater treatment plants in Durham. It also shows the projected cumulative demand of all three plants in maximum flow and average daily flow.  
Sources: Water and Sewer Utility Strategic Plan, March 2000; Final Environmental Assessment, Durham Triangle Wastewater Treatment Facility Upgrade and Expansion, February 19, 2001.

The recent adoption of the Falls and Jordan Lake Rules impose stringent reductions of nutrient discharges into the lakes which will have a significant impact on the water reclamation facilities. The NDWRF has a number of process improvements and facility upgrades under way to facilitate meeting reductions of discharges of nitrogen and phosphorus in two phases; Stage 1 reductions are due January 1, 2016 and assessment of water quality will take place before final reductions of Stage 2 become effective in 2036. Similarly, the SDWRF has a number of scheduled plant improvements – both underway and planned – to enable the facility to reduce discharges of phosphorus and nitrogen. The South Durham facility is currently meeting phosphorus limits and the projects noted will enable the facility to meet the compliance deadline of 2018 for nitrogen. Based on updated flow projections, there are no current plans for increased plant capacity at either facility.

Outside of public utility service areas, Durham residents rely on on-site septic systems to handle household waste. The Durham County Health Department, Division of Environmental Health, approves and issues permits for new septic systems. All new systems are required to be sited in suitable soils and have sufficient land area available for a future repair drain field.

Durham County has generally poor soils for on-site septic systems. Aging systems and those not benefiting from regular maintenance are subject to failure. Especially problematic is the potential for stream contamination from about 5,200 older discharging sand filter systems in Durham. Failing septic systems can pollute ground waters, surface waters and water supply reservoirs. They can represent health hazards to nearby residents, especially young children.

The Upper Neuse Watershed Management Plan has recognized the potential water quality problems of on-site septic systems. The Plan recommends that Durham create a program to inspect and certify septic tanks once every 5 years. Such a program would represent a significant new environmental protection effort for Durham

## Stormwater Management

Non-point sources of water pollution, such as runoff from construction, urban streets, and parking lots, can contribute significantly to water quality problems. State and federal laws require that Durham and Durham County develop, adopt, and enforce comprehensive storm water management programs. Durham's storm water management program includes reviewing proposed new development, managing storm water infrastructure and implementing water quality programs.

The Storm Water Management Division of the City's Public Works Department and the County Engineering Department review new development proposals for compliance with storm water management requirements. Developers are required to prepare a storm water impact analysis for each new development. If the proposed development results in an increase in the rate of storm water runoff in excess of 10 percent (from the 2-year or 10-year storm), then on-site storm water facilities or improvement may be required. The City or County Engineer may also require storm water facilities or improvements to address off-site impacts.

Durham's storm water management program includes managing a system of storm water facilities, consisting of pipes, catch basins, ponds and discharge points. The City also manages a variety of programs aimed at maintaining and improving water quality.

- The City sweeps curb-and-gutter streets on a regular basis to remove debris and improve the flow of storm water runoff.
- The City provides regular opportunities for citizens to properly dispose of household hazardous wastes.
- The City operates a program to detect and eliminate illicit discharges to the storm water system.
- The Pollution Reporting Hotline (550-SWIM) provides citizens a way to report what appears to be improper discharge of pollution into area streams.
- The City operates several water and stream quality monitoring programs.

The Neuse River Nutrient Sensitive Waters Strategy is the State's comprehensive approach for reducing pollutants and nutrients in the Neuse River basin and the Pamlico Sound. The Strategy established a goal of reducing nitrogen levels in the lower basin by 30 percent within five years. In order to achieve this goal, new developments throughout the basin are required to control storm water runoff in order to reduce

the nitrogen that they contribute to the basin's waterways. The City and County's review of new developments proposals ensure that they comply with these requirements.

## Water Resource Issues

Durham will need to develop new supplies of raw water to serve expected future populations. Several options are available, each with distinct advantages and disadvantages. Some are relatively inexpensive short-term solutions that increase available raw water and delay future expenditures. Others are long-range solutions that involve significant expense.

The majority of the Little River watershed drainage area is within Orange County. The majority of the Flat River watershed is within Person County. Durham regulations to protect these two primary water supplies are based on the recommendations from a technical evaluation of each reservoir's present and future water quality. These watershed studies pointed out the vulnerability of the water supplies to impacts from our upstream local governments. Durham must continue to work with Orange and Person counties on local regulations that can preserve the present water quality, while taking into account the needs and concerns of these communities.

As indicated above, Durham is exploring sharing water treatment with Cary. Regional water treatment arrangements such as this can benefit both parties and maximize the efficiency of the jurisdiction's public infrastructure. What other opportunities exist for regional cooperation? Perhaps Durham can share facilities and services to mutual advantage with adjacent public utility providers, such as the Orange Water and Sewer Authority or the City of Raleigh.

Water conservation programs are aimed at reducing the use of potable water for residences and businesses. How effective are the water conservation programs that the City of Durham now manages? What other approaches to water conservation could Durham implement to reduce water demand?

Future growth and development in Durham depends on sufficient wastewater treatment capacity. Treatment facilities must be able to handle the expected future volume of wastewater flow, while treating the wastewater to State standards for effluent quality. One of Durham's three wastewater treatment plants needs and is undergoing improvement. Projected treatment demand is expected to reach 90 percent of plant capacity at Durham's other two wastewater treatment plants by 2017 and 2025. Providing additional capacity by then, either through plant upgrade or building new facilities will be needed. Wastewater treatment facilities are large capital expense items for local government, so Durham needs to actively plan and budget for facility improvements over the coming years.

In addition to plant expansions, Durham may face more stringent effluent standards at its wastewater treatment facilities. Tighter state-

mandated effluent standards generally mean greater expense for wastewater treatment. Durham needs to recognize that expensive upgrades to existing wastewater treatment facilities may be required before capacity improvements are needed.

Older poorly maintained on-site septic systems pose a potential health and water quality problem for Durham. Discharging sand filter systems, in particular, have the potential for stream contamination. How much should Durham get into the business of systematic monitoring and managing on-site waste disposal systems?

As indicated above, the State's strategy for reducing nitrogen in the Neuse River and Pamlico Sound includes on-site storm water management and standards for nitrogen export. While this type of requirement is not yet imposed on new development in the Cape Fear River basin, the State is considering enacting similar regulations. When this takes place, all of Durham County will be required to meet these additional state standards for maintain high water quality.

# Community Facilities and Services

## Solid Waste Management

In 2008, Durham County produced over 305,000 tons of solid waste. Houses contributed about 25 percent, businesses contributed about 35 percent, and industries contributed about 41 percent. This amounts to about 1.21 tons per person per year, or about 6.6 pounds per person per day. (These figures do not include approximately 10,100 tons of land clearing and inert debris (LCID) disposed of annually in the City of Durham Rubble Landfill or an unknown amount disposed of in private landfills.) Characterizations of the waste stream suggest that this pattern of solid waste generation is typical.

## Solid Waste Services

The City's Solid Waste Management Department and several private haulers provide solid waste disposal services in Durham. The City provides rollout cart collection, yard waste collection, waste reduction and recycling, and stationary container collection. About 56,000 single-family homes and small business are served by rollout cart collection. Large businesses and multifamily housing development use stationary containers, which are picked up by private waste haulers.

The Department collects and delivers to the Waste Disposal and Recycling Center on East Club Boulevard about 110,000 tons of solid waste annually. About 82 percent, or 90,000 tons per year of solid waste, are destined for a landfill, while the remainder is recycled. Durham County hosts no active solid waste landfills, so solid waste is compacted and shipped by rail to a landfill in Lawrenceville, Virginia. The City has a long-term contract to dispose of solid waste in this manner. The City can extend the contract for up to 18 years. Durham has no active plans to locate a solid waste landfill locally.

Several years ago, Durham prohibited several types of materials from its landfills operations. Materials that must be recycled include aluminum and steel cans, glass bottles and jars, newspapers and corrugated cardboard. Durham diverts and recycles approximately 18 percent, or 20,000 tons of solid waste.

The City faces two challenges in solid waste. The first is to collect and dispose of the waste materials in an efficient, environmentally safe and cost-effective manner. The second is to reduce the amount of solid waste being disposed. In accordance with State statutes, Durham prepared a 10-year *Comprehensive Solid Waste Management Plan* and updated it in 2000. The major goal of the Plan is to reduce the waste produced by the community. The reduction goal was 10 percent (over the 1988-1989 amount) over the 10-year time frame of the Plan. Waste reduction approaches recommended in the Plan include source reduction, recycling, reuse, composting, and special waste programs (such as household hazardous waste disposal programs, and tire

recycling).

The City presently operates several waste reduction programs: curbside and drop-off recycling, commercial cardboard recycling, yard waste composting, household hazardous waste disposal, and source reduction education. A waste reduction coordinator works with the community, other governmental agencies, and the commercial and industrial sectors to develop these programs and financing options for implementation.

## Parks and Recreation

The Durham City Parks System includes over 60 park facilities covering almost 3,000 acres (see Map 8, Parks and Greenways). Park facilities are diverse. Large regional parks attract users from all over the Triangle region and may offer hiking trails, boating, recreation centers, ball fields, basketball and tennis courts, playgrounds, picnicking, restrooms, and special events. Examples are West Point on the Eno and Piney Woods Park.

Community parks are generally between 5 and 45 acres. They attract users from all parts of the City. Community parks may offer recreation centers, ball fields, basketball and tennis courts, playgrounds, picnic areas, and restrooms. Fine examples of community parks in Durham include Rock Quarry Park and Campus Hills Park. Portions of Durham within two miles of community parks are shown in Map 9, Community Parks Two-Mile Service Area.

Neighborhood parks attract users from the immediate area and are generally one to five acres in size. They may provide ball fields, basketball and tennis courts, playgrounds, and picnic areas. Some small parks are referred to as mini-parks and are only an acre or two, providing little more than playground equipment for young children. The City's Parks and Recreation Department and Property and Facilities Management Department manage most parks facilities and recreation programs in Durham.

Durham County does not have a parks and recreation department. Nevertheless, the County developed, in conjunction with Orange County, the Little River Regional Park. This facility, which provides passive recreation opportunities, is located in northwest Durham County (see Map 8).

## Trails and Greenways

Durham County has completed 2.5 miles of trail in the New Hope Creek Corridor near Githens Middle School. Trails associated with the Little River Regional Park will add another 10 to 12 miles when completed.

For both City and County, land acquisition for trails is continuing through the regular land development dedication process. The City also funds land acquisition through expenditures of recreation impact fee funds.

Durham has supported trails and greenways in several ways. The City

Council approved in 1986 an initial allocation of \$400,000 to acquire land and construct trails. Durham voters have approved two bond issues for trails, one in 1990 and another in 1996. The City Council and County Board of Commissioners supported the creation and continuing operation of a citizens’ advisory board on open space and trails, the Durham Open Space and Trails Commission (DOST). Several matching grants have been received for trails projects, including from state and federal sources.

Durham City and County approved a plan for a trails and greenways system in 1988, and most recently updated the plan in 2011. The *Durham Trails and Greenways Master Plan* identifies approximately 118 miles of on-road and off-road trails in Durham and Durham County. It makes distinctions between:

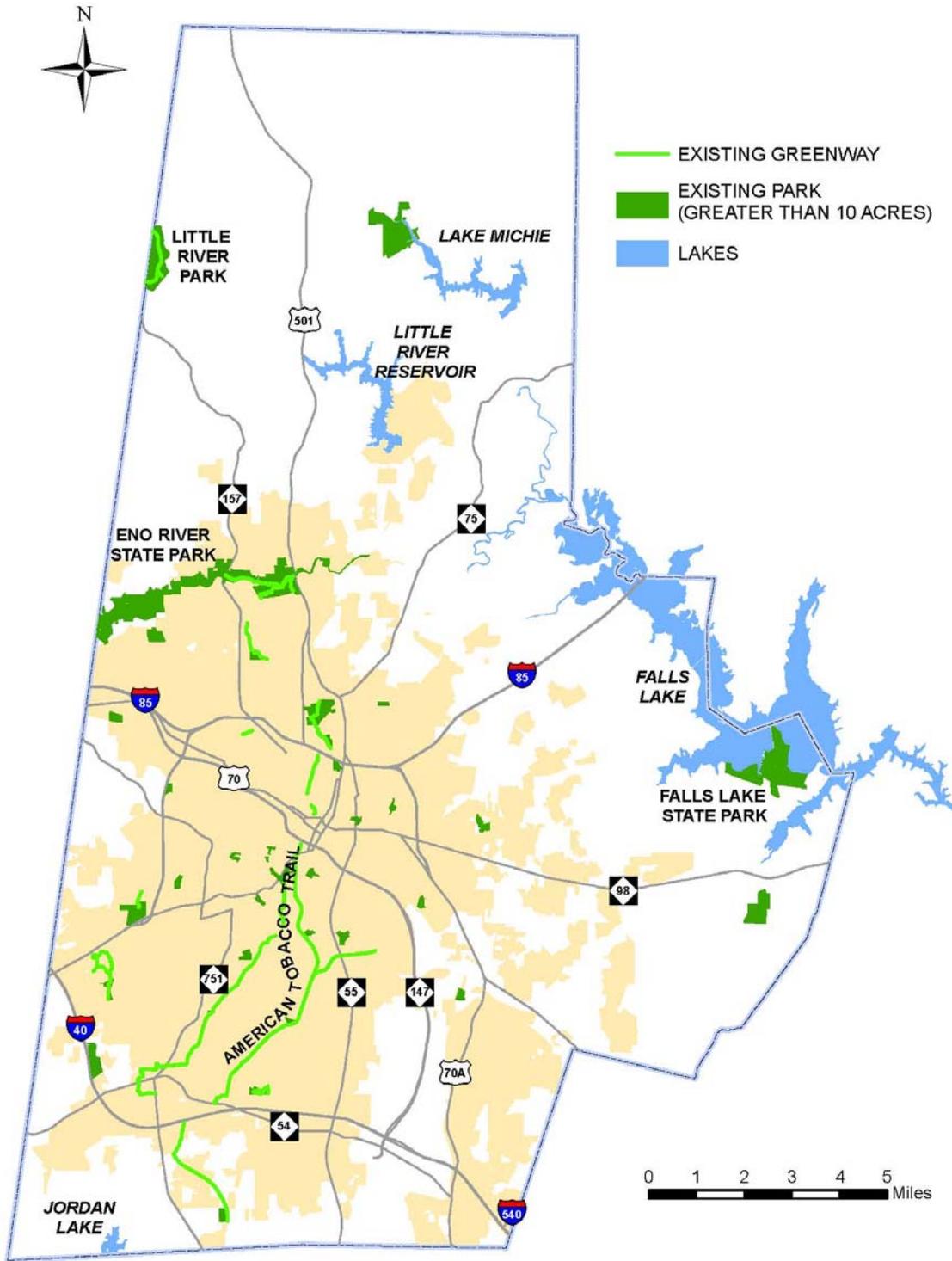
- A trail—a discrete section of hard-surfaced pathway;
- A sidewalk trail section—an 8- to 10-foot paved section immediately adjacent to a road right-of-way;
- A street trail—a designated connector between trails, consisting of a standard sidewalk and a bike lane on the roadway; and
- A recreation trail—an unpaved trail or a smaller paved trail within a park.

The Master Plan gives a full list of the different types in the City and County. Standards for construction and signage are established for each of the types, as are maintenance and management standards.

The American Tobacco Trail (ATT) is a Durham’s section of The East Coast Greenway, an almost 3,000 mile trail that will eventually connect major cities from Maine to Florida. The ATT is now largely completed from downtown Durham to its boundary with Chatham County. Construction of a pedestrian bridge spanning Interstate Highway 40 remains to be accomplished. As of August 2011, the City’s General Services Department was soliciting bids for the project.

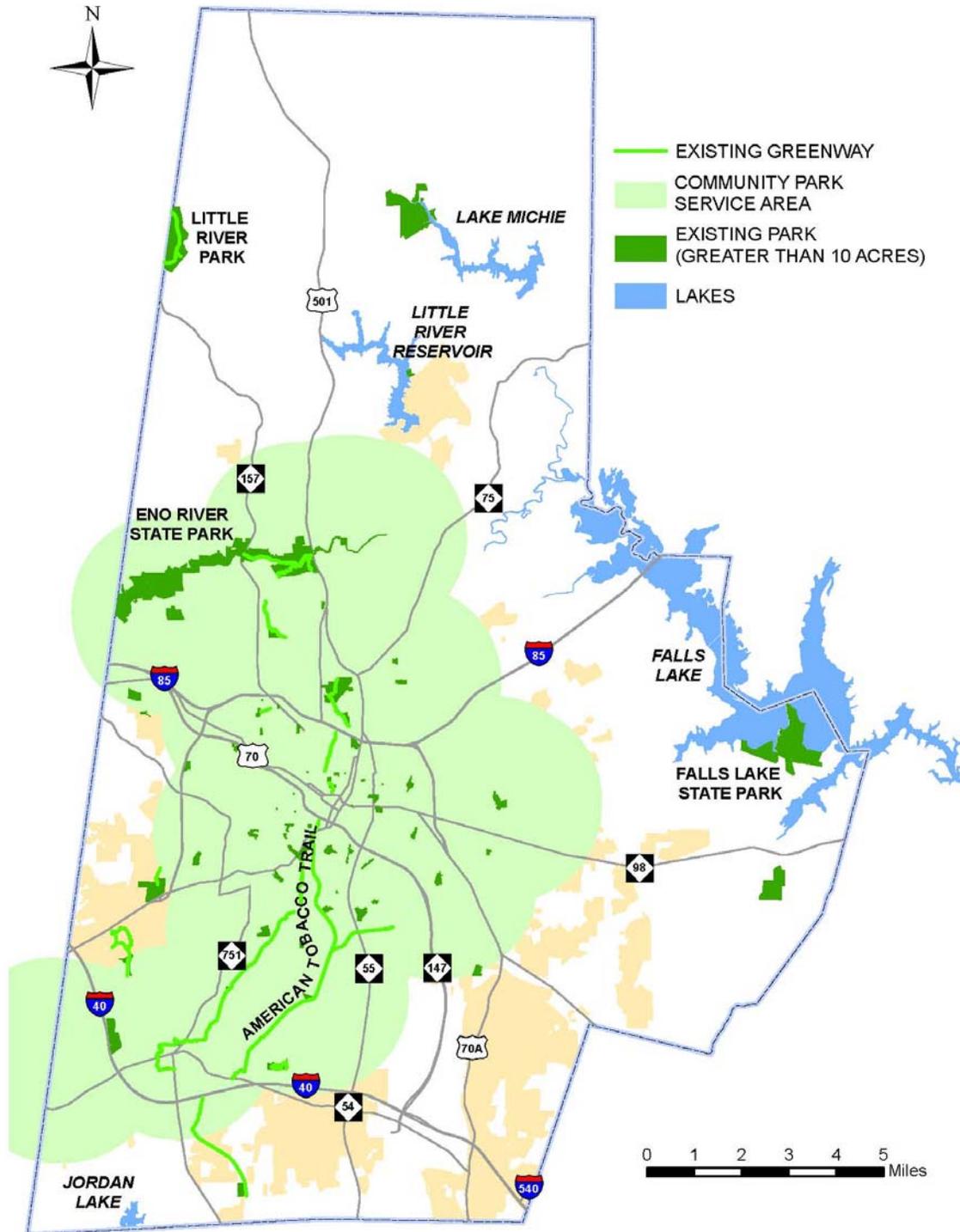


### Map 8. Parks and Greenways



Note: Source is Durham City-County Planning Department.

### Map 9. Community Park Two-Mile Service Area



Note: Source is Durham City-County Planning Department.

## Durham Public Schools

The Durham Public Schools (DPS) provide educational services to over 31,000 students in Durham County. DPS operates 43 schools: 27 elementary, 10 middle, and 6 high schools (Not included in these figures are the special programs of the Lakewood Accelerated Lab and the Hospital Schools). These schools and more than 50 other buildings represent almost 5 million square feet of school and support space. Some schools follow a traditional calendar, while others are year-round schools.

DPS school facilities are described in Table 16, School Capacity. DPS schools are shown in Map 10, High Schools, Map 11, Middle Schools and Map 12, Elementary Schools. Durham has several magnet schools that attract students from outside their normal attendance zones. Table 15, School Capacity shows the 20<sup>th</sup> day enrollment at each school for this academic year, the school capacity (without relocatable units), the proportion of capacity used, and the number of relocatable units on each school site. Present enrollment in DPS schools is 30,510, while the buildings have capacity to handle 29,939 students.

In general, high schools have sufficient capacity to handle enrollment today, with most facilities operating at or under capacity. As a group, middle schools operate at 107 percent of capacity without relocatable classrooms, while elementary schools operate at 104 percent of capacity without relocatable classrooms. Mobile units used for classrooms provide some relief, but additional classrooms place stress on core building facilities, such as the gyms, cafeterias and restrooms.

The primary purpose of relocatable classrooms is flexible and mobile space. Relocatability is perhaps the only advantage of mobile classrooms. Mobile classrooms are expensive to relocate and place a financial burden on utilities and other infrastructure, particularly at aging school facilities. Mobile classrooms present safety issues for faculty and students during severe weather and potentially suffer from security problems due to their frequent location out of site of main school offices.

Due to a strong economy and high rate of population growth in Durham, it is likely that there will continue to be a need for mobile classrooms into the foreseeable future. Nevertheless, DPS is implementing its Long Range Facilities Plan in an effort to significantly decrease its reliance on portable classrooms. This multi-phase \$204 million capital improvements program will involve new facilities, additions and renovations to add new permanent classrooms space while bringing all school conditions up to today's standards. New elementary schools are needed in southeast and southwest Durham. Figure 28, Elementary Schools also shows areas within which DPS has been searching for new elementary school sites. These improvements will provide only a modest amount of additional capacity beyond present needs. The Long Range Facilities Plan will help ensure that

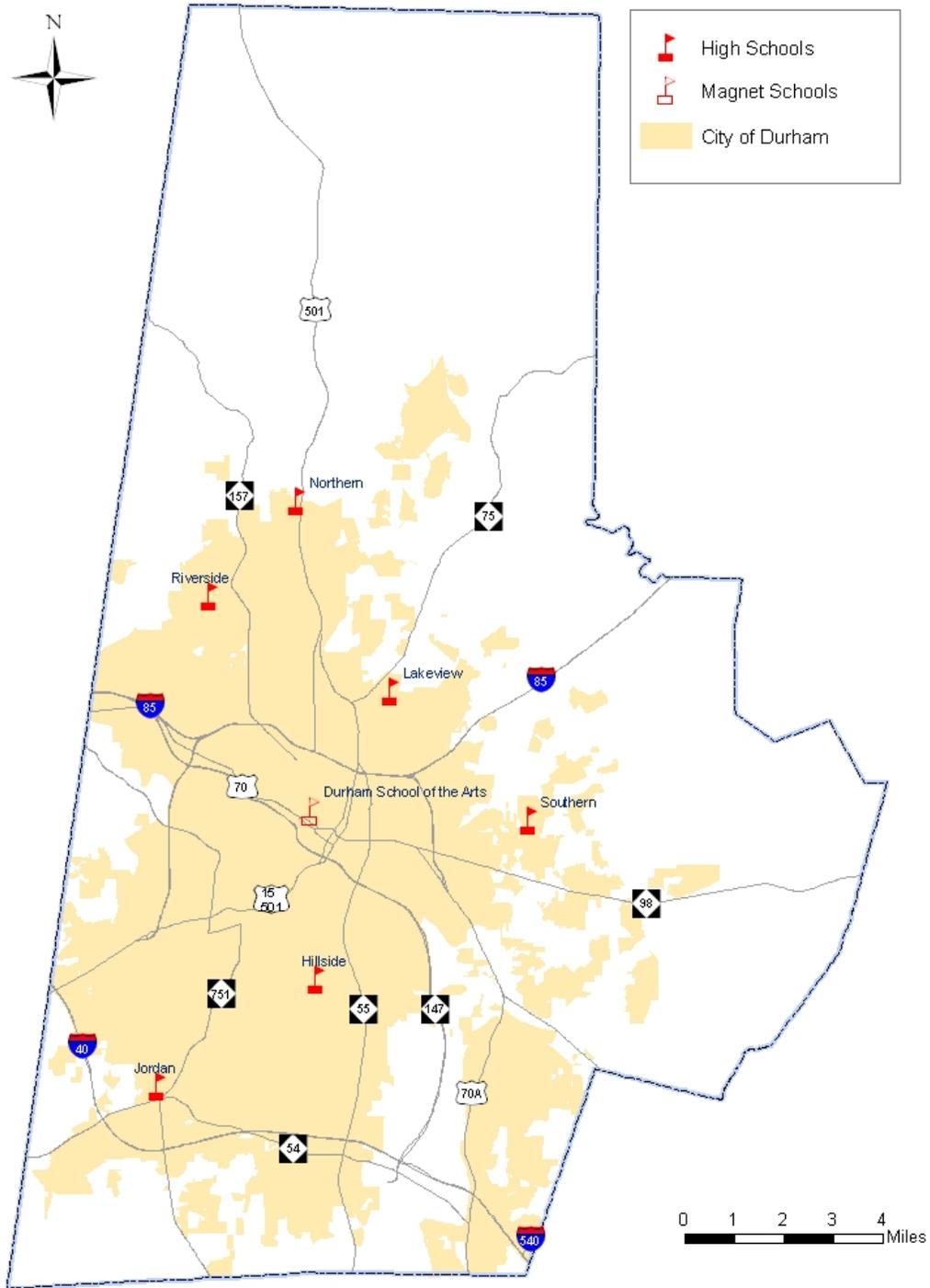
Durham provides the best possible physical environment for fostering student achievement.

<b>Table 16. School Capacity</b>					
<b>Elementary (Pre K, K-5)</b>					
<b>School</b>	<b>Location</b>	<b>20<sup>th</sup> Day Enrollment 10-11</b>	<b>Capacity in 2010</b>	<b>Percent Capacity</b>	<b>*2020 Projected ADM</b>
Bethesda	2009 S Miami Blvd	726	712	102.0%	1,092
Burton	1500 Mathison Ave	358	376	95.2%	376
Club Boulevard	400 W Club Blvd	510	398	128.1%	492
Creeside	5321 Ephesus Church Rd	861	601	143.3%	1,345
Easley	302 Lebanon Cir	609	522	116.7%	710
Eastway	610 Alston Ave	505	408	123.8%	595
Eno Valley	107 Milton Rd	669	638	104.9%	840
Fayetteville St	2905 Fayetteville St	304	316	96.2%	323
Forest View	3007 Mt Sinai Rd	615	659	93.3%	708
Glenn	2415 E Geer St	655	591	110.8%	877
R.N. Harris	1520 Cooper St	392	376	104.3%	376
Hillandale	2730 Hillandale rd	637	689	92.5%	664
Holt	4019 Holt School Rd	595	585	101.7%	654
Hope Valley	3005 Dixon Rd	714	628	113.7%	758
Lakewood	2520 Vesson Ave	474	302	157.0%	434
Little River	2315 Snow Hill Rd	646	658	98.2%	781
Mangum	9008 Quail Roost Rd	486	408	119.1%	593
Merrick-Moore	2325 Cheek Rd	713	584	122.1%	740
Morehead	909 Cobb St	245	222	110.4%	222
Oak Grove	3810 Wake Forest Hwy	556	794	70.0%	619
Parkwood	5207 Revere Rd	616	648	95.1%	647
W.G. Pearson	3501 Fayetteville St	618	628	98.4%	629
Pearsontown	4915 Barbee Rd	880	836	105.3%	836
E.K. Powe	913 9 <sup>th</sup> St	383	404	94.8%	409
Sandy Ridge	1417 Old Oxford Rd		630		
Y.E. Smith	2410 E Main St	358	290	123.4%	396
Southwest	2320 Cook Rd	602	585	102.9%	711
C.C. Spaulding	1531 Roxboro Rd	273	388	70.4%	280
Spring Valley	2051 Northern Durham Pkwy	613	638	96.1%	1126
George Watts	700 Watts St	390	340	114.7%	340
New School "C"	906 Scott King Rd		630	To be completed in 2015	
New School "E"				To be completed in 2017	
<b>Middle (Grades 6-8)</b>					
Brogden	1001 Leon St	679	815	83.3%	671
Carrington	227 Milton Rd	1,182	1,262	93.7%	1,187
Chewing	5001 Red Mill Rd	530	706	75.1%	483
School of the Arts	400 N Duke St	616	600	102.7%	690

Githens	4800 Chapel Hill Rd	965	810	119.1%	1,036
Lakewood Montessori	2119 Chapel Hill Rd				300
Lowe’s Grove	4418 S Alston Ave	642	780	82.3%	806
Neal	201 Baptist Rd	612	826	74.1%	838
W.G. Pearson	600 E Umstead St	312	360	86.7%	360
Rogers-Herr	911 Cornwallis Rd	639	644	99.2%	644
Shepard	2401 Dakota St	436	338	129.0%	546
Middle “B”	923 Snow Hill Rd		644		
<b>High (Grades 9-12)</b>					
Durham School of the Arts	400 N Duke St		800		920
J.D. Clement Early College	1801 Fayetteville St	327	400	81.8%	300
Hillside	3727 Fayetteville St	1,253	1,535	81.6%	1,696
Jordan	6806 Garrett Rd	1,839	1,810	101.6%	1,799
Lakeview	3705 Dearborn Dr		125	0.0%	108
Middle College	1637 Lawson St				100
Northern	117 Tom Wilkinson Rd	1,488	1,790	83.1%	1,520
Riverside	3218 Rose of Shannon Rd	1,887	1,540	122.5%	1,797
Southern	800 Clayton Rd	1,054	1,540	68.4%	1,360

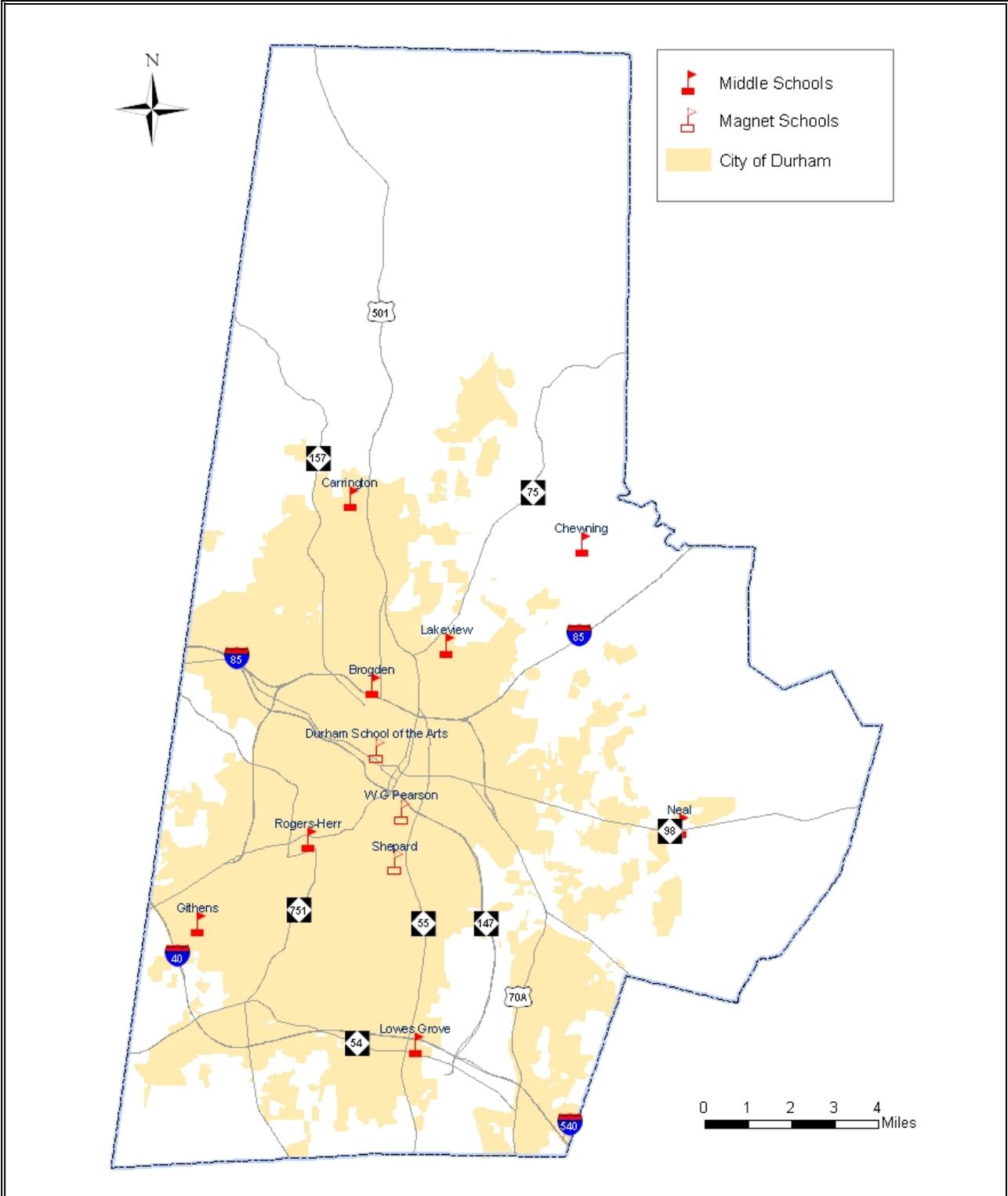
bringing all school conditions up to today’s standards. New elementary schools are needed in southeast and southwest Durham. These improvements will provide only a modest amount of additional capacity beyond present needs. The Long Range Facilities Plan will help ensure that Durham provides the best possible physical environment for fostering student achievement.

### Map 10. High Schools

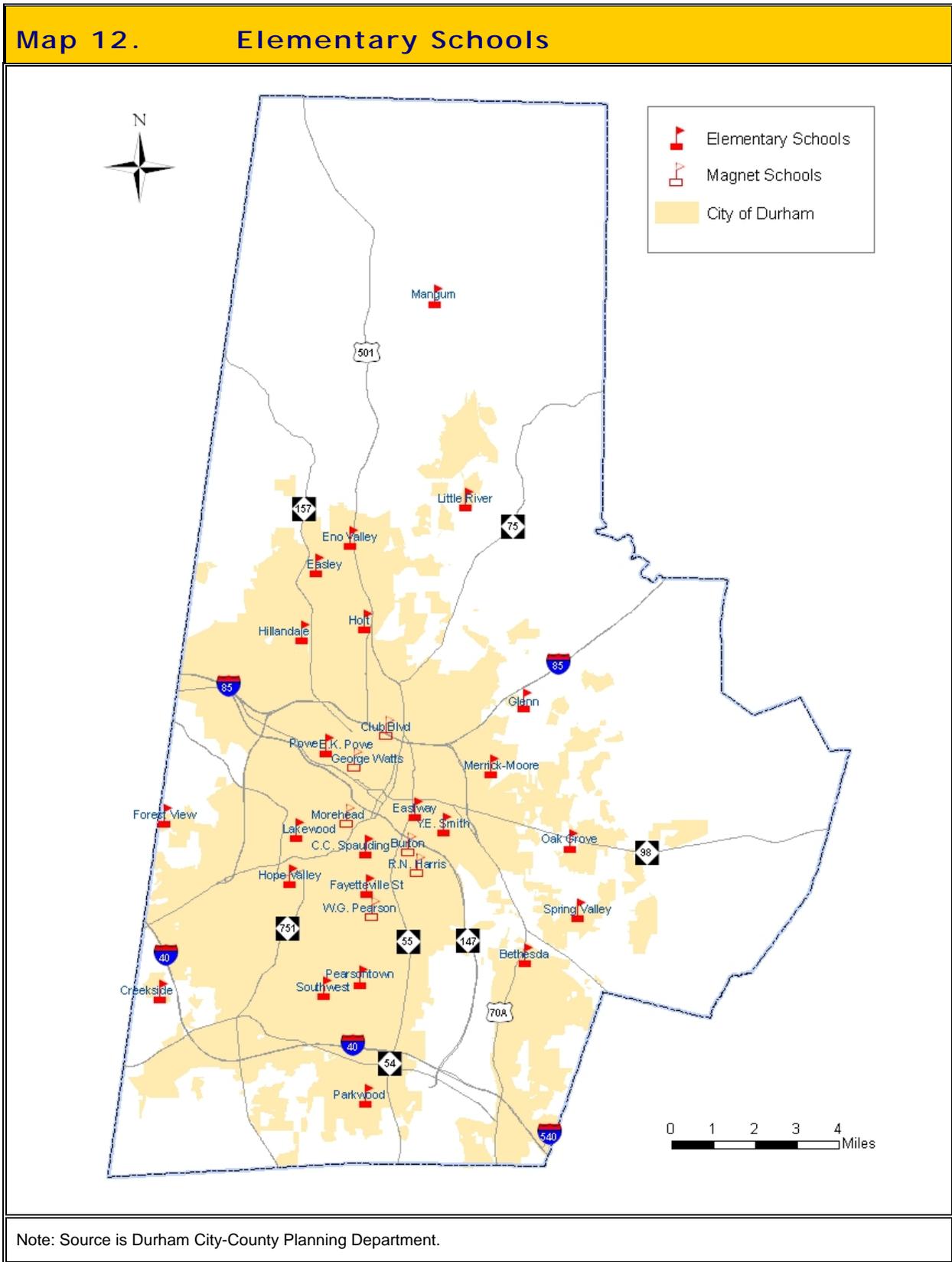


Note: Source is Durham City-County Planning Department.

### Map 11. Middle Schools



Note: Source is Durham City-County Planning Department.



## Fire Protection

Fire protection services in the City of Durham are provided by the Durham Fire Department and in Durham County by several volunteer fire departments. The Durham Fire Department's employees strive to provide a cost-effective level of service designed to protect and prevent the loss of life and property to the citizens of Durham from the adverse effects of fires, medical emergencies, or exposure to dangerous conditions created by either man or nature. It offers fire education and fire suppression programs, enforces state and City fire codes, investigates arson and the causes of fires, provides basic training skills to recruits and in-service personnel, and conducts a preventive fire maintenance program to ensure equipment is dependable and efficient.

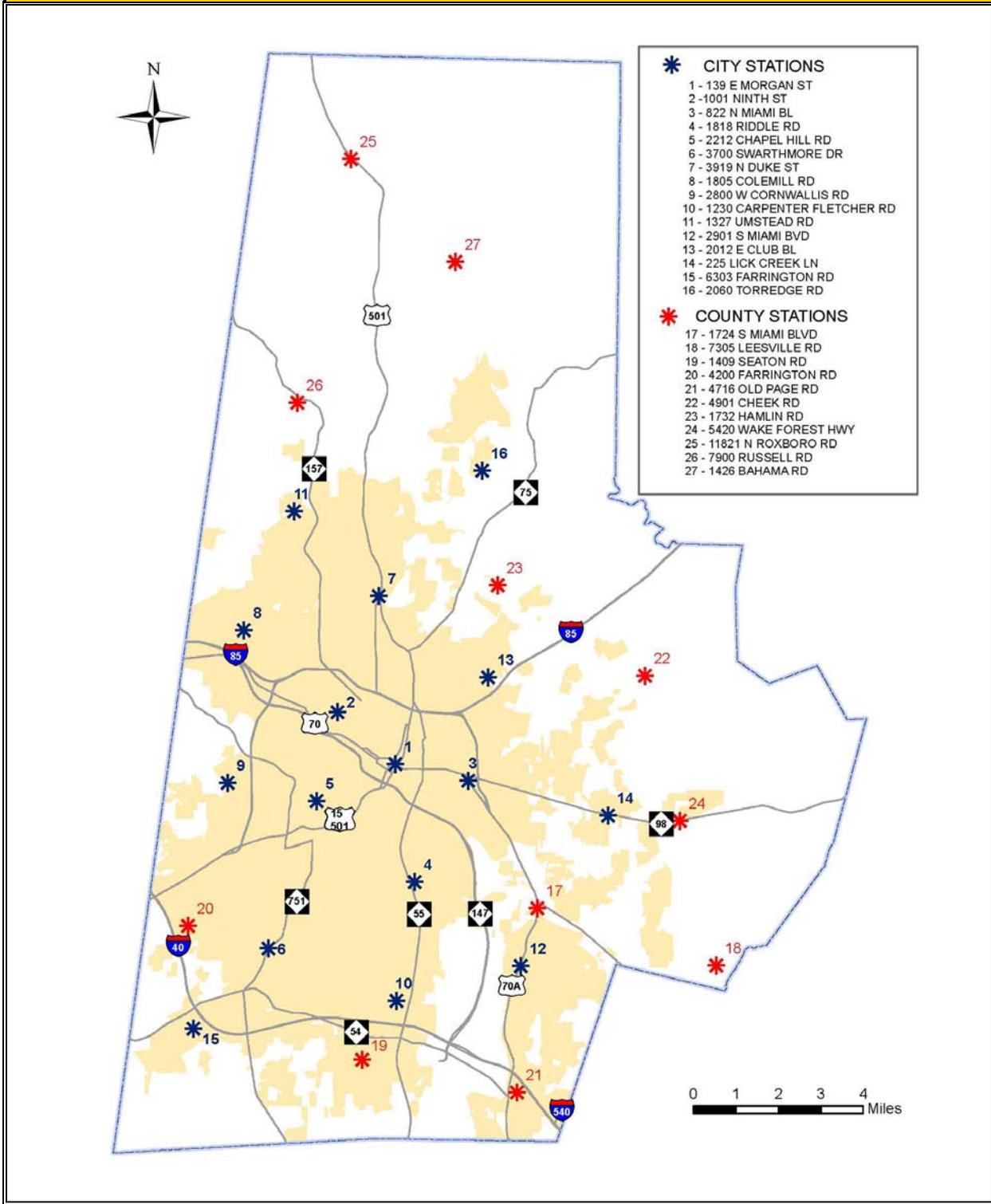
The administrative offices are located at the Fire Training Academy, 2008 East Club Blvd. The locations of the Department's 16 fire stations are listed below and shown on Map 13, Fire Stations.

- Station #1, 139 E. Morgan St.
- Station #2, 1001 Ninth St.
- Station #3 and #8, 822 N. Miami Blvd.
- Station #4, 1818 Riddle Rd.
- Station #5, 2212 Chapel Hill Blvd.
- Station #6, 3700 Swarthmore Rd.
- Station #7, 3919 N. Duke St.
- Station #9, 2012 E. Club Blvd.
- Station #10, 1805 Cole Mill Rd.
- Station #11, 2800 W. Cornwallis Rd.
- Station #12, 1230 Carpenter Fletcher Rd
- Station #13, 2901 S. Miami Blvd.
- Station #14, 1327 Umstead Rd.
- Station #15, 2060 Torredge Rd.
- Station #16, 6303 Farrington Rd.

Five volunteer fire departments (VFD) provide fire suppression, ambulance and first responder assistance throughout the County. They generally cover areas outside the City of Durham. The County's volunteer fire departments and their stations are listed below and shown on Map 13, Fire Stations.

- Bahama VFD Station #1, 1426 Bahama Road Station #2, 11819 Roxboro Rd
- Bethesda VFD: Station #1. 1724 S. Miami Blvd Station #2, 7305 Olive Branch Rd
- Lebanon VFD Station #1, Milton Road Station #2, Russell Rd
- Parkwood VFD Station #1, 1409 Seaton Road Station #2, 4700 Old Page Road Station #3, 4900 Farrington Rd
- Redwood VFD Station #1, 4801 Cheek Road Station #2, 1730 Hamlin Rd

**Map 13. Fire Stations**



Note: Source is Durham City-County Planning Department, September 2011.

## Public Safety

Police services for the City are provided by the Durham Police Department. The Police Department's Headquarters is at the intersection of South Duke Street and Chapel Hill Streets. The Police Department uses substations to increase police presence in the neighborhoods and to improve administrative efficiency. The five substations and their districts are listed below and shown on Map 14, Police and Sheriff's Substations.

- District One Substation provides patrol coverage to the eastern portions of the City and is located at 2400 Holloway St, Joyland Shopping Center.
- District Two Substation provides patrol coverage to the northern portions of the City and is located in Northgate Mall.
- District Three Substation provides patrol coverage to the southwest portions of the City and is located at 2000 Chapel Hill Road in the Shoppes of Lakewood.
- District Five Substation provides patrol coverage to the central portion of the City and is located at 505 West Chapel Hill Street in the Durham Police Headquarters.

Increased growth of the City in east Durham will likely require an additional Police substation.

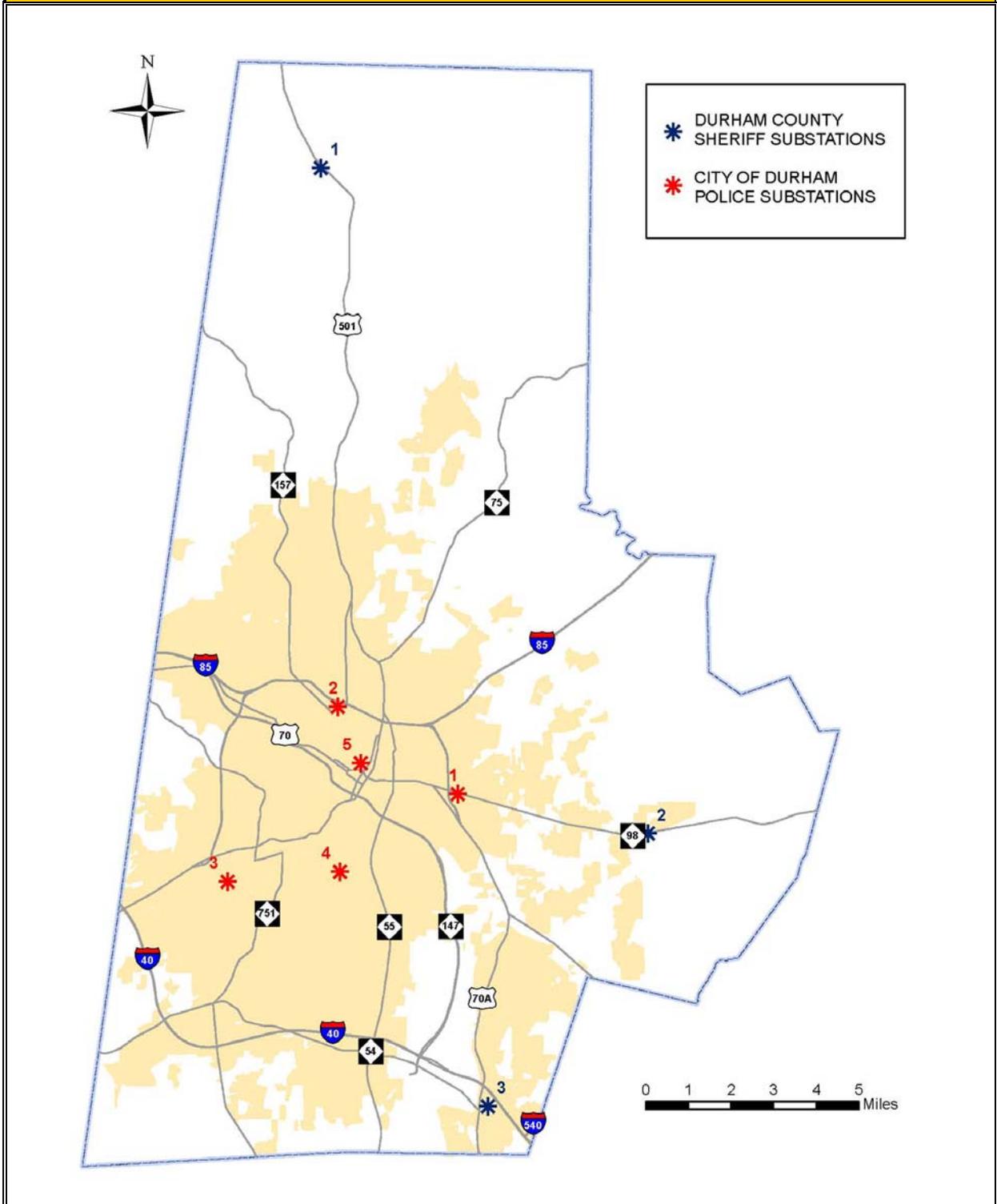
The Office of the Sheriff provides Sheriff's services for Durham County. In addition, the Sheriff's office maintains 204 detention officers and 18 civilians at the Detention Center. The Sheriff's Office performs its duties through three main divisions: Operations, Support Services, and Detention. The Operations Division manages communication related, records, juvenile services, adult services, and the Sheriff's Community Oriented Policing Effort.

The Support Services Division handles the service of civil process, which is the formal delivery of civil papers to people in Durham County. The Division also maintains security at all courtrooms in operation at the Durham County Judicial Facility, providing officers who serve as Bailiffs for the District and Superior Courts. Finally, the Division also houses the Sheriff's Anti-Crime/Narcotics unit and the certified and accredited training academy for law enforcement officers and detention staff.

The Durham Sheriff's Office maintains three satellite stations to carry out its law enforcement functions (also shown on Figure 30, Police and Sheriff's Substations):

- East Satellite Station, 5323 Waked Forest Highway (NC98)
- North Satellite Station, 11821 US 501 North
- South Satellite Station, 4716 Old Page Road

### Map 14. Police and Sheriff Substations



Note: Source is Durham City-County Planning Department.

and staff. The Durham County Detention Facility, located in downtown Durham, opened in the summer of 1996 with a capacity of 576 single cells. Bunk beds have been added since then to increase the facility's capacity to 736. A portion of the Center is a 48bed housing unit currently leased to the NC Department of Corrections. At a cost of \$40 million, the Detention Center was one of the most significant capital projects ever developed by Durham County.

Construction of Durham County's justice center is nearing completion. The facility will house the court services of the 14th Judicial District, including the Superior Court, the District Court, the Clerk of Superior Court, Trial Court Administration, and related courts services.

The Durham County Emergency Medical Services (EMS) Department provides emergency medical services in Durham. Paramedic services are provided from five primary sites within the City while the City Fire Department provides first responder services. Duke Rescue, a student-run volunteer service provides first responder assistance on the Duke University campus.

Outside the City, first responder services are provided in conjunction with five volunteer fire departments, including the Bahama, Lebanon, Redwood, Bethesda and Parkwood Volunteer Fire Departments). The volunteer departments provide an ambulance, station, and a driver. Durham County EMS provides a paramedic and related equipment for advanced life support responses in those districts.

Durham County EMS also provides patient accounting and educational programs. The EMS services administration is housed at the main EMS facility on the Durham Regional Hospital campus. Over 140 full and part time staff provides these emergency services to Durham citizens.

### Libraries

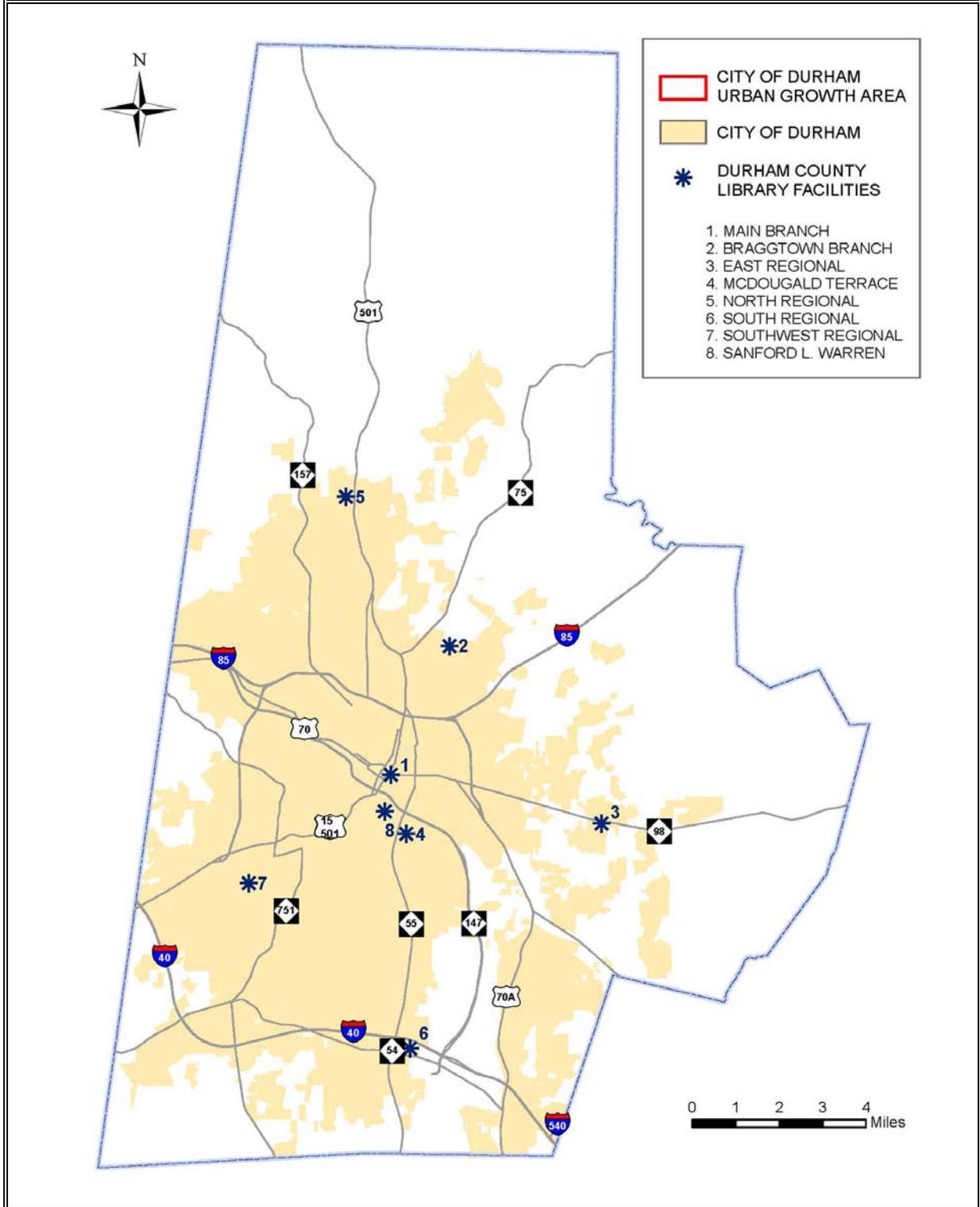
The Durham County Library has been a valuable resource for the Durham community for over a century. From its origins as the first free, tax-supported public library in North Carolina to offering World Wide Web access and CD ROMs, the Library has well served the community.

The Durham County Library system consists of the Main Branch and 7 branch library facilities. Map 15, Library Facilities shows the location of existing library facilities. The Main Branch, located in downtown Durham, houses a collection of over 460,000 titles, 900 magazine titles, an auditorium seating about 200 visitors, children's materials, audio-visual materials, the North Carolina collection and Library administration.



The South Durham Regional Library was completed in 2010. It has a collection capacity of 100,700 and offers many services, including 20 public access work stations.

### Map 15. Library Facilities



Source: Durham City-County Planning Department, August 2011.

The Stanford L. Warren Branch is a little less than 9,500 square feet and offer collections of between 30,000 and 62,000 titles.

Three new 25,000 square foot library branches were completed during the period 2005-2010, at a cost of approximately \$6 million each. The North Durham branch is located on Milton Road near Carrington Middle School and replaced the north Durham facility in the Riverview Shopping Center. A new south Durham branch library is located at 4504 South Alston Avenue was completed in 2010. Finally, a new east Durham branch is planned for the vicinity of NC 98 and Mineral Springs Road. Durham County expects that all three will be completed by 2005.

## Other Public Services

Durham County has recognized the need to plan for growth of general government functions as the County population grows in the future. In 2000, Durham County performed a needs analysis to determine future space needed to support County administration, health and human services, and public safety/justice functions. The needs assessment concluded that by 2020, the County would need to provide about 170,000 square feet of building space in addition to its present occupied building space of about 400,000 square feet.

From the needs assessment emerged a long-range plan for County government facilities. It employs a strategy of constructing new facilities to house County offices, renovating selected other County-owned buildings and reducing the amount of County-leased building space. The Plan envisions construction of a new justice center (mentioned above), co-location of public health, mental health and social services in a new building on East Main Street, new parking garages, and renovation of other buildings. This Plan is intended to meet County building space needs for general government purposes through the year 2020.

## Community Facilities Issues

As Durham's population increases over the next decades, so will the amount of solid waste the community generates. Durham operates no solid waste landfill facilities in the area, so solid waste is presently collected, compacted, transferred to rail cars, and sent to a sanitary landfill in Virginia.

Continued growth in the City's population will necessitate expanding existing parks or developing new ones. A long-range plan for park facilities is needed to ensure that future park facilities are coordinated with other public improvements.

Parks standards are an explicit statement of government policy about what park facilities the community intends to provide for its citizens. They offer a guide for determining how much land and what types of park facilities are needed to support future populations—they relate community growth to needed capital improvements. Level of service standards will determine the types of park facilities to be provided in

the future.

The rapid pace of development in Durham over the past two decades has placed unusual pressure on the DPS system. The student population is currently increasing at a rate of about 1.25 to 1.5 percent annually, bringing in about 750 new students each year. Student population is projected to reach 36,000 students by 2008. While DPS has set out an assertive plan to alleviate its present overcrowding by 2007, growth in Durham's population will continue. DPS needs to continue and enhance its long-range facility planning to address facility needs over the next two decades.

As Durham grows, so will the need for City and County fire protection, emergency medical services, and public safety services. Critical questions for Durham to address in its long-range planning include: Are appropriate service standards adopted for each type of service? What and how many new facilities will be needed and where should they be located to best serve present and future populations? What opportunities exist for combining these facilities with other government buildings and sites, such as libraries and recreation centers?





Updated, April 2012

# Durham Comprehensive Plan

## Appendix A Existing Conditions

### Part 3 Natural Resources

Durham City-County Planning Department

# The Durham Comprehensive Plan

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- Chapter 1. Introduction and Administration Element
- Chapter 2. Land Use Element
- Chapter 3. Housing Element
- Chapter 4. Community Character and Design Element
- Chapter 5. Historic Preservation Element
- Chapter 6. Economic Development Element
- Chapter 7. Conservation and Environment Element
- Chapter 8. Transportation Element
- Chapter 9. Water Utilities Element
- Chapter 10. Parks and Recreation Element
- Chapter 11. Schools Element
- Chapter 12. Public Safety Element
- Chapter 13. Solid Waste Element
- Chapter 14. Libraries Element
- Chapter 15. Capital Improvements Element
- Chapter 16. Intergovernmental Cooperation Element
- Appendices

# Appendix A, Existing Conditions Part 3: Natural Resources

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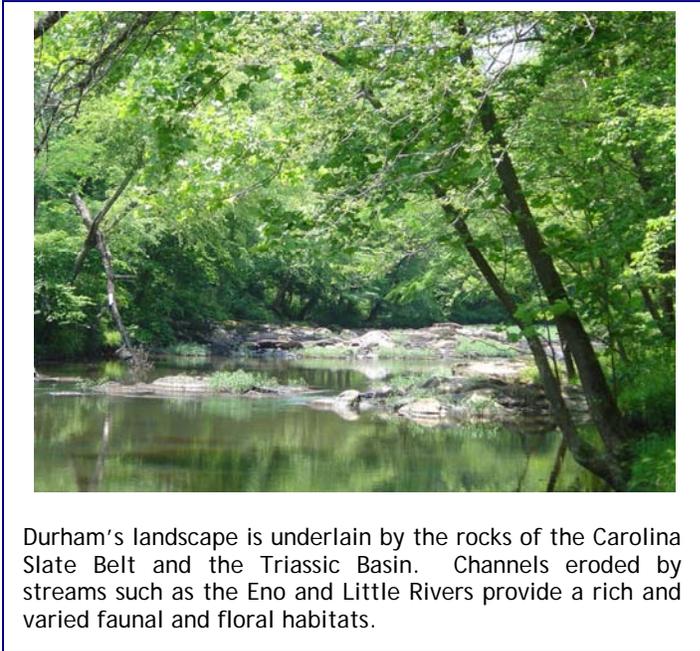
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# Part 3: Natural Resources

## Environment Profile

Durham is located in the heart of North Carolina’s Piedmont region. Two major geologic provinces have given rise to several opportunities and constraints to Durham’s development. The Triassic Basin is a generally low and flat band sedimentary rock formed about 200 million year ago. It traverses most of the southern portion of Durham County



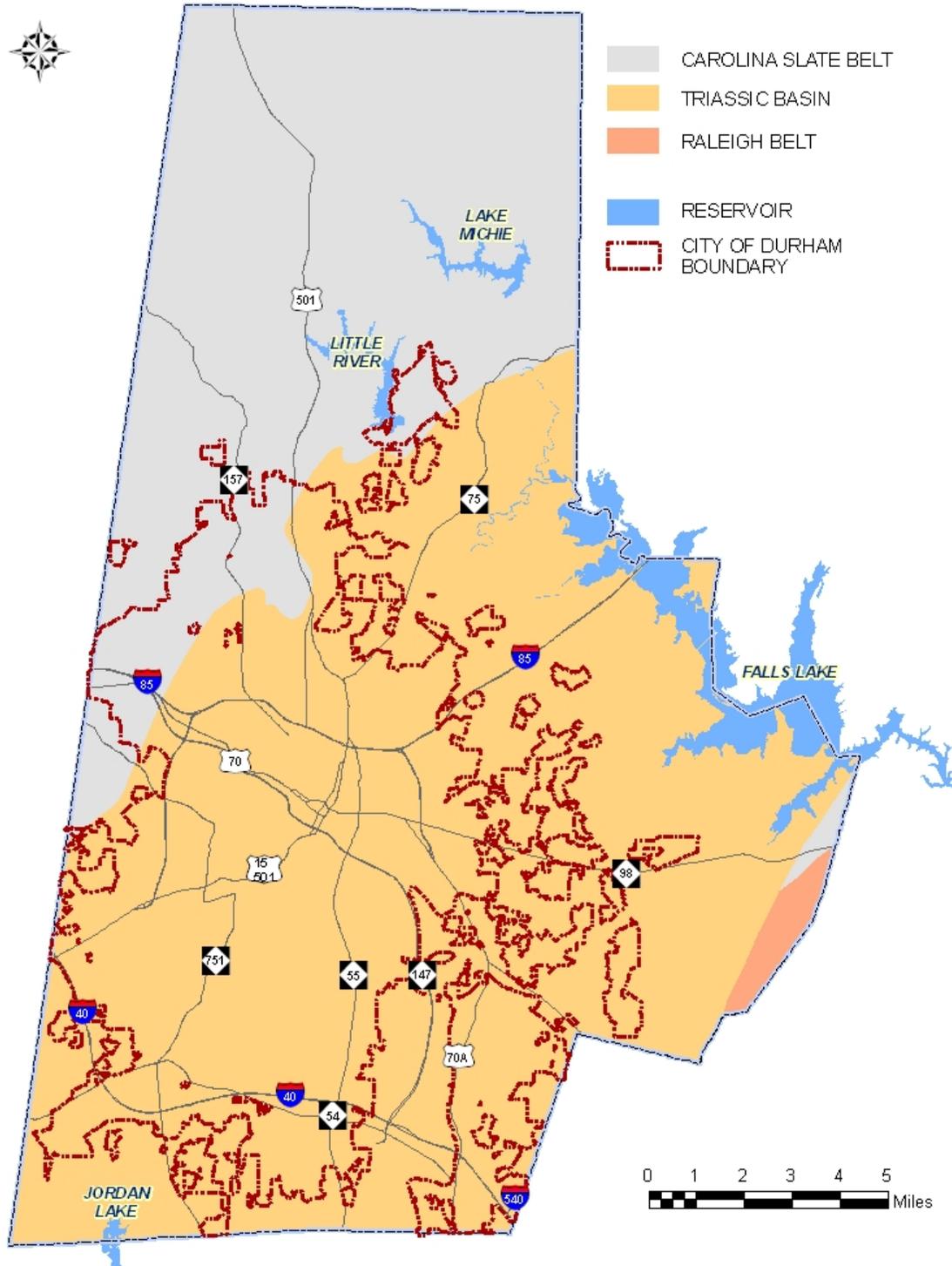
from southwest to northeast. The Carolina Slate Belt underlies the northwest third of the County (see Map 1). The Slate Belt is comprised largely of metamorphosed volcanic and sedimentary rocks, originally formed during late Proterozoic and Cambrian time (between 600 million and 400 million years ago).

Gorges cut into the Slate Belt by the Eno River, the Little River and the Flat River in northern Durham County, particularly along the boundary between the Slate Belt and the Triassic Basin, offer interesting wildlife habitat, especially on their cool north slopes.

The center of Durham is located on a ridgeline that separates the Cape Fear River basin and the Neuse River basin.

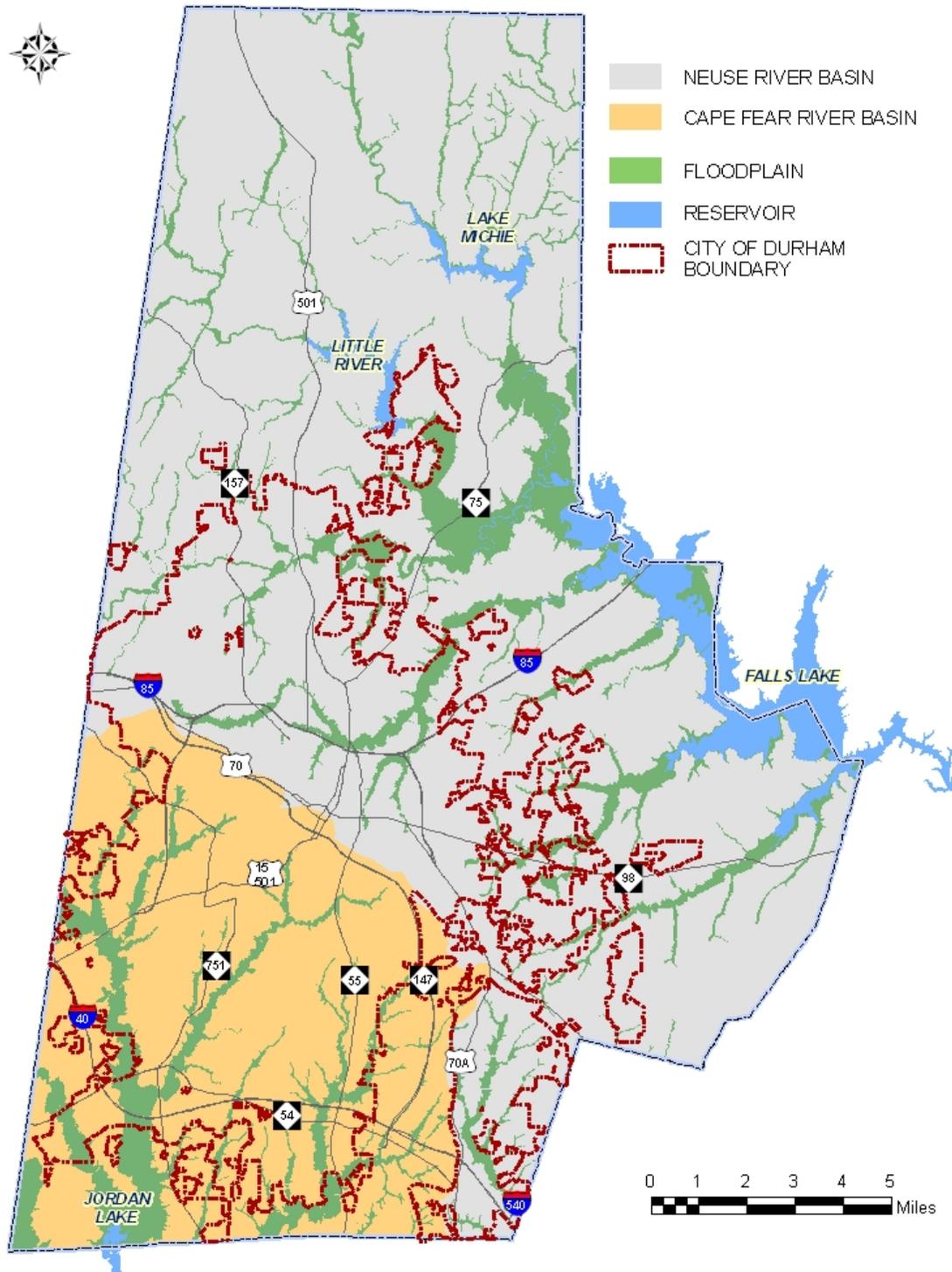
The location of Durham on the ridgeline means that surface waters flow away from the center of the town. Major streams, and gravity flow sewer lines, flow generally east on the Neuse Basin side of the ridge and south on the Cape Fear Basin side of the ridge (see Map 2).

### Map 1. Generalized Geology of Durham County



Note: Source is Durham City-County Planning, January 2012

### Map 2. The Neuse and Cape Fear River Basins



Note: Source is Durham City-County Planning, January 2012

## Natural Features and Important Habitats

Durham's rolling topography is comprised of flat areas, hills, small streams and larger creeks and rivers. Within the City, many existing undeveloped natural lands are along steep slopes, floodplains and low-lying creek areas, since these historically were less desirable for development. Major creeks within the City limits include Third Fork, Ellerbee, Little Lick, and Northeast Creeks. These creeks all contain major floodplains.

Floodplains are the natural bottomlands adjacent to perennial streams and rivers where flooding can be anticipated to occur. They perform valuable natural functions:

- Floodplains absorb and hold floodwaters, slowly releasing them and thereby reducing the intensity of downstream flooding;
- Floodplains allow natural recharge of water back into the ground;
- Floodplains maintain water quality by filtering storm water before it reaches the stream; and
- Floodplains provide important wildlife habitat.

Durham presently has floodplain regulations that prohibit most new

development in floodplain areas. Perennial and intermittent streams also receive some protection through Durham's stream buffer requirements.

Wetlands are typically found in floodplain areas and in the low areas that surround streams. Wetlands offer a natural buffer between upland habitat and watercourses and serve many similar functions as floodplains. Wetlands that are preserved in new developments require a 25-foot naturally vegetated buffer maintained around them if they are one acre in size or greater.

Durham revised its development regulations in 1999 to better address protection of environmentally significant features. The City and County approved a

series of amendments to its zoning and subdivision ordinances to address, stream buffers, floodplains, steep slope wetlands, and tree protection measures.



Floodplains and wetlands not only serve as important faunal and floral habitat, they also provide natural storage for storm water runoff, thus enhancing flood protection.

More stringent environmental resource protection was accomplished through adoption of the Unified Development Ordinance (UDO) in 2006. In the past five years, Durham has adopted a number of text amendments to the UDO in order to further enhance environmental protection. These enhancements addressed development within special flood hazard areas, sedimentation and erosion control, riparian buffers, and tree protection (See Table 1).

<b>Table 1. Environmental Enhancements to the UDO</b>			
<b>UDO Text Amendments</b>		<b>Board of County Commissioners Date of Adoption</b>	<b>City Council Date of Adoption</b>
TC05-04	Flood Damage Protection Standards	4/24/2006	5/6/2006
TC06-05	Sedimentation and Erosion Control	6/26/2006	6/19/2006
TC06-10	Septic Tank Lot Sizes	11/27/2006	12/3/2006
TC07-09	FIRM Technical Changes	7/23/2007	7/19/2007
TC07-05	Floodplain Fill	8/13/2007	8/6/2007
TC09-07	Sedimentation and Erosion Control	11/23/2009	12/7/2009
TC08-02	FIRM update	5/12/2008	5/5/2008
TC07-21	Stormwater	6/9/2008	6/2/2008
TC09-08	Riparian Buffers	11/8/2010	11/4/2010
TC10-03	Tree Protection	4/11/2011	3/21/2011
TC10-07	Riparian Buffers Technical Revision	4/11/2011	3/21/2011

Source: Durham City-County Planning Department

The *Durham County Inventory of Important Natural Areas, Plants and Wildlife* identifies 45 sites within Durham County. These sites provide a high diversity of plant and animal species, support populations of rare plants and animals, and serve as critical open space corridors for animal movements. The rare species identified in the Inventory range from the federally-listed Bald Eagle, to rare aquatic mussels and to sun-loving rare prairie species. These Inventory sites are located in Map 3, Natural Resources and listed in Table 2, Natural Inventory Sites.

The Natural Heritage Program ranks sites based on the variety and rarity of species found in these areas. Of the 34 sites, 23 are ranked as “significant” at the state or national level. Another seven are ranked as “regionally significant.” These areas are located primarily along Durham’s river and stream corridors and upland areas that border these bottomlands. Historically, the land along rivers and

streams has been less disturbed by development or agricultural activities, and so retains more native plant and animal habitat. The stream corridors are also important habitats because they provide opportunities for animal movement between large core areas of habitat.

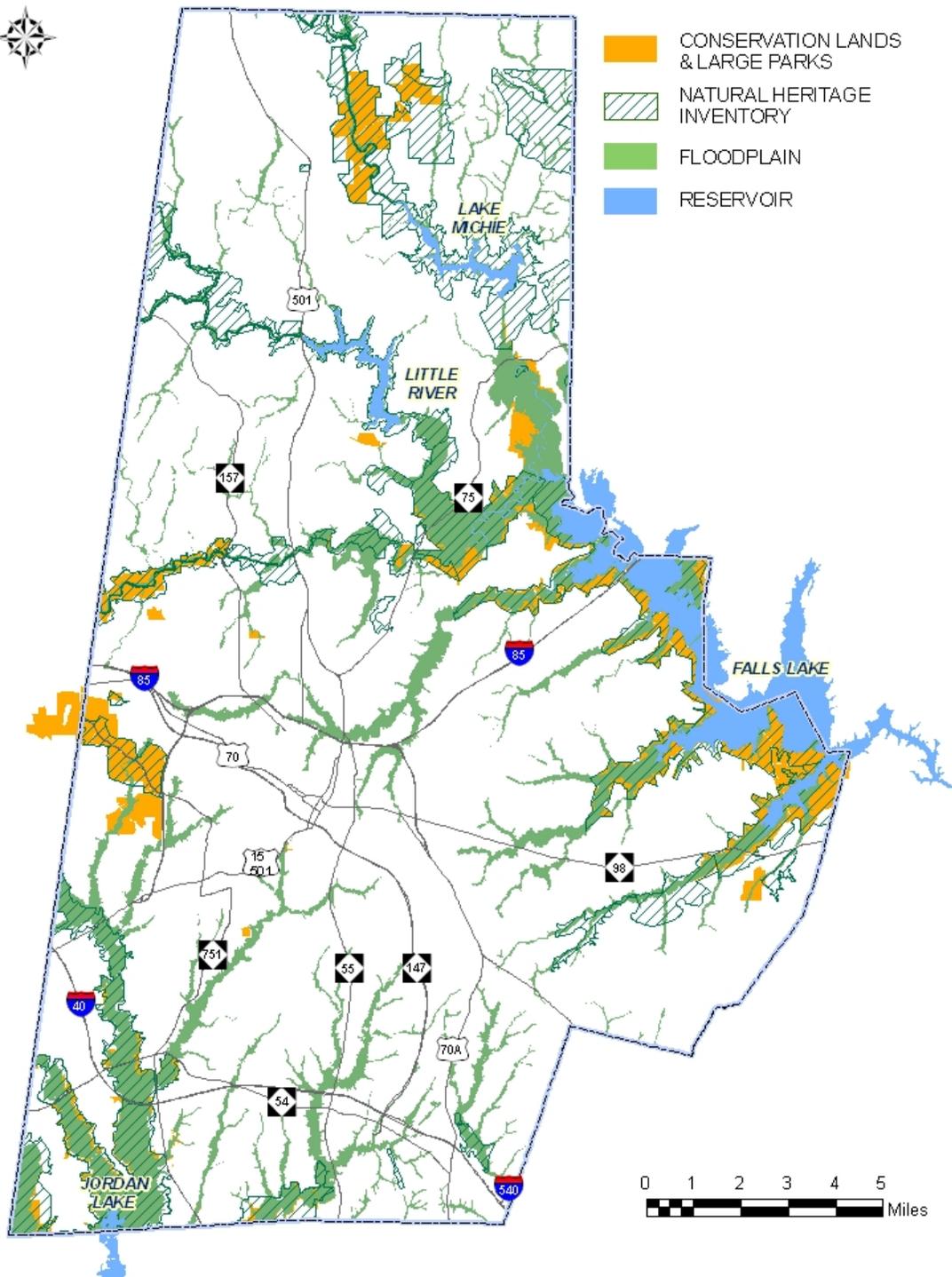
<b>Table 2. Natural Inventory Sites</b>	
<b>Site</b>	<b>Acres</b>
Bennett Place Upland Forest	41.75
Big Oak Woods	56.57
Cabin Branch Creek Bottomland-Swamp	196.47
Camp Butner Game Land	2043.27
Catsburg Natural Area	110.15
Dry Creek/Mount Moriah Bottomland	438.97
Duke Forest Oak-Hickory Upland	423.32
Eno River Aquatic Habitat	7.23
Eno River Blue Wild Indigo Slope	44.49
Eno River Diabase Sill	7748.07
Falls Lake Shoreline and Tributaries	17.41
Flat River Aquatic Habitat	2504.26
Flat River Bend Forest	642.06
Flat River Slopes above Lake Michie	241.28
Flat River Slopes below Lake Michie	204.99
Gate 4 Mafic Forests	1.10
Gate 9 Pond	90.11
Hebron Road Remnant Glade	206.53
Hebron Road Remnant Glade	1247.45
Hill Forest Chestnut Oak/Shortleaf Pine Forest	41.33
Hill Forest Dial Creek Hardwood Forest	5995.28
Jenkins Road Diabase Dike	66.69
Jordan Lake Bald Eagle Habitat	1883.00
Knap of Reeds Creek Beaver Ponds and Swamp	159.02
Lake Michie Corridor	1743.79
Leatherwood Cove	1126.32
Lick Creek Bottomland Forest	320.96
Little River (Durham) Corridor	1213.89

Little River (Orange/Durham) Aquatic Habitat	2157.02
Little River Gorge	1422.76
Little River Uplands	408.00
Lower Eno River/Little River Bottomlands	2123.81
Lower New Hope Creek Floodplain Forest and Slopes	2572.04
Middle Eno River Bluffs and Slopes	964.59
Middle Lick Creek Bottomlands	819.93
Morgan Creek Floodplain Forest	325.22
New Hope Creek Bottomland Forest	16.93
Northeast Creek Floodplain Forest	226.54
Pennys Bend/Eno River Bluffs	22.48
Quail Roost Oak Uplands	18.00
Red Mountain/Flat River Slopes	199.87
Redwood Road Remnant Glade	144.70
Stirrup Iron Creek Marsh and Sloughs	221.60
Stirrup Iron Creek Marsh and Sloughs	265.02
Third Fork Creek Wetlands	148.91
Source: Durham City-County Planning Department	

Durham County also includes rare upland habitats. Durham and Granville Counties include locations of unusual diabase soils that are more common in the Great Plains. These basic soils support a variety of rare plants, including the smooth coneflower, which is federally-listed as an endangered species. Another 24 diabase-loving species are state-listed as “rare.”

The Eno, Flat, and Little Rivers contain populations of eight mussel species that are state-listed as “rare” or “significantly rare.” Maintaining good water quality is particularly important for the continued long-term presence of these species in Durham. Aquatic plant and animal species are particularly vulnerable to water quality changes. Sedimentation can have disastrous effects on mussels, which are unable to relocate during periods of heavy sedimentation, and are additionally vulnerable as filter feeders. Likewise, the City’s proposal to expand Lake Michie could threaten aquatic habitat. The expansion would likely inundate over a mile of river upstream from the present lake boundaries, which could have a serious impact on any mussel species living in this stretch of the river.

### Map 3. Natural Resources



Note: Source is Durham City-County Planning, January 2012

Twenty-six of the Inventory sites are at least partially protected by virtue of their public or institutional ownership. That status alone does not ensure that the values of the site will be protected. The remainder of the Inventory sites are in private ownership and vulnerable to development impacts that would degrade their habitat value.

Durham’s development regulations do not require the preservation of Inventory sites. New developments frequently do not incorporate identified natural features into the development design. Floodplain restrictions and stream buffers provide some degree of protection, since many sites are associated with watercourses. However, protection of Inventory sites is not a standard requirement of new development. The upland Inventory sites not associated with watercourses face the greatest threat from development impacts.

### Water Quality

As indicated previously, Durham County is divided into two major drainage basins, both of which supply water for the Region’s drinking water reservoirs. The southern third of the County drains into Jordan Reservoir and the Cape Fear River basin. The northern two-thirds of the County drains into the Falls of the Neuse Reservoir and the Neuse River basin. All of the major watercourses in Durham County drain to water supply reservoirs and affect the quality of their waters.



Lake Michie and Little River Reservoir in northern Durham County were created by damming the Flat and Little Rivers. These reservoirs serve as public water supply for the City of Durham

The Flat River and Little River in northern Durham County have been dammed for the Little River and Lake Michie drinking water reservoirs for the City of Durham. These two watersheds, plus the Eno River, Ellerbe, Lick and Little Lick Creeks all drain into Falls Lake, a drinking water supply for the City of Raleigh. The streams in Durham County within the Cape Fear basin drain into Jordan Reservoir, a water supply for Apex and Cary, and a potential future water supply for Durham. These watercourses include Little, New Hope, Third Fork, Crooked, and Northeast Creeks.

The NC Division Water Quality (DWQ) classifies streams according to their best-intended uses. Surface waters, including streams, lakes, and estuaries, are rated as fully

supporting, partially supporting or not supporting their intended uses. Intended uses could include water supply, aquatic life protection and swimming or other recreation. The DWQ has determined that several streams in Durham County do not support their intended uses. These streams include New Hope, Third Fork, and Northeast Creeks in the Cape Fear basin and Ellerbe, Little Lick, and Lick Creeks in the Neuse basin. All have impaired water quality.

Durham applies special zoning regulations for the purposes of water supply watershed protection. Industrial land uses are prohibited on land near water supply reservoirs, reducing the probability of spills of toxic materials. The intensity of development is kept relatively low on land near water supply reservoirs in order to minimize pollution from storm water runoff. Preventing water pollution is usually preferable and less costly than removing pollutants from water prior to urban uses.

Durham's watershed protection regulations use several techniques for preventing water supply pollution. First, the regulations establish limits on that amount of impervious surfaces allowed in a new development. Impervious surfaces are hard surfaces such as driveways, parking lots and rooftops that do not allow water to naturally infiltrate into the soil. Allowed impervious surfaces can vary from 6 percent in sensitive areas to 70 percent in less sensitive areas.

Second, new development must preserve undisturbed naturally vegetated areas on each side of most streams. Stream buffers can be from 50 feet in width on each side of the stream to 150 feet in width. Finally, the regulations establish minimum lot sizes for all new development. The minimum can vary from 2 acres in sensitive watershed down to 20,000 feet in less sensitive watersheds, with provisions for smaller lots in clustered developments.

The degree of land use regulation applied to a particular site varies within the County and depends upon:

- Which water supply reservoir's drainage basin the site is in;
- Whether a site is within 1 mile or 5 miles from the reservoir;
- Whether engineered storm water controls (also called best management practices) are provided on-site; and
- Whether the site is inside or outside of the Urban Growth Area.

In general, the rules are most restrictive in north Durham areas close to Lake Michie and the Little River Reservoir, both considered sensitive watersheds. The rules are least restrictive in the portions of the Falls Reservoir and Jordan Reservoir basins that are well away from the lakes' edges.

Durham's watershed protection regulations prohibit community

scale wastewater treatment systems in areas outside the Urban Growth Area. Community scale wastewater treatment systems serve multiple homes and rely on a common septic system or a package treatment plant.

In 1997, the State of North Carolina adopted a comprehensive strategy for reducing pollutants in the Neuse River basin and the Pamlico Sound. The Nutrient Sensitive Waters Management Strategy for the Neuse River Basin established a goal of reducing nitrogen levels in the lower basin by 30 percent within five years. Nitrogen is a nutrient commonly found in storm water runoff and wastewater. In large quantities, nitrogen has a negative impact on water quality.

The Management Strategy proposes to meet the 30 percent reduction by distributing the nitrogen reduction goal between wastewater dischargers, developers, farmers and fertilizer applicators. Ten municipalities and five counties, including the City of Durham and Durham County, are required to address the nitrogen levels in storm water runoff from new developments. New developments are required to capture the storm water from the one-year 24-hour storm, and to limit the nitrogen export from new development. The Management Strategy also requires that all streams within the Neuse River basin provide a 50-foot stream buffer.

While similar regulations are not yet in place in the Cape Fear River basin, the state is considering enacting such regulations. Should this take place, Durham City and County will both be required to meet these additional state standards to maintain high water quality.

The Upper Neuse River Basin covers about 770 square miles of the North Carolina Piedmont and is home to a diverse variety of wildlife, nine drinking water supplies and significant urban development. Protecting the basin's water resources is essential to the health, safety and vitality of the region's people, economy and environment. The Upper Neuse River Basin Association (UNRBA) is a coalition of counties, municipalities and soil and water conservation districts. With the assistance many local and state agencies, the UNRBA prepared an Upper Neuse Watershed Management Plan.

The Management Plan recognizes that increasing population and development in the basin over the next two decades will continue to impact the water quality of streams, rivers and reservoirs in the basin. It notes that that several important point and non-point source control measures are already in place. Through its analysis of the basin and potential growth, the Plan indicated that these measures, if fully implemented and enforced, will be sufficient to meet targets for drinking water in 2025. Present water quality protection measures may not be sufficient for protection beyond

that time frame and they will be insufficient to protect aquatic habitat.

The Management Plan identifies five management techniques for use by municipalities and counties in the basin:

- Controlling the quality and quantity of water running off future development site through density and impervious surface limits and enhanced peak flow requirements;
- Enhanced monitoring and enforcement programs to ensure proper performance and maintenance of wastewater, storm water and septic systems;
- Education and Citizen Stewardship programs to increase citizens' and developers' awareness of and participation in watershed management efforts;
- Point source control efforts to upgrade existing wastewater treatment systems and phase out older systems; and
- Stream and wetland restoration projects to restore some of the natural functions and characteristics of impaired bodies of water.

These techniques, when used together, can address existing pollution problems and minimize future problems. Local governments in the upper Neuse River basin and the Board of the UNRBA are reviewing the draft to assess the effectiveness and cost of implementing the Management Plan's recommendations.

In 2002, the North Carolina Wetlands Restoration Program targeted Ellerbe Creek for a local watershed plan. The goal of the Plan is to produce specific recommendations that could improve water quality within the Ellerbe Creek drainage area. The watershed plan for this degraded stream drew together the efforts from many City, County, regional and state agencies. In particular, the Plan will assist the Wetlands Restoration Program in locating sites for wetlands projects that can provide the greatest water quality benefit. Portions of New Hope Creek may be targeted for a similar watershed plan in the future.

## Air Quality

People living in areas with poor air quality are more susceptible to asthma and a host of other breathing related disorders. The American Lung Association tracks air quality trends nationwide. In its most recent ranking, the Raleigh-Durham area tied with Philadelphia for the rating of the 10<sup>th</sup> worst air quality in the nation. Although Raleigh-Durham rankings higher than larger cities, such as Los Angeles, Houston and Atlanta, it indicates poorer air quality than a number of larger urban areas such as Dallas-Fort Worth, New York City, San Diego and Pittsburgh.

The air quality in Durham is affected by both local sources and by

the quality of air that comes into the Triangle Region. Local sources of air pollution come primarily from auto emissions and from individual stationary sources, such as industrial plants and some commercial businesses, such as dry cleaners.

The Environmental Protection Agency (EPA) has established standards for common air pollutants. A geographic area that meets or exceeds the standard for a particular air pollutant is called an "attainment area." Likewise, an area that does not meet the standard is called a "nonattainment area." Standards are set for a number of pollutants, including ozone, nitrous dioxide and carbon monoxide. An area could be an attainment area for some pollutants and a non-attainment area for others.

When air quality does not meet federally-mandated standards, the non-attainment status can directly affect the community's economic development efforts. Federal funding for transportation improvements may be delayed. Industrial development proposing to emit air pollutants may be prevented from locating in the jurisdiction. Non-attainment status for one or more pollutants affects potential employment growth, and perhaps more indirectly, affects our quality of life.

Ozone is a problem air pollutant in Durham and the Triangle Region. Ozone is created by a chemical reaction between volatile organic compounds (VOCs) and nitrous oxide with heat. Between 1999 and 2001, the Triangle Region averaged almost 21 days, mostly during the summer, when ozone levels exceeded the federal standard. During these days, residents were urged to limit their exposure to the outside air, and encouraged to reduce car trips and refueling during peak times.

Since ozone is directly related to automobile combustion and emission, expected increases in travel over the next two decades will also result in increased ozone levels. More travel will have a negative impact on Durham's air quality, increase health problems, and possibly jeopardize federal transportation funds without concerted efforts to improve the situation.

An urban heat island is a localized microclimate created by a concentration of paved surfaces in an urban area that absorbs heat from the sun during the day and releases the heat slowly during the night. Heat islands can be downtown areas or large shopping centers with expanses of un-shaded parking. Urban heat islands raise ambient temperatures and help to trigger the chemical reactions that produce ozone. The higher temperatures require greater energy consumption to cool interior spaces. Durham does not have a coordinated policy to address heat island issues.

Greenhouse gases occur naturally in the atmosphere, while others result from human activities. Naturally occurring greenhouse gases

include water vapor, carbon dioxide, methane, nitrous oxide, and ozone.

Certain human activities, however, add to the levels of most of the naturally occurring gases. Carbon dioxide is released into the atmosphere when fossil fuels and other materials are burned. Methane is emitted during the production and transport of fossil fuels and from the decomposition of organic wastes. Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of solid waste and fossil fuels. Powerful greenhouse gases that are not naturally occurring include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, which are generated in a variety of industrial processes. Each of these greenhouse gasses is noted for its ability to absorb heat in the atmosphere.



The Durham Area Transit Authority placed 20 diesel-electric hybrid buses in operation in 2010.

In response to concerns about global warming and air quality, Durham adopted a *Greenhouse*

*Gas Emissions Reduction Plan* in 2007. The Plan is administered through the County's Engineering and Environmental Services Department. The Plan calls for a 30 percent reduction from 2005 emissions levels by 2030 for local government operations. The Plan also includes the following recommendations:

- Implementation of a green building policy for all new construction and major renovations;
- Efficiency improvements to water and sewage operations;
- Expand energy conservation in commercial, residential, and industrial sectors via education and awareness campaigns, partnerships, energy audits, and design standards;
- Expand land use planning strategies that control suburban sprawl and encourage mass transit use; and
- Promote the use of alternative vehicles and fuels.

## Environmental Issues

New development can significantly impact natural features, such as floodplains, streams, steep slope areas, wetlands and natural vegetation. Land use regulations try to strike a balance between achieving broader community objectives of environmental protection while recognizing the rights of private property owners.

Typical of many communities, Durham faces the problem of how to accommodate new development while protecting its natural heritage. Many of the Natural Inventory sites are protected: at least partially in public or institutional ownership and managed as natural

areas, forestlands or wildlife habitat.

Durham faces two potentially conflicting public objectives. The City needs to develop a new and cost-effective raw water supply to address anticipated future needs. At the same time, Durham may also want to take steps to prevent degradation of the habitat of these important species.

Poor air quality resulting from increases in ozone levels can be anticipated due to increases in vehicle miles traveled. Poorer air quality can have an impact on Durham's quality of life for many residents who exercise or have sensitivity to air quality. Poor air quality can also affect Durham's ability to recruit new businesses.

## Open Space and Farmland

### Natural and Urban Open Spaces

Open space can refer to lands that are largely undeveloped and natural in character. They can be floodplain areas, steep slope areas, tree preservation areas, wetlands, parks for passive recreation, research forests, and natural land around institutions and facilities. Vegetative buffers between different land uses offer small areas of natural open space. Some natural open spaces may allow public access and provide recreational opportunities—a place to hike, bird watch, fish or picnic. Other natural open spaces may restrict public access. Natural open spaces adjacent to watercourses help to reduce sedimentation into streams, protecting downstream water quality. Rivers and streams provide homes for fish and other aquatic species. The lowlands and slopes adjacent to rivers and streams often provide prime habitat for birds and other wildlife.

Developed open space can refer to farms, golf courses, and parks for active recreation. Many residents view agricultural fields and horse farms, sometimes termed “working lands,” as a desirable landscape feature. Farms contribute jobs, money and produce to Durham's local economy. The City has a long history of developing open spaces. The City owns hundreds of acres of extensive park facilities for sports, such as softball, soccer and even frisbee golf.

In urban areas, developed open space can also refer to parks, plazas, parkways, pedestrian spaces and even cemeteries. Urban open spaces provide causal opportunities to socialize and contribute a neighborhood's character and appeal. Like natural areas, urban open spaces can be publicly owned or privately owned, but are generally accessible to the public. Urban open spaces are discussed in the section of this report on Community Character and Design.

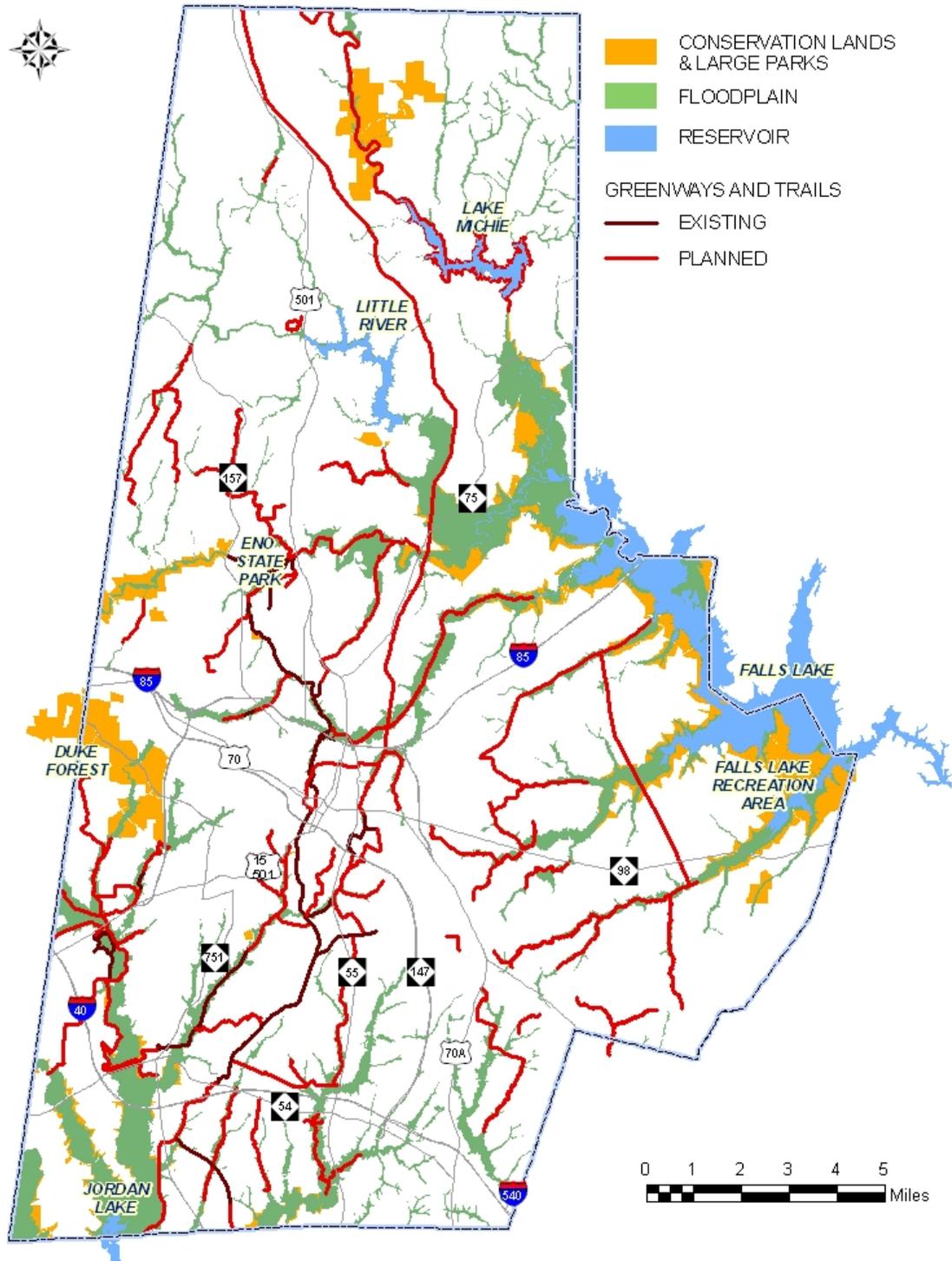
In the 1992 and early 1993, the County and City adopted *The Durham County Open Space Corridor System: A Program for Natural*

*Areas and Passive Recreation.* This document recommended developing a County-wide system of open space corridors. It focused primarily on corridors along the Eno River, the Little River, the Flat River, New Hope Creek, Lick Creek and the Falls Lake shoreline (see Map 17-22, Open Spaces and Corridors). State parks, City parks, Corps land and other public open spaces already protect portions of these corridors. Over the next few years, corridor plans were created and adopted for New Hope Creek in southern Durham and the Little River in northern Durham. Other corridor plans are yet to be prepared.

The Flat River is one of three rivers that flows through northern Durham County to the Falls of the Neuse Lake. Much of the land along the Flat River is protected because it is in public ownership. The US Army Corps of Engineers owns land near the Lake and allows recreational uses. The City of Durham owns land around Lake Michie. North Carolina State University owns the Hill Forest research area upstream of Lake Michie. Durham has targeted this corridor for further planning efforts to ensure coordinated public and private protection all along the River.

Little Lick Creek in east Durham flows to the Falls of the Neuse Lake. This stream corridor is relatively undeveloped, but faces development pressures over the next decades. Durham County has also targeted the Little Lick Creek corridor for an open space planning effort.

### Map 4. Recreation and Open Space



Note: Source is Durham City-County Planning, January 2012

New Hope Creek flows south between Durham and Chapel Hill. It meanders along a broad flat floodplain of hardwood swamp forest. In the early 1990s, The City of Durham, Durham County, the Town of Chapel Hill and Orange County recognized value of the Creek corridor as open space. The four jurisdictions wanted to preserve open spaces to connect New Hope Creek with the Eno River to the north and to the Corps land and Jordan Lake on the south. The New Hope Creek Corridor Open Space Master Plan was adopted by all four jurisdictions to provide wildlife habitat, environmental benefits, recreational opportunities and aesthetic enjoyment, and as a means of shaping the area's urban form.

The Master Plan sets out a broad program for preserving open spaces:

- Acquisition from willing sellers of about 1,103 acres of floodplain land, 45 acres of steep slope area and 554 acres of uplands;
- Development of about 20 miles of trails and nine trail access points; and
- Establishment of a permanent, joint New Hope Corridor Open Space Advisory Committee to monitor and advise elected boards about implementation of the Master Plan.

The four jurisdictions share responsibilities and project costs for implementing the Master Plan. Since the Plan's adoption, both the City of Durham and Durham County have actively worked to implement the Plan through the parks acquisition, trail development and open space acquisition.

The Little River corridor in northwestern Durham displays farms, woodlands, pasturelands, historic home sites and meandering streams. The Little River itself is both beautiful and environmentally significant. Upstream from the Little River Reservoir, the River is characterized by scenic gorges, rocky riffle sections, steep rocky bluffs and wooded scenery. Steep north-facing slopes create a cool microclimate that supports rhododendron and mountain laurel groves more typical of the mountains. The River's water quality is highly rated by the NC Environmental Management Commission.

The goals of the Little River Corridor Open Space Plan include preserving wildlife habitat and movement corridors, protecting the area's natural beauty, protecting water quality, and accommodating existing uses and future development. Citizens in the area expressed a strong desire to preserve the special places in the Little River corridor, but preferred that any public acquisition be on a voluntary basis.

In order to accomplish its goals, the Plan recommends numerous

public and private actions, including:

- Developing five parks for active recreation;
- Developing five canoe and kayak access points along the River;
- Developing parks and greenway trails for passive recreation;
- Preserving through public acquisition or private efforts numerous wildlife habitat areas and corridors along the Little River and its key tributaries.
- Open space education and site stewardship programs to increase citizen awareness of the River and its environs.

Public interest in the Little River corridor and the Plan has been broad. A group of citizens has formed an organization, Little River Corridor Citizens' Advisory Committee, for the specific purpose of raising awareness of the corridor and monitoring implementation of the Plan.

Durham County and Orange County have taken a major step to implement the Plan in acquiring and developing the Little River Regional Park. Straddling the County line, the Regional Park encompasses 307 acres along the western bank of the North Fork of the Little River. Purchase was accomplished through a joint agreement of Durham County, Orange County, the Triangle Land Conservancy, and the Eno River Association. A \$365,000 grant from the NC Clean Water Management Trust and a \$262,000 grant from the NC Land and Water Conservation Fund covered part of the acquisition cost. The Regional Park will be developed to accommodate passive recreation: picnicking, horse trails, hiking trails and mountain bike trails. A grant of \$250,000 from the NC Parks and Recreation Trust Fund will assist with development costs. When operational, the Regional Park will be managed by Orange County.

## Farmland Preservation

Farming has historically been an important part of Durham's rural heritage and economic base. Farms add to our rural character. They can provide local sources of fresh foods, and open spaces important for wildlife and water quality.

The majority of farms in Durham exist outside the Urban Growth Area (UGA) in northern and eastern Durham County. Soils identified as ideal for agricultural use are scattered throughout the County, but are more heavily found in northern Durham. A significant proportion of prime soils are found within the UGA where suburban residential development has been taking place.

Most active farmland is located in areas that are zoned Rural District (RD). Rural District zoning permits residential development and

agricultural uses. Single-family development is allowed by right through the zoning and subdivision ordinances. Some traditional rural and agricultural uses require additional reviews. Roadside stands, summer camps and equestrian facilities are permitted uses but require use permits from the Board of Adjustment.

The importance of farming to Durham's economy has changed considerably over the past three decades. As Durham's economic base has grown dramatically in the medical, high tech, and service-related sectors, farmland that used to produce tobacco or row crops has been allowed to go fallow or been converted to development. Data provided by the US Census of Agriculture finds that the number of farms in Durham County declined from 350 to 159 between 1978 and 1997. During the same time, the amount of farm acreage has declined by over half, from 50,010 acres in 1978 to 22,238 acres in 1997.

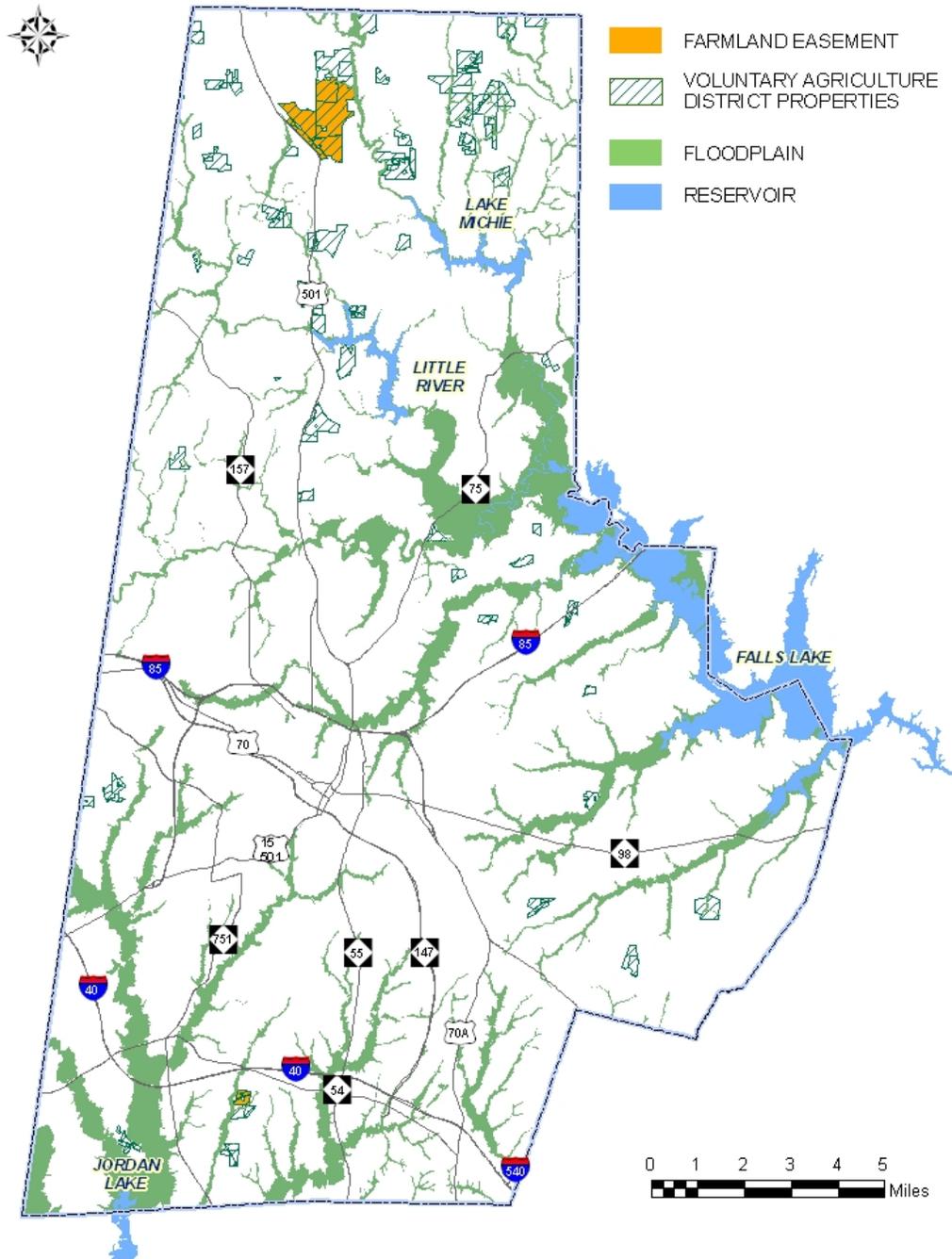
The nature of farming in the Triangle is changing. In general, traditional agriculture, such as dairying and row crop cultivation of tobacco and grains, is on the decline while specialty farming is growing rapidly. Tobacco quotas in the Triangle Region have been reduced by about 50% since 1996. The number of dairy herds has dropped steadily. In contrast, income from nursery and greenhouse production as well as fruits and vegetables has increased rapidly. Beef cattle and hay production are also on the rise, in part as a replacement for tobacco.

The average age of farm operators is increasing. The average farmer in the region is now more than 55 years old. Fewer young people are getting into agriculture, driving the average age of farmers steadily upward. What farmers decide to do with their land when they retire will have a major impact on the long-term prospects for farming in the region.

Existing farmland has fiscal benefits in addition to retaining a portion of our rural character. Farmland adds to the local economy and requires few public services. In recent years, both Chatham and Wake Counties have performed "cost of community service" studies. These studies evaluated the cost of providing public services to farmland and other types of residential and non-residential land use. The Chatham County study found that for every dollar farmland contributed, it only required \$0.92 in services, even under the present use value program. By contrast, residential land uses required on average \$1.12 in services for every dollar contributed in taxes. The Wake County study, completed in June 2001, produced similar results.

One tool Durham County uses to encourage preservation of farmland is the Present Use Value program. North Carolina statutes allow counties to tax certain agricultural, horticultural or forestry lands on their present value rather than on their (usually higher)

### Map 5. Voluntary Agriculture District Properties and Farmland Easements



Note: Source is Durham City-County Planning, January 2012

market value. In order to qualify, agricultural land must be at least 10 acres in size and produce an average gross income of \$1,000; forestry land must be at least 20 acres and in commercial tree production. For farmers, inclusion in the program can mean significantly lower tax burden and less incentive to sell farmland for development purposes. Durham County lists 441 parcels in its Present Use Value program for agricultural uses, representing 18,611 acres of land (see Table 3, Present Use Valuation Program). Another 491 parcels are in the Present Use Value program for forestry uses

<b>Table 3. Present Use Valuation Program</b>		
	<b>Number of Parcels</b>	<b>Area (in Acres)</b>
Present Use Agriculture	374	14,297
Present Use Forestry	218	11,733
Source: Durham County Tax Assessor records.		

Durham County created a Farmland Protection Board in 1994. The Board’s purpose is to support farmland protection efforts and the continuation of farming in Durham. This Board has helped to develop a Voluntary Agriculture District (VAD) program based on state guidelines.

Participating farms must have at least 20 contiguous acres. Farmers voluntarily agree to not develop their acreage for a minimum of 10 years. The benefits to VAD farms include:

- Participating farms receive a waiver of water and sewer assessments on their land if they do not use the service;
- A notice is placed on County maps warning potential neighbors of noise, odor, dust, and slow-moving vehicles;
- Participating farms have the right to a public hearing if a public entity considers condemnation of a portion of the property.

While the benefits are modest, participants are more motivated by the statement of commitment to farming. Durham presently has 24 farms participating in the VAD program, totaling 1,763 acres. These are shown on Figure 7, Farmland Preservation.

Durham has used conservation easements as another tool for protecting farmland. Conservation easements can be purchased by local governments or donated by private property owners. Under a conservation easement, the farmer retains ownership of the land but voluntarily restricts the ability to develop the farm for non-farm usage in perpetuity. These restrictions guarantee that the property will remain in farming and open space. Figure 34, Farmland

Preservation shows the location of conservation easement that Durham has acquired for farmland protection.

The Herndon Farm was the first farm to grant permanent conservation easements to Durham County. The easement covers a 55 acre portion of the farm located in fast growing southern Durham County near The Streets of Southpoint shopping center and the Research Triangle Park. This farm was also awarded a \$250,000 state farmland preservation grant in 2001 to partially reimburse for the lost value in potential development rights.

Quail Roost Farm in northern Durham became the second property to donate a conservation easement for farmland protection purposes. A 32-acre portion of the Farm was donated in March 2002.

The Durham County Farmland Protection Program Guidelines specify that Agricultural Priority Areas should be established by Durham County. The priority areas would provide the basis where more concerted efforts to preserve farmland could be directed, including the purchase of conservation easements. These priority areas have not yet been adopted by Durham County.

## Open Space and Farmland Issues

Open space corridor plans help Durham to identify and prioritize actions that government and private property owners can take to protect valuable open spaces from negative impacts of development. Preservation plans have been prepared for four important open space corridors in Durham County. Plans for the Flat River corridor remains to be completed.

Durham has expressed a desire to preserve important open spaces along its major river and stream corridors. Each open space preservation plan carries with it public and private responsibility for implementation. Durham City and County have budgeted and spent fund to acquire land and develop recreational facilities.

Farming in Durham has faced development pressure due to the value of land for suburban development, combined with lowered economic returns for farming. Although the pressure has been somewhat ameliorated over the by the lingering effects of a national recession, it is anticipated that redevelopment pressure will again increase as the economy rebounds.



**Updated, April 2012**

## **Durham Comprehensive Plan**

# **Appendix B Glossary and Acronyms**

**Durham City-County Planning Department**

# The Durham Comprehensive Plan

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# Appendix B

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## Glossary

### A

<b>Accessory Housing</b>	A secondary dwelling unit that is part of the primary dwelling. Examples include basement apartments and garage apartments.
<b>Adaptive Re-use</b>	The conversion of obsolete or historic buildings from their original or most recent use to a new use. For example, the conversion of industrial buildings to residential use, or the conversion of a single-family home to office use.
<b>Adverse Impact</b>	A negative consequence to the physical, social, or economic environment resulting from an action or project.
<b>Affordable Housing</b>	Housing capable of being purchased or rented by a household with very low, low, or moderate income, based on a household's ability to make monthly payments necessary to obtain housing. Housing is considered affordable when a household pays less than 30 percent of its gross monthly income (GMI) for housing including utilities.
<b>Air Pollution</b>	Concentrations of substances found in the atmosphere that exceed naturally occurring quantities and are undesirable or harmful in some way.
<b>Annexation</b>	The process of incorporating a land area into an existing municipality, with a resulting change in the boundaries of the annexing jurisdiction.
<b>Apartment</b>	A multifamily structure on a single tract or parcel of land containing four or more units.
<b>Arterial</b>	A medium-speed (30-40 m.p.h.), medium-capacity (10,000-35,000 average daily trips) roadway that provides intra-community travel and access to the highway system. Access to community arterials should be provided at collector roads and local streets, but direct access from parcels to existing arterials is common.

### B

<b>Base Flood</b>	The flood having a one percent chance of being equaled or exceeded in any given year, that is, the 100-year flood.
<b>Bed and Breakfast</b>	A building or group of buildings containing one or more guest rooms for an overnight stay which are rented at a daily rate and where breakfast is the only meal served to guests.
<b>Bicycle Lane</b>	A corridor expressly reserved for bicycles, existing on a street or roadway in addition to any lanes for use by motorized vehicles.
<b>Bicycle-Oriented Development</b>	A development that is designed to facilitate bicycling, with bike routes on interior and exterior roadways, bike paths, bicycle racks near building entrances, bicycle storage lockers, and/or shower facilities for bicyclers.
<b>Bicycle Path</b>	A paved route not on a street or roadway and expressly reserved for bicycles traversing an otherwise unpaved area. Bicycle paths may parallel roads but typically are separated from them by landscaping.

<b>Bicycle Route</b>	A facility shared with motorists and identified only by signs, a bicycle route has no pavement markings or lane stripes.
<b>Bikeways</b>	A term that encompasses bicycle lanes, bicycle paths, and bicycle routes.
<b>Buffer</b>	A portion of property designated to mitigate impacts between land uses or transportation routes, or to protect water features from pollutants.
<b>Building Capacity</b>	The design capacity of the buildings (without trailers) located on a campus within the Durham Public School System. Building capacity does not reflect campus capacity, which includes students in mobile classrooms.
<b>Buildout</b>	Development of land to its maximum potential or theoretical capacity as permitted under current or proposed planning or zoning designations.

## C

<b>Carrying Capacity</b>	The level of land use, human activity, or development for a specific area that can be accommodated permanently without an irreversible change in the quality of air, water, land, or plant and animal habitats. May also refer to the upper limits beyond which the quality of human life, health, welfare, safety, or community character within an area will be impaired. Carrying capacity usually is used to determine the potential of an area to absorb development.
<b>Census</b>	The official decennial enumeration of the population conducted by the Federal government.
<b>Central Business District (CBD)</b>	The major commercial downtown center of a community. General guidelines for delineating a downtown area are defined by the US Census of Retail Trade, with specific boundaries being set by the local municipality.
<b>Cluster Development</b>	A residential subdivision that concentrates development on a portion of a site, leaving the remainder in open space. Cluster developments achieve the land use intensity objectives by virtue of limits to overall density rather than minimum lot sizes.
<b>Collector Street</b>	A local street which serves as a connector between local residential streets, commercial development, and the thoroughfare system; such streets typically collect traffic from 250 to 400 dwelling units.
<b>Commercial</b>	A land use classification that permits facilities for the buying and selling of commodities and services.
<b>Commercial - Linear</b>	Pedestrian-oriented, primarily commercial areas built along streets in the urban, downtown and compact neighborhood tiers. Linear commercial typically includes buildings built to the street and on-street parking and is pedestrian-oriented.
<b>Commercial - Node</b>	Discrete, primarily non-residential areas located at key intersections, incorporating integrated design that promotes vehicular and pedestrian access.

<b>Community Development Block Grant (CDBG)</b>	The federal grant program designed to act as a catalyst in leveraging private dollars with public assistance to further the capacity of private and public developers to provide affordable housing opportunities. CDBG provides eligible metropolitan cities and urban counties (called "entitlement communities") with annual direct grants that they can use to revitalize neighborhoods, expand affordable housing and economic opportunities, and/or improve community facilities and services, principally to benefit low- and moderate-income persons.
<b>Community Park</b>	Land with full public access intended to provide recreation opportunities beyond those supplied by neighborhood parks. Community parks are larger in scale than neighborhood parks but smaller than regional parks.
<b>Community Service Node</b>	A commercial development that contains a junior department store, or a large variety, discount or department store. A typical community shopping center has a larger market area than a neighborhood shopping center. The size of a typical community shopping center can range from about 100,000 to 450,000 gross leasable area, with a site area of 10 to 30 acres.
<b>Complete Streets</b>	Street design that enables safe access to all users, including motorists, transit riders, bicyclists, and pedestrians and allows for safe movement along or across streets.
<b>Comprehensive Plan</b>	The overall development plan for the community which has been officially adopted to provide long-range development policies including all specified individual elements thereof among which are the plans for land intensities,; land subdivision; circulation; and community facilities, utilities and services.
<b>Condominium</b>	A structure of two or more units, the interior spaces of which are individually owned; the balance of the property (both land and building) is owned in common by the owners of the individual units.
<b>Conservation</b>	The management of natural resources to prevent waste, destruction, or neglect.
<b>Conservation Subdivision</b>	A housing development in rural areas that is characterized by compact lots and common open space, where the natural features of the land are preserved to the greatest extent possible. Typically, environmentally sensitive areas, such as wetlands, floodplains and steep slopes, are set aside in conservation areas, while lots are reduced in size and arranged to fit in less sensitive areas.
<b>Convenience Goods</b>	Retail items generally necessary or desirable for everyday living, usually purchased at a convenient nearby location. Because these goods cost relatively little compared to income, they are often purchased without comparison-shopping.
<b>Cul-de-sac</b>	A short street having only one end open to traffic and the other being permanently terminated with a vehicular turn-around provided.

**D**

<b>Daylighting</b>	Daylighting is the efficient use of natural light in order to minimize the need for artificial light in buildings.
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<b>dB</b>	The decibel (dB) is the unit used to measure the magnitude or intensity of sound. It uses a mathematical scale to cover the large range of sound pressures that can be heard by the human ear. A 10-dB increase will be perceived by most people to be a doubling of loudness.
<b>Dedication</b>	The transfer without payment of ownership or other interests in real property from a private entity to a public agency.
<b>Dedication, In lieu of</b>	Cash payments which may be required of an owner or developer as a substitute for a dedication of land, usually calculated in dollars per lot, and referred to as in lieu fees or in lieu contributions.
<b>Density</b>	The number of dwelling units per gross acre, except in the case of a conservation subdivision, where the net area shall be used.
<b>Density, Residential</b>	The number of permanent residential dwelling units per acre of land. Densities may be expressed in units per gross acre or per net developable acre.
<b>Density, Employment</b>	A measure of the number of employed persons per specific area (for example, employees/ acre).
<b>Density Transfer</b>	A way of retaining open space by concentrating densities-usually in compact areas adjacent to existing urbanization and utilities-while leaving unchanged historic, sensitive or hazardous areas. In some jurisdictions, for example, developers can buy development rights of properties targeted for public open space and transfer the additional density to the base number of units permitted in the zone in which they propose to develop.
<b>Developable Land</b>	Land which is suitable as a location for structures and which can be developed free of hazards to, and without disruption of, or significant impact on, natural resource areas.
<b>Developer</b>	(a) The person, firm, corporation, or legal entity that has financial, or operational control over land-disturbing activity; or (b) The person, firm, corporation, or legal entity in possession or control of the land when he directly or indirectly allowed the land-disturbing activity, has benefited from it, or has failed to comply with any provisions of the Unified Development Ordinance.
<b>Development</b>	Any human caused change to improved or unimproved real estate that requires a permit or approval from any agency of the City or County of Durham, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations and storage of materials.
<b>Development Rights</b>	The right to develop land by a land owner who maintains fee-simple ownership over the land or by a party other than the owner who has obtained the rights to develop. Such rights usually are expressed in terms of density allowed under existing zoning.
<b>Division of Water Quality</b>	A functional component of the North Carolina Department of Environment and Natural Resources.
<b>DNL</b>	The average annual sound level, in decibels, computed on the basis of a 24-hour period with a 10-dB penalty for sound occurring between 10 p.m. and 7 a.m. to account for the greater intrusiveness of noise during late night or early morning hours.

<b>Duplex</b>	A detached building under single ownership, which is designed for occupation as the residence of two families living independently of each other.
<b>Dwelling Unit</b>	Rooms used for human habitation containing independent cooking, sleeping and toilet facilities; excluded are boarding houses, hotels, and dormitories.

## E

<b>Easement</b>	A grant by a property owner for use by the public, a corporation or persons of an area of land for specific purposes.
<b>Easement, Conservation</b>	A tool for acquiring open space with less than full-fee purchase, whereby a public agency buys only certain specific rights from the land owner. These may be positive rights (providing the public with the opportunity to hunt, fish, hike, or ride over the land), or they may be restrictive rights (limiting the uses to which the land owner may devote the land in the future.)
<b>Easement, Scenic</b>	A tool that allows a public agency to use an owner's land for scenic enhancement, such as roadside landscaping or vista preservation.
<b>Elderly Housing</b>	Housing units intended for and solely occupied by persons 62 years of age or older or, an elderly family whose head or spouse is 62 years of age or older
<b>Eminent Domain</b>	The right of a public entity to acquire private property for public use by condemnation, and the payment of just compensation.
<b>Endangered Species</b>	A species of animal or plant is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more causes.
<b>Environment</b>	The physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, mineral, flora, fauna, noise, and objects of historic or aesthetic significance."
<b>Erosion</b>	The wearing away of land surface by the action of wind, water, gravity or any combination thereof.
<b>Exaction</b>	A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

## F

<b>Family</b>	One or more individuals residing in a dwelling unit, living as a single housekeeping unit, and complying with the following rules: (a) Any number of individuals related by blood, marriage, or adoption may occupy a dwelling unit. (b) Where some or all of the occupants are unrelated by blood, marriage, or adoption, the total number of occupants that are unrelated shall not exceed three. In applying this provision, children who are under the age of 23 and who are children of the owner or a person renting an entire dwelling unit from the owner, shall be counted as a single occupant. In addition, in all cases, the limitation set out in subsection (c) below shall apply. (c) The presence of household employees or children in foster care shall not disqualify any premises otherwise satisfying the above rules.
<b>Fast-food Restaurant</b>	Any retail establishment intended primarily to provide short-order food services for on-site dining and/or take-out, including self-serve restaurants (excluding cafeterias where food is consumed on the premises), drive-in restaurants, and formula restaurants required by contract or other arrangement to offer standardized menus, ingredients, and fast-food preparation.
<b>Fixed-Guideway Transit</b>	A transit system composed of buses, short trains or monorails that operate on a single, exclusive track or roadway. Fixed-guideway transit includes heavy rail, light rail, people movers, track guided buses, bus-ways (bus-only roads) and others.
<b>Flood, 100-Year</b>	The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.
<b>Flood Insurance Rate Map (FIRM)</b>	For each community, the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the risk premium zones applicable to that community.
<b>Floodplain</b>	The relatively level land area on either side of the banks of a stream regularly subject to flooding. That part of the floodplain subject to a one percent chance of flooding in any given year is designated as an "area of special flood hazard" by the Federal Insurance Administration.
<b>Floodway</b>	The area within the special flood hazard areas that has been identified on the Flood Boundary and Floodway Map, which area is the portion of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
<b>Floodway Fringe</b>	The area within the special flood hazard area that has been identified on the Flood Boundary and Floodway Map, which area is adjacent to, but not within the floodway and is within the 100 year floodplain and is inundated by the base flood.
<b>Floor Area Ratio (FAR)</b>	The ratio of building area to parcel area. Floor area ratio is a measure of nonresidential land use intensity.

<b>Focus Areas</b>	Communities or neighborhoods with adopted redevelopment or revitalization plans or publicly funded revitalization initiatives. Projects and programs in these areas are typically funded through the Community Development Block Grant Program (CDBG), housing bonds issued by the City of Durham, tax credits allocated by the North Carolina Housing Finance Agency, bonds issued by the Durham Housing Authority and/or HOPE VI to achieve community revitalization goals.
<b>Freeway</b>	A multi-lane, controlled or limited access major road connecting this region, major activity centers or major roads with other regions, major activity centers or major roads. It is designed to accommodate large traffic volumes at high speeds. Such facilities may be part of the Interstate, Federal, or State primary highways system and are identified on the adopted thoroughfare plan.
<b>Future Land Use Map (FLUM)</b>	A map of the community, adopted as part of the Comprehensive Plan, showing desirable patterns of future land use in color and used to guide the location and character of new development.

**G**

<b>Goal</b>	A general, overall, and ultimate purpose, aim, or end toward which the City and County will direct effort.
<b>Greenhouse Effect</b>	A term used to describe the warming of the Earth’s atmosphere due to accumulated carbon dioxide and other gases in the upper atmosphere. These gases absorb energy radiated from the Earth’s surface, “trapping” it in the same manner as glass in a greenhouse traps heat.
<b>Groundwater</b>	Water under the earth’s surface, often confined to aquifers capable of supplying wells and springs.
<b>Groundwater Recharge</b>	The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks which provide underground storage (“aquifers”).
<b>Group House</b>	A dwelling operated under State regulations that provide room and board for more than 6 individuals who, as a result of age, illness, handicap or some specialized program, require personalized services or a supervised living arrangement in order to assure their safety and comfort. Additional requirements may be imposed by the North Carolina Building Code.
<b>Growth Management</b>	The use by a community of a wide range of techniques in combination to determine the amount, type, and rate of development desired by the community and to channel that growth into designated areas.

**H**

<b>Habitat</b>	The physical location or type of environment in which an organism or biological population lives or occurs.
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<b>Hazardous Material</b>	Any substance that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. The term includes, but is not limited to, hazardous substances and hazardous wastes.
<b>High Occupancy Vehicle (HOV)</b>	Any vehicle other than a driver-only automobile (e.g., a vanpool, a bus, or two or more persons to a car).
<b>Highway</b>	A high-speed, high-capacity, limited-access transportation facility serving regional and county-wide travel. Highways may cross at a different grade level.
<b>Historic Building or Site</b>	A historic building or site is one which is noteworthy for its significance in local, state, or national history or culture, its architecture or design, or its works of art, memorabilia, or artifacts.
<b>Historic Preservation</b>	The preservation of historically significant structures and neighborhoods until such time as, and in order to facilitate, restoration and rehabilitation of the building(s) to a former condition.
<b>Home Ownership Opportunities</b>	Housing units designed, constructed, and/or marketed for direct sale to owner-occupants. Developments or housing units in this category shall include, but not be limited to, those funded by governmental entities and programs, non-profit corporations and groups, public or private lending institutions, and public housing agencies. "Sweat equity" programs are also included in this category.
<b>Household</b>	All those persons—related or unrelated—who occupy a single housing unit.
<b>Housing Unit</b>	The place of permanent or customary abode of a person or family. A housing unit may be a single-family dwelling, a multi-family dwelling, a condominium, a modular home, a mobile home, a cooperative, or any other residential unit considered real property under State law. A housing unit has, at least, cooking facilities, a bathroom, and a place to sleep.



<b>Impact</b>	The effect of any direct man-made actions or indirect repercussions of man-made actions on existing physical, social, or economic conditions.
<b>Impact Fee</b>	A fee levied on the developer of a project by a city, county, or other public agency as compensation for otherwise-unmitigated impacts the project will produce.
<b>Implementation</b>	Actions, procedures, programs, or techniques that carry out policies.
<b>Industrial</b>	The manufacture, production, and processing of consumer goods. Industrial is often divided into "heavy industrial" uses, such as construction yards, quarrying, and factories; and "light industrial" uses, such as research and development and less intensive warehousing and manufacturing.

<b>Industry, Basic</b>	The segment of economic activity that brings dollars to a region from other areas. Traditional examples are manufacturing, mining and agriculture. The products of all of these activities are exported (sold) to other regions. The money thus brought into the local economy is used to purchase locally provided goods and services as well as items that are not available locally and which must be imported from other regions. Other, less traditional examples of basic industry are tourism, higher education, and retirement activities that also bring new money into a region.
<b>Industry, Non-basic</b>	The segment of economic activity that is supported by the circulation of dollars within a region. Examples are the wholesale, retail, and service functions that supply goods and services to local sources of demand such as businesses, public agencies, and households.
<b>Infill Development</b>	Development of vacant land, usually individual lots or leftover properties, within areas that are already largely developed.
<b>Infrastructure</b>	Public services and facilities, such as sewage-disposal systems, water-supply systems, other utility systems, public safety facilities, libraries, schools, and roads.
<b>Institutional Use</b>	(1) Privately owned and operated activities which are institutional in nature, such as hospitals, museums, and schools; (2) churches and other religious institutions; and (3) other nonprofit activities of an education, youth, welfare, or philanthropic nature which can not be considered a residential, commercial, or industrial activity.
<b>Issues</b>	Important unsettled community matters or problems that are identified in a community’s general plan and dealt with by the plan’s goals, objectives, and policies.

**J**

**K**

**L**

<b>Landmark</b>	Refers to a building, site, object, or structure having historical, architectural, social, or cultural significance and marked for preservation by the local, state, or federal government.
<b>Landscaping</b>	Planting-including trees, shrubs, and ground covers-suitably designed, selected, installed, and maintained as to enhance a site or roadway permanently.
<b>Land Use</b>	The occupation or utilization of land or water area for any human activity or any purpose defined in a land use plan.

<b>Level of Service (LOS)</b>	<p>In general, an indicator of the extent or degree of service provided by, or proposed to be provided by, a facility based on and related to the operational characteristics of the facility. A measure of capacity per unit of demand for a public service or facility.</p> <p>For purposes of the Durham school adequate facility policy, Level of Service shall mean the measure of the utilization, expressed as a percentage, which is the result of comparing the number of students enrolled in the school system at all schools of each type with the total building capacity of all schools of that type.</p>
<b>Low Impact Development (LID)</b>	<p>An ecologically-friendly approach to site development and stormwater management that aims to mitigate development impacts to land, water and air. LID aims to preserve open space and minimize land disturbance; protect drainage ways, vegetation, soils, and sensitive areas; re-examine the use and sizing of traditional site infrastructure and customize site design to each site; incorporate wetlands, stream corridors and mature forests as site design elements; and decentralize and micromanage stormwater at its source.</p>
<b>Low-Income Household</b>	<p>A household earning 80 percent or less of the median household income for Durham County.</p>
<b>Low-Income Housing Tax Credit Program (LIHTC)</b>	<p>The Low Income Housing Tax Credit (LIHTC or Tax Credit) program was created by the Tax Reform Act of 1986 as an alternate method of funding housing for low- and moderate-income households. In 2003, each state receives a tax credit of \$1.75 per person that can be allocated towards funding housing that meets program guidelines. The program was recently changed to allow the, the allocation to be adjusted for inflation. Tax credits are used to leverage private capital into new construction or acquisition and rehabilitation of affordable housing. LIHTC in North Carolina is administered by NCHFA.</p>

## M

<b>Manufactured Home</b>	<p>A residential unit that is not constructed in accordance with the standards set forth in the North Carolina State Building Code and is composed of one or more components, each of which was substantially assembled in a manufacturing plant and designed to be transported to a site on its own chassis.</p>
<b>Maximum Building Capacity</b>	<p>The level of service that may be permitted in the Durham Public School System, or 120 percent of total building capacity.</p>
<b>Million Gallons per Day (MGD)</b>	<p>A unit of measurement for use and treatment of water and wastewater.</p>
<b>Million Solar Roofs Initiative</b>	<p>The Million Solar Roof Initiative (MSRI) is a US Dept. of Energy effort to facilitate the installation of solar energy systems on one million US buildings by 2010. The MSRI involves soliciting voluntary participation by state and local governments and groups; developing a pool of existing federal lending and financing options; leveraging other financial support and incentives, both current and proposed; and accelerating the use of solar energy systems on Federal buildings. See web site: <a href="http://www.millionsolarroofs.com">www.millionsolarroofs.com</a></p>

<b>Moderate-Income Household</b>	A household with an annual income between the lower income eligibility limits and 120 percent of the area median family income adjusted by household size.
<b>Modular Unit</b>	A factory-fabricated, transportable building of dwelling in compliance with the North Carolina Building Code, that is designed to be used by itself or to be incorporated with other units into a structure that will be a finished building on a permanent location on a permanent foundation.

**N**

<b>National Register of Historic Places</b>	The official list, established by the National Historic Preservation Act, of sites, districts, buildings, structures, and objects significant in the nation’s history or whose artistic or architectural value is unique.
<b>Neighborhood Service Node</b>	A commercial development that provides for the sale of convenience goods (food, drugs, and sundries) and personal services (those that meet the daily needs of an immediate neighborhood trade area) A supermarket that combines grocery shopping with a pharmacy and other convenience goods and service is the principle tenant in most neighborhood centers. The size of a typical neighborhood shopping center can range from about 30,000 to 100,000 gross leasable area on a site of 3 to 10 acres.
<b>Non-Attainment</b>	The condition of not achieving a desired or required level of performance. Frequently used in reference to air quality.
<b>Non-Conforming Use</b>	A use which was valid when brought into existence, but by subsequent regulation becomes no longer conforming. “Non-conforming use” is a generic term and includes (1) non-conforming structures (by virtue of size, type of construction, location on land, or proximity to other structures), (2) nonconforming use of a conforming building, (3) non-conforming use of a non-conforming building, and (4) non-conforming use of land.

**O**

<b>Objective</b>	A specific statement of desired future condition toward which the local government will expend effort in the context of striving to achieve a broader goal. An objective should be achievable and, where possible, should be measurable and time-specific
<b>Office Use</b>	The use of land by general business offices, medical and professional offices, administrative or headquarters offices for large wholesaling or manufacturing operations, and research and development.
<b>Open Space</b>	Areas of a development that allow for light, air, wildlife habitat, and for scenic and recreational use. Also included are areas designed to enhance the privacy or general appearance of a development. Private open space is open space that is owned by a corporation, individual, or house owners association. Public open space is open spaced owned by a governmental jurisdiction.
<b>Overlay</b>	A zoning designation on a zoning map that modifies the basic underlying designation in some specific manner.

**Ozone** A tri-atomic form of oxygen (O<sub>3</sub>) created naturally in the upper atmosphere by a photochemical reaction with solar ultraviolet radiation. In the lower atmosphere, ozone is a recognized air pollutant that is not emitted directly into the environment, but is formed by complex chemical reactions between oxides of nitrogen and reactive organic compounds in the presence of sunlight, and becomes a major agent in the formation of smog.

## P

**Parking, Shared** A public or private parking area used jointly by two or more uses.

**Parking Management** An evolving TDM technique designed to obtain maximum utilization from a limited number of parking spaces. Can involve pricing and preferential treatment for high occupancy vehicles (HOVs), non-peak period users, and short-term users.

**Parking Ratio** The number of parking spaces provided per 1,000 square of floor area.

**Parks** Open space lands whose primary purpose is recreation.

**Park Strip** A piece of land located between the rear of a curb and the front of a sidewalk, usually used for planting low ground cover and/or street trees, also known as “planter strip.”

**Pedestrian-Oriented Development** A development that is designed to facilitate walking, with walkways connecting the development to the surrounding neighborhood, interior walkways connecting buildings, and pedestrian amenities (such as benches, landscaping, street furniture, etc.).

**Performance Standards** Zoning regulations that permit uses based on a particular set of standards of operation rather than on particular type of use. Performance standards provide specific criteria limiting noise, air pollution, emissions, odors, vibration, dust, dirt, glare, heat, fire hazards, wastes, traffic impacts, and visual impact of a use.

**Planned Unit Development (PUD)** A description of a proposed unified development, consisting at a minimum of a map and adopted ordinance setting forth the regulations governing, and the location and phasing of all proposed uses and improvements to be included in the development.

**Planning Commission** A body consisting of fourteen members, created by the City Council and County Board of Commissioners in compliance with State statutes, which advises both governing bodies about matters related to planning.

**Policy** A specific statement of principle or of guiding actions which implies clear commitment but is not mandatory. A general direction that a governmental agency sets to follow, in order to meet its goals and objectives before undertaking an action program. (See “Program.”)

**Pollution, Non-Point** Sources for pollution that are difficult to define and usually cover broad areas of land, such as agricultural land with fertilizers which are carried from the land by runoff, or automobiles.

**Pollution, Point** In reference to water quality, a discrete source from which pollution is generated before it enters receiving waters, such as a sewer outfall, a smokestack or an industrial waste pipe.

<b>Program</b>	An action, activity, or strategy carried out in response to adopted policy to achieve a specific goal or objective. Policies and programs establish the “who,” “how” and “when” for carrying out the “what” and “where” of goals and objectives with new development to the users of the infrastructure on the basis of projected use.
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## Q

## R

<b>Recreation, Active</b>	Leisure activities usually of an organized nature, often performed with others and often requiring equipment, taking place at prescribed places, sites, or fields.
<b>Recreation, Passive</b>	Recreational activities that do not require a developed site. This includes such activities as hiking, horseback riding, and picnicking.
<b>Recycle</b>	The process of extraction and re-use of materials from waste products.
<b>Redevelop</b>	To demolish existing buildings; or to increase the overall floor area existing on a property; or both; irrespective of whether a change occurs in land use.
<b>Regional</b>	Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad homogeneous area.
<b>Regional Park</b>	A park, typically 150-500 acres in size, focusing on activities and natural features not included in most other types of parks and often based on a specific scenic or recreational opportunity.
<b>Regional Service Node</b>	A commercial development that contains one or two full-line department stores and occupies 300,000 to 900,000 gross leasable area. The usual site size is 10 to 60 acres. The typical regional shopping center has a larger market area smaller than a community shopping center.
<b>Rental Housing</b>	Developments or housing units designed, constructed, and marketed for tenant (renter) occupancy. Developments or housing units in this category shall include, but not be limited to, those funded by governmental entities and programs, non-profit corporations and groups, public or private lending institutions, and public housing agencies.
<b>Residential</b>	Land designated for buildings consisting only of dwelling units.
<b>Residential Development</b>	Any development that is comprised in whole or in part of dwelling units designed for long-term human habitation.
<b>Residential, Multiple Family</b>	Usually three or more dwelling units on a single site, which may be in the same or separate buildings.
<b>Residential, Single-family</b>	A single dwelling unit on a building site.
<b>Rezoning</b>	An amendment to the map and/or text of a zoning ordinance to effect a change in the nature, density, or intensity of uses allowed in a zoning district and/or on a designated parcel or land area.
<b>Rideshare</b>	A travel mode other than driving alone, such as buses, rail transit, carpools, and vanpools.

<b>Ridgeline</b>	A line connecting the highest points along a ridge and separating drainage basins or small-scale drainage systems from one another.
<b>Right-of-way</b>	A strip of land acquired by reservation, dedication, prescription or condemnation and intended to be occupied by a street, trail, or public utility.
<b>Runoff</b>	Water from precipitation that flows off a property.
<b>Rural Village</b>	A location in the Rural Tier that is appropriate for a small-scale concentration of retail and commercial land uses and community services.

## S

<b>Sanitary Sewer</b>	A system of subterranean conduits which carries refuse liquids or waste matter to a plant where the sewage is treated.
<b>School Type</b>	Schools in the same categories of education, i.e., elementary (grades K-5), middle schools (grades 6-9), and high schools (grades 9-12).
<b>Section 8 Existing Rental Assistance</b>	A Federal program that provides direct rental assistance in the form of vouchers or certificates to low-income families who are unable to afford market-rate rents.
<b>Septic System</b>	A sewage-treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of oxygen. Septic systems are often used for individual-home waste disposal where an urban sewer system is not available.
<b>Setback</b>	The minimum distance between a property line and a building or structure.
<b>Shopping Center</b>	A group of retail businesses developed under a uniform development scheme and served by common off-street parking.
<b>Sign</b>	Any words, lettering, parts of letters, figures, numerals, phrases, sentences, emblems, devices, structures, designs, trade names, or trade marks by which anything is made know such as are used to designate an individual, a firm, an association, a corporation, a profession, a business, or a commodity or produces, which are legible from any public street or adjacent property and used to attract attention. This definition includes a structure or the face on which a sign message is displayed. This definition shall not include "trade dress," i.e., architectural features identified with a product or business, as s sign.
<b>Single-Family</b>	A house designed for, or occupied exclusively by, one family. Not to include manufactured housing.
<b>Site</b>	A parcel of land used or intended for one use or a group of uses and having frontage on a public or an approved private street. A lot. (See "Lot.")
<b>Slope</b>	Land gradient described as the vertical rise divided by the horizontal run, and expressed in percent.
<b>Smart Growth</b>	Land use and transportation planning and design that emphasizes compact, walkable urban centers and promotes transit-oriented, walkable and bicycle-friendly urban design.

<b>Solid Waste</b>	General category that includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood.
<b>Special Flood Hazard Area</b>	Land in the floodplain subject to a one percent or greater chance of being flooded in any given year based on current conditions hydrology.
<b>Special Needs Housing</b>	Shelter for persons with physical and mental disabilities, such as severe mental illness, developmental disabilities, alcohol and drug addiction, physical disabilities, HIV/AIDS, or the frail elderly. This type of housing may include single-family homes, apartments for independent living, shared apartment living, single room occupancy (SRO) housing, group homes, and transitional housing.
<b>Standards</b>	A rule or measure establishing a level of quality or quantity that must be complied with or satisfied. Requirements in a zoning ordinance that govern building and development as distinguished from use restrictions. For example, site-design regulations such as lot area, height limit, frontage, landscaping, and floor area ratio.
<b>Station Area Plans</b>	Plans to direct growth and redevelopment for each designated regional transit station that enhance each area's characteristics, reflect the area's focus, and foster distinctive and attractive places.
<b>Storm Water Runoff</b>	Surplus surface water generated by rainfall that does not seep into the earth but flows overland to flowing or stagnant bodies of water.
<b>Strip Commercial</b>	Characterized as linear in arrangement, but associated with it are high volume traffic generating uses, separate vehicular entrances and exits for each use on the street, no defined pedestrian path, space onsite for parking and loading activities, and a cluttered appearance from an abundance of signs.
<b>Strip Development</b>	A development pattern characterized by a series of commercial or residential land uses generally one lot deep along a road or highway, with each use usually requiring a separate access road. Or a string of houses and/or businesses, each with direct access to the roadway.
<b>Student Generation Multipliers</b>	The calculation of the number of students anticipated to be generated by various types of residential development. Separate multipliers should be employed for each type of school.
<b>Subdivisions</b>	All divisions of a tract or parcel of land into two or more lots, building sites, or other divisions for the purpose of sale or building development (whether immediate or future) or any division of land involving the dedication of a new street or a change in existing streets.
<b>Subsidized Housing</b>	Any housing development(s) or housing unit(s) intended to provide shelter for low-income households, the elderly and/or other special needs populations, that is funded wholly or in part by HUD, the North Carolina Housing Finance Agency (NCHFA), Durham County, the City of Durham or the Durham Housing Authority (DHA). The source of funding, for purposes of this policy, can include grants, loans, tax credits or tax exempt bonds.

**Suburban Transit Support Area**

A location in the Suburban Tier that lies along a possible future regional transit line and is appropriate for moderately high density development in a transit-supportive design.

## T

**Temporary Assistance for Needy Families (TANF)**

Assistance and work opportunities provided by the United States Department of Health and Human Services to needy families by granting states federal funds and wide flexibility to develop and implement their own welfare programs. This program replaces the former Aid to Families with Dependent Children (AFDC) and Job Opportunities and Basic Skills Training (JOBS) programs, ending the federal entitlement to assistance.

**Total Building Capacity**

The sum of all building capacities of all schools of each type within the Durham Public School System.

**Townhouse**

A one-family dwelling in a row of at least three such units in which each unit has its own front and rear access to the outside, no unit is located over another unit, and each unit is separated from any other unit by one or more common and fire-resistant walls.

**Traffic Model**

A mathematical representation of traffic movement within an area or region based on observed relationships between the kind and intensity of development in specific areas. Many traffic models operate on the theory that trips are produced by persons living in residential areas and are attracted by various non-residential land uses.

**Transfer of Development Rights (TDR)**

A program which can relocate potential development from areas where proposed land use or environmental impacts are considered undesirable (the “donor” site) to another (“receiver”) site chosen on the basis of its ability to accommodate additional units of development beyond that for which it was zoned, with minimal environmental, social, and aesthetic impacts.

**Transit-Oriented Development**

Transit-Oriented Development (TOD) refers development with higher density, mixed-use development that is located in or around transit facilities (train stations, bus stations, etc.). Typically, a TOD neighborhood has a center with a rail or bus station, surrounded by relatively high-density development, with progressively lower-density spreading outwards.

**Transit, Public**

A system of regularly-scheduled buses and/or trains available to the public on a fee-per ride basis. Also called “Mass Transit.”

**Transitional Housing**

Temporary housing provided for homeless individuals or families.

**Transportation Demand Management (TDM)**

A strategy for reducing demand on the road system by reducing the number of vehicles using the roadways and/or increasing the number of persons per vehicle. TDM attempts to reduce the number of persons who drive alone on the roadway during the commute period and to increase the number in carpools, vanpools, buses and trains, walking, and biking TDM can be an element of TSM.

**Transportation Systems Management (TSM)**

A comprehensive strategy developed to address the problems caused by additional development, increasing trips, and a shortfall in transportation capacity. Transportation Systems Management focuses on more efficiently utilizing existing highway and transit systems rather than expanding them. TSM measures are characterized by their low cost and quick implementation time frame, such as computerized traffic signals, metered freeway ramps, and one-way streets.

**Trees, Street**

Trees strategically planted—usually in parkway strips, medians, or along streets—to enhance the visual quality of a street.

**Trip Generation**

The dynamics that account for people making trips in automobiles or by means of public transportation. Trip generation is the basis for estimating the level of use for a transportation system and the impact of additional development or transportation facilities on an existing, local transportation system.

**U**

**Urban Design**

The attempt to give form, in terms of both beauty and function, to selected urban areas or to whole cities. Urban design is concerned with the location, mass, and design of various urban components and combines elements of urban planning, architecture, and landscape architecture.

**Urban Growth Area**

Those portions of Durham, Orange, and Wake Counties indicated in the Comprehensive Plan which are expected to receive urban services and to develop an urban character over the next 20 to 30 years and are not within the Rural Tier.

**Urban Sprawl**

Suburban development or uses which are located in predominantly rural areas, or rural areas interspersed with generally low-intensity or low density suburban uses, characterized by one or more of the following conditions: (a) the premature or poorly planned conversion of rural lands to other uses; (b) the creation of suburban development or uses that are not functionally related to land uses that predominate the adjacent area; or (c) the creation of areas of suburban development or uses that fail to maximize the use of existing or planned public facilities.

**Use**

The purpose for which a building, structure, or area of land may be arranged or occupied or the activity conducted or proposed in a building, structure, or on an area of land.

**V**

**Vacant**

Lands or buildings that are not actively used for any purpose.

**Vehicle-Miles Traveled (VMT)**

A key measure of overall street and highway use. Reducing vehicle miles traveled is often a major objective in efforts to reduce vehicular congestion and achieve regional air quality goals.

**Very Low-income Household**

A household with an annual income usually no greater than 50 percent of the area median family income adjusted by household size.

**Volume-to-Capacity Ratio (V/C)** A measure of the operating capacity of a roadway or intersection, in terms of the number of vehicles passing through, divided by the number of vehicles that theoretically could pass through when the roadway or intersection is operating at its designed capacity.

**W**

**Warehousing Use** A use engaged in storage, wholesale, and distribution of manufactured products, supplies, and equipment, excluding bulk storage of materials which are inflammable or explosive or which present hazards or conditions commonly recognized as offensive.

**Watercourse** Natural or once natural flowing (perennially or intermittently) water including rivers, streams, and creeks. Includes natural waterways that have been channelized, but does not include manmade channels, ditches, and underground drainage and sewage systems.

**Watershed** All of the land area draining to a particular point on a water course or to a water body.

**Wetland** An area that is inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and under normal circumstances does support, a prevalence of vegetation typically adapted for life in saturated soil conditions, commonly as hydrophytic vegetation, as defined by responsible State or Federal agencies.

**Working Lands** An identified parcel of land actively devoted to agriculture and/or forestry.

**X**

**Y**

**Z**

**Zero Lot Line** A detached dwelling unit positioned on one property line without any setback.

**Zone, Overlay** A special purpose zone, which is superimposed over the regular zoning map. Overlay zones are used for a variety of purposes, such as airport compatibility, floodplain or wetlands protection, historic designation, or special parking regulations.

**Zoning** The division of a city or county by legislative regulations into areas, or zones, which specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the Comprehensive Plan.

**Zoning District** A designated section of the city or county for which prescribed land use requirements and building and development standards are uniform.

**Zoning, Exclusionary** Development regulations that result in the exclusion of low- and moderate income and/or minority families from a community.

**Zoning, Incentive**

The awarding of bonus credits to a development in the form of allowing more intensive use of land if public benefits-such as preservation of greater than the minimum required open space, provision for low- and moderate-income housing, or plans for public plazas and courts at ground level-are included in a project.

**Zoning, Inclusionary**

Regulations that increase housing choice by providing the opportunity to construct more diverse and economical housing to meet the needs of low- and moderate-income families. Often such regulations require a minimum percentage of housing for low- and moderate-income households in new housing developments and in conversions of apartments to condominiums.

## Planning Acronyms

APF .....	Adequate public facilities
BMP .....	Best management practices
BOA .....	Board of Adjustment
CAMPO .....	Capital Area Metropolitan Planning Organization
CBD .....	Central business district
CDBG .....	Community Development Block Grant
DATA .....	Durham Area Transit Authority
dB .....	Decibels
DCHC MPO .....	Durham-Chapel Hill-Carrboro Metropolitan Planning Organization
DOST .....	Durham Open Space and Trails Commission
DU .....	Dwelling unit
DWQ .....	Division of Water Quality
EMC .....	Environmental Management Commission
FAR .....	Floor area ratio
FHWA .....	Federal Highway Administration
FIRM .....	Flood Insurance Rate Map
FLUM .....	Future Land Use Map
FTA .....	Federal Transit Authority
gpdc .....	gallons per capita per day (raw water demand)
GMI .....	Gross monthly income
HOV .....	High occupancy vehicle
HUD .....	US Department of Housing and Urban Development
JCCPC .....	Joint City-County Planning Committee
LOS .....	Level of service
MGD .....	Million gallons per day
MPH .....	Miles per hour
MSRI .....	Million Solar Roofs Initiative
NEPA .....	National Environmental Policy Act
NCDOT .....	North Carolina Department of Transportation
OWASA .....	Orange Water and Sewer Authority
PUD .....	Planned unit development
PDR .....	Planned density residential
ROW .....	Right-of-way
SEPA .....	State Environmental Policy Act
SFHA .....	Special Flood Hazard Area

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SRO.....	Single room occupancy
STSA .....	Suburban Transit Support Area
TAC.....	Transportation Advisory Commission
TAZ.....	Traffic analysis zone
TCC.....	Technical Coordinating Committee
TEA 21 .....	Transportation Enhancement Act for the 21 <sup>st</sup> Century
TIA.....	Traffic impact analysis
TIP .....	Transportation Improvement Program
TDM .....	Travel demand management
TDR.....	Transfer of development rights
TSM.....	Transportation system management
TTA.....	Triangle Transit Authority
UGA.....	Urban growth area
UDO.....	Unified development ordinance
USDOT.....	United States Department of Transportation
VMT.....	Vehicle miles traveled
VOCs.....	Volatile organic compounds
WRF.....	Water Reclamation Facility (or wastewater treatment plant)



## SUBSIDIZED HOUSING LOCATION POLICY

Adopted by the Durham City Council on May 3, 2003

Draft Update, February 14, 2012

### STATEMENT OF POLICY

Opportunities for affordable housing should be available to residents throughout the City of Durham. To that end, the City shall utilize criteria designed to evaluate the dispersal of conditions of poverty as well as of subsidized housing throughout the City in the review of proposals for locating Subsidized Housing.

While the application of the Subsidized Housing Location Policy (referred to throughout as “the Policy”) is intended to be advisory to the City Council, with the Council reserving the prerogative to consider each proposal for Subsidized Housing on its merits, as a general rule the City will not support proposals for Subsidized Housing that are inconsistent with the locational criteria established herein.

### DEFINITIONS

**Community Development Block Grants (CDBG):** The federal grant program designed to act as a catalyst in leveraging private dollars with public assistance to further the capacity of private and public developers to provide affordable housing opportunities. CDBG provides eligible metropolitan cities and urban counties (called "entitlement communities") with annual direct grants that they can use to revitalize neighborhoods, expand affordable housing and economic opportunities, and/or improve community facilities and services, principally to benefit low- and moderate-income persons.

**Elderly Housing:** Housing units intended for and solely occupied by persons 62 years of age or older or, an elderly family whose head or spouse is 62 years of age or older.

**Focus Areas:** Communities or neighborhoods with adopted redevelopment or revitalization plans or publicly funded revitalization initiatives. Projects and programs in these areas are typically funded through the Community Development Block Grant Program (CDBG), housing bonds issued by the City of Durham, tax credits allocated by the North Carolina Housing Finance Agency, bonds issued by the Durham Housing Authority and/or HOPE VI to achieve community revitalization goals.

**Group Home:** A dwelling operated under State regulations that provide room and board for more than six individuals who, as a result of age, illness, handicap or some specialized program, require personalized services or a supervised living arrangement in order to assure their safety and comfort. All group home facilities must be regulated by the State of North Carolina.

## APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

**Home Ownership Opportunities:** Housing units designed, constructed, and/or marketed for direct sale to owner-occupants. Developments or housing units in this category shall include, but not be limited to, those funded by governmental entities and programs, non-profit corporations and groups, public or private lending institutions, and public housing agencies. “Sweat equity” programs are also included in this category.

**Low-Income Household:** A household earning 80 percent or less of the median household income for Durham County.

**Low-Income Housing Tax Credit Program (LIHTC):** The Low Income Housing Tax Credit (LIHTC or Tax Credit) program was created by the Tax Reform Act of 1986 as an alternate method of funding housing for low- and moderate-income households. In 2003, each state receives a tax credit of \$1.75 per person that can be allocated towards funding housing that meets program guidelines. The program was recently changed to allow the, the allocation to be adjusted for inflation. Tax credits are used to leverage private capital into new construction or acquisition and rehabilitation of affordable housing. LIHTC in North Carolina is administered by NCHFA.

**Rental Housing:** Developments or housing units designed, constructed, and marketed for tenant (renter) occupancy. Developments or housing units in this category shall include, but not be limited to, those funded by governmental entities and programs, non-profit corporations and groups, public or private lending institutions, and public housing agencies.

**Section 8 Existing Rental Assistance:** A Federal program that provides direct rental assistance in the form of vouchers or certificates to low-income families who are unable to afford market-rate rents.

**Special Needs Housing:** Shelter for persons with physical and mental disabilities, such as severe mental illness, developmental disabilities, alcohol and drug addiction, physical disabilities, HIV/AIDS, or the frail elderly. This type of housing may include single-family homes, apartments for independent living, shared apartment living, single room occupancy (SRO) housing, group homes, and transitional housing.

**Subsidized Housing:** Any housing development(s) or housing unit(s) intended to provide shelter for low-income households, the elderly and/or other special needs populations, that is funded wholly or in part by HUD, the North Carolina Housing Finance Agency (NCHFA), Durham County, the City of Durham or the Durham Housing Authority (DHA). The source of funding, for purposes of this policy, can include grants, loans, tax credits or tax exempt bonds (See Map 1 for the location of identified subsidized housing developments.)

**Temporary Assistance for Needy Families (TANF):** Assistance and work opportunities provided by the United States Department of Health and Human Services to needy families by granting states federal funds and wide flexibility to develop and implement their own welfare programs. This program replaces the former Aid to Families with Dependent Children (AFDC) and Job

## APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

Opportunities and Basic Skills Training (JOBS) programs, ending the federal entitlement to assistance.

**Transitional Housing:** Temporary housing provided for homeless individuals or families.

### REVIEW PROCEDURES

The ~~Housing and~~ Community Development Department (~~HCD~~), in consultation with ~~and~~ the City-County Planning Department, shall be jointly responsible for the review of Subsidized Housing proposals, including proposals for the renovation, rehabilitation or replacement of existing Subsidized Housing.

~~Proposals for Subsidized Housing seeking City support that are submitted to HCD shall be forwarded to the Planning Department for a review of compliance with the Policy, employing the methodology identified below. The Planning Department shall provide HCD with a report of its findings regarding consistency with the criteria established herein for HCD's use in preparing any documents related to City support for the proposed Subsidized Housing project.~~

### REVIEW CRITERIA

A multi-step process shall be employed in determining if Subsidized Housing projects are consistent with the Policy. As part of this process, the Planning Department shall maintain a database and corresponding map identifying the location of all Subsidized Housing developments in the City (See Appendix). This process first shall consider whether the proposed Subsidized Housing project is exempt from the Policy as a result of complying with the established exemptions.

Any project determined not to be exempt from the application of the Policy will initially be evaluated to ensure that there is not a concentration of either poverty or Subsidized Housing in the Census-designated block group where the development is proposed to be located. Concentrations of poverty are based upon statistical analysis considering the citywide concentration of poverty and identifying those areas of the City where the concentration is greater than would be anticipated if poverty was dispersed throughout the City. If the most recent census indicates that the concentration of poverty within any block group exceeds 40 percent, the proposed Subsidized Housing development shall be determined to be in violation of this policy. Concentrations of Subsidized Housing are determined by the ratio of Subsidized Housing units to the total number of housing units, based on ~~the a~~ a database of Subsidized Housing units maintained by the Planning Department. If the concentration of housing units in subsidized developments in any block group exceeds 20 percent in the ~~Urban Core or Central City~~ Downtown, Compact Neighborhood or Urban Tiers, or 25 percent in the ~~Outer City Suburban or Rural Tiers~~, the proposed Subsidized Housing development shall be determined to be in violation of this policy. Map ~~2~~ 1 indicates all Census block groups that have ~~either~~ a concentration of ~~poverty or~~ Subsidized Housing units, where the City should not support

## APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

additional subsidized developments. ~~Map 3 defines the boundaries of the Urban Core, Central City and Outer City~~

Any project that passes this review shall be subject to a final review, considering the concentration of Subsidized Housing in a broader area than the immediate block group where the project is proposed to be located. In this final review, the Planning Community Development Department shall employ the Evaluation Areas shown on Map ~~3~~ 2. ~~The Evaluation Areas represent three distinct areas of the City (as defined by census block groups) where different parameters for evaluating concentrations of Subsidized Housing shall be applied. The following criteria shall be applied within each Evaluation Area:~~

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

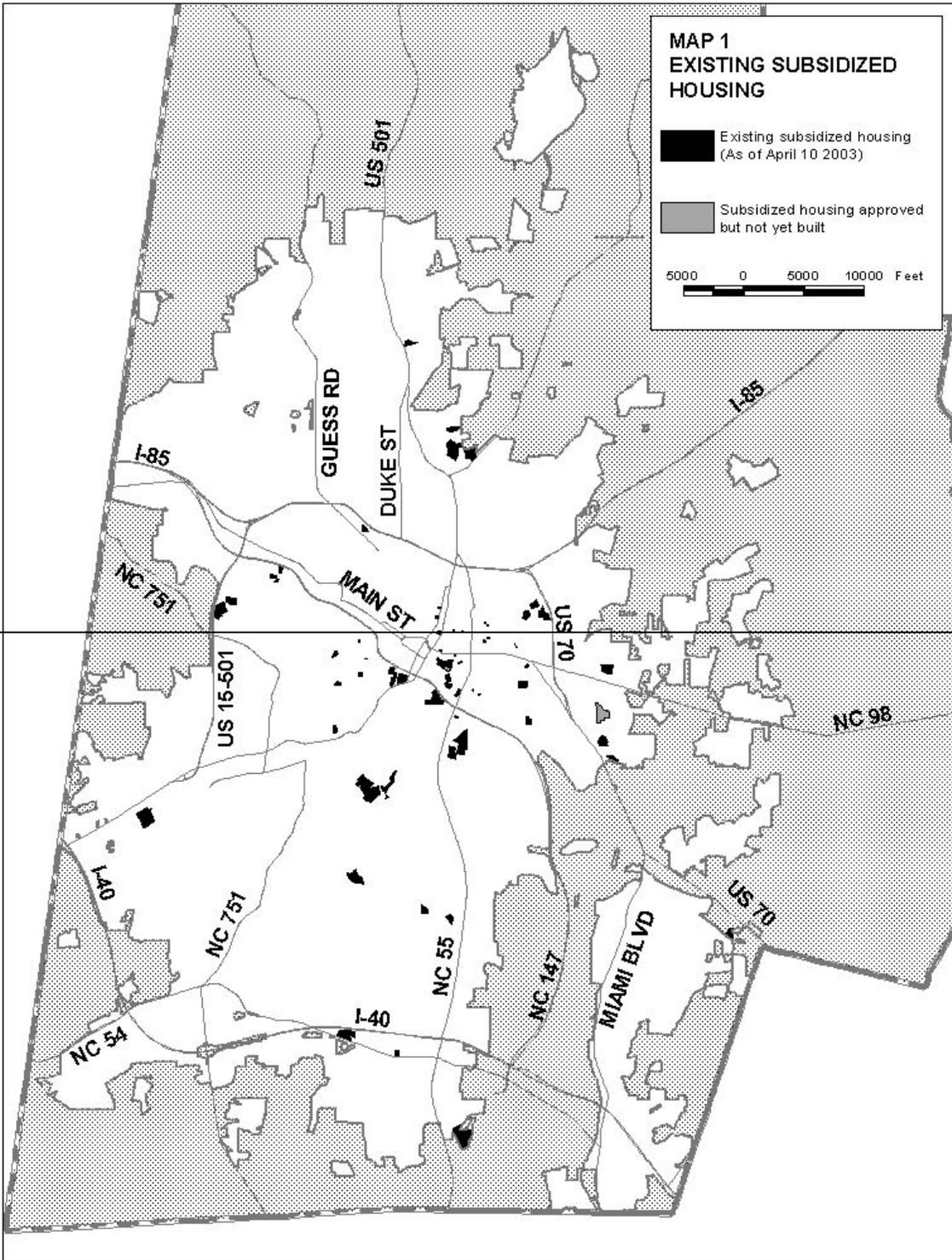
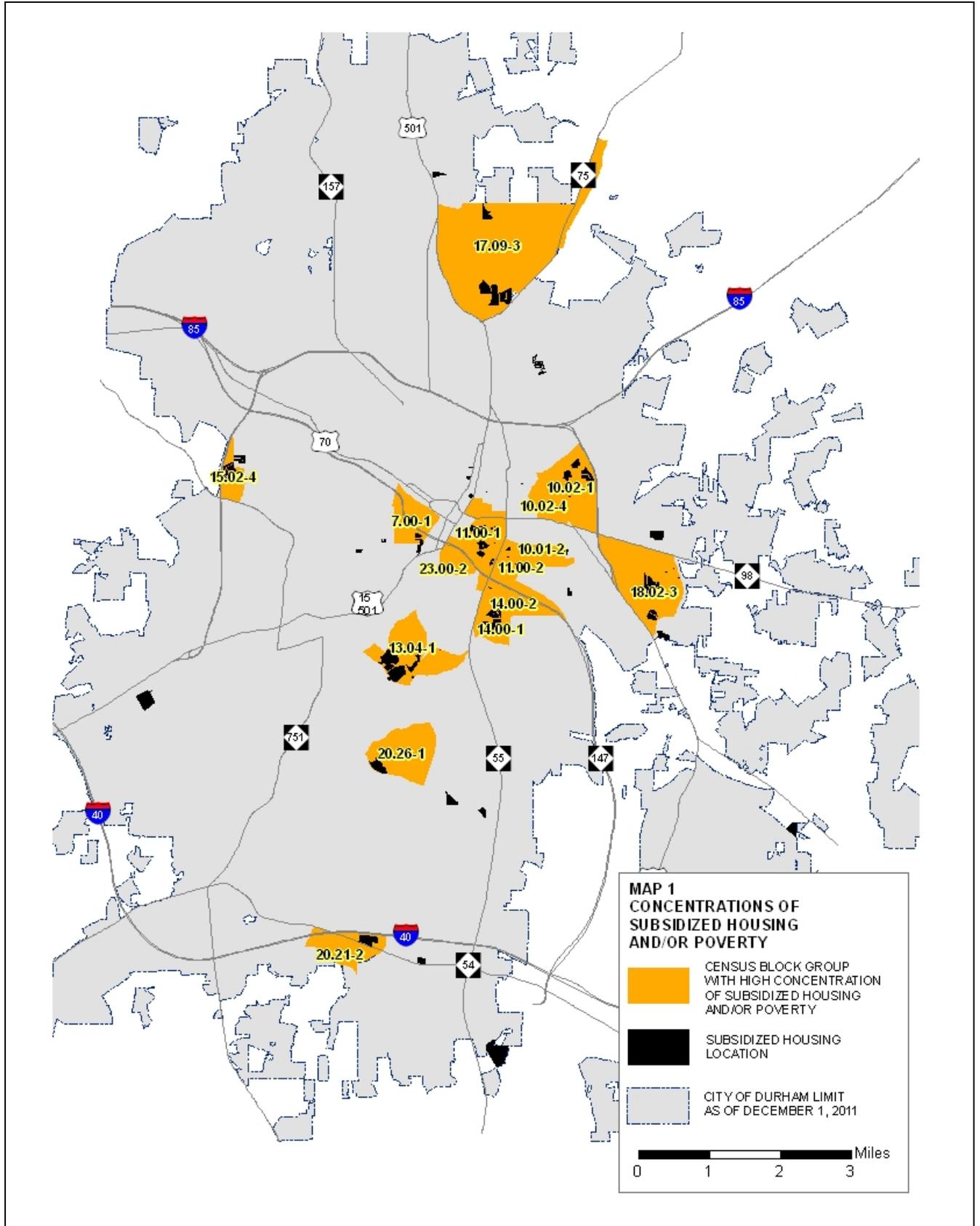


Figure 1 - DELETE

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY



APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

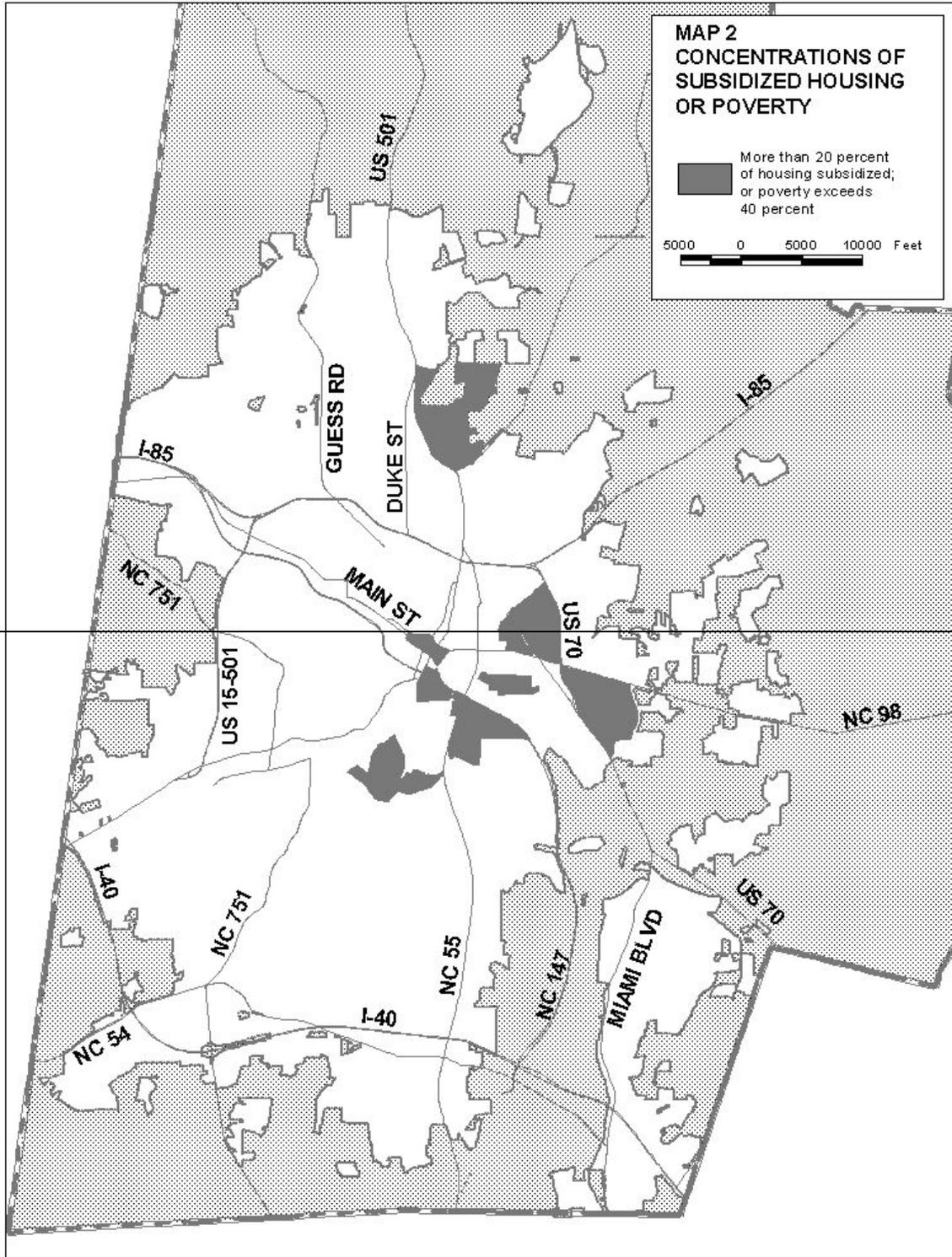


Figure 2 - DELETE

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

a. ~~**Outer City:** Areas that are continuing to experience growth in population and housing units; generally in a suburban pattern in relatively close proximity to retail and office development.~~

**Rural and Suburban Tiers:** Within this area these Tiers, the maximum concentration of Subsidized Housing units, determined by the number existing and proposed Subsidized Housing within a 0.5 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 25 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation (See Map 2).

b. ~~**Central City:** Areas that meet some of the criteria of the outer city, but may lack suitable parcels for new housing developments.~~

**Urban Tier:** Within this area Tier, the maximum concentration of Subsidized Housing units, determined by the number existing and proposed Subsidized Housing within a 0.5 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 20 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation (See Map 2)..

c. ~~**Urban Core:** Areas with significantly higher concentrations of existing Subsidized Housing developments/units; or a lack of suitable parcels for new housing developments.~~

**Downtown, and Compact Neighborhood Tiers:** Within this these area Tiers, the maximum concentration of Subsidized Housing units, determined by the number existing and proposed Subsidized Housing within a 0.25 mile radius of the proposed project divided by the total number of housing units within the defined radius, should not exceed 20 percent. Existing units that are exempt from the location criteria shall be excluded from the calculation (See Map 2).

The following table summarizes the criteria to be applied within each Evaluation Area.

Summary of Evaluation Area Criteria		
Evaluation Area	Evaluation Radius (Radius in miles)	Maximum Concentration
<del>Outer City</del> Suburban and Rural Tiers	0.50	25 percent
<del>Central City</del> Urban Tier	0.25	20 percent
<del>Urban Core</del> Downtown and Compact Neighborhood Tiers	0.25	20 percent

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

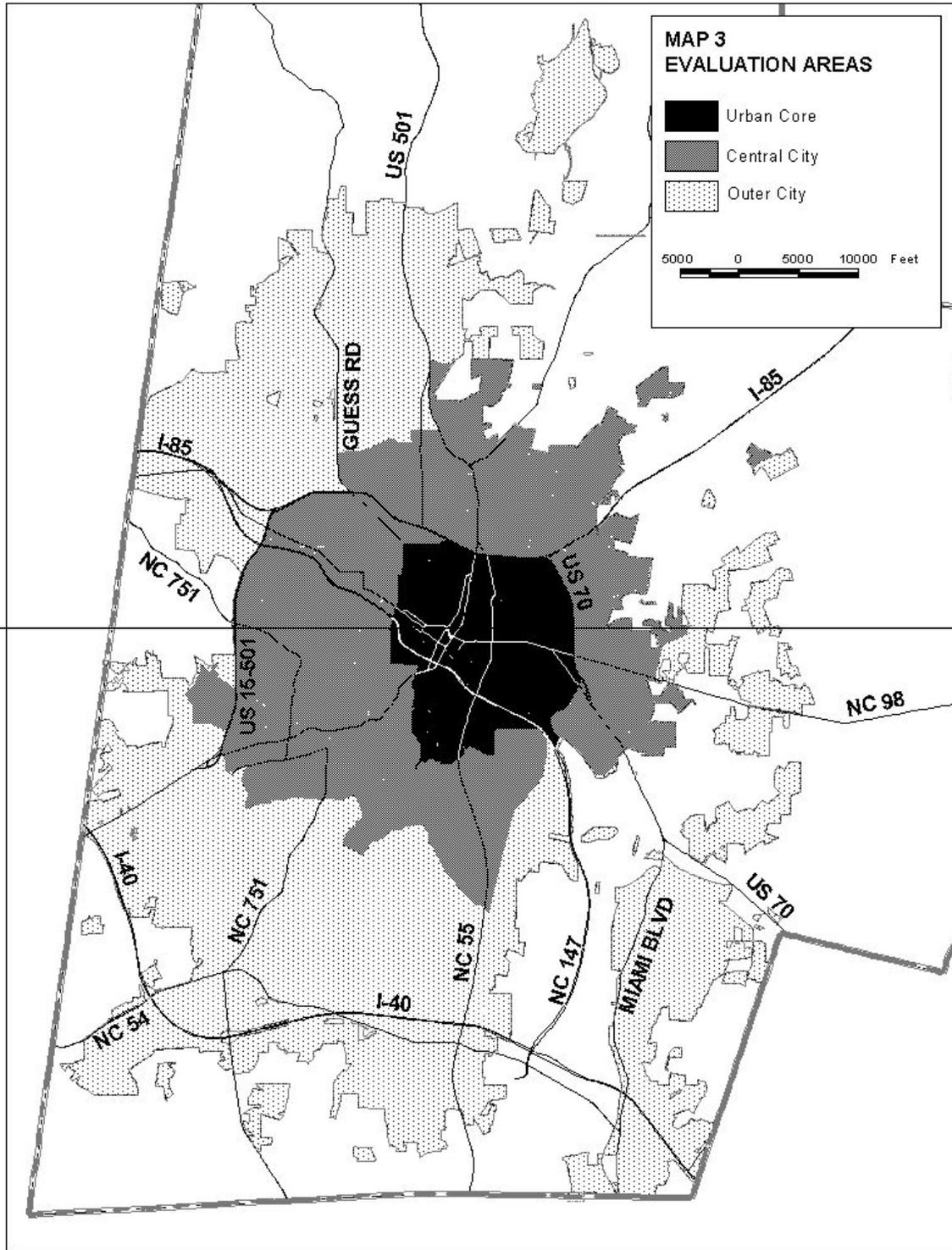
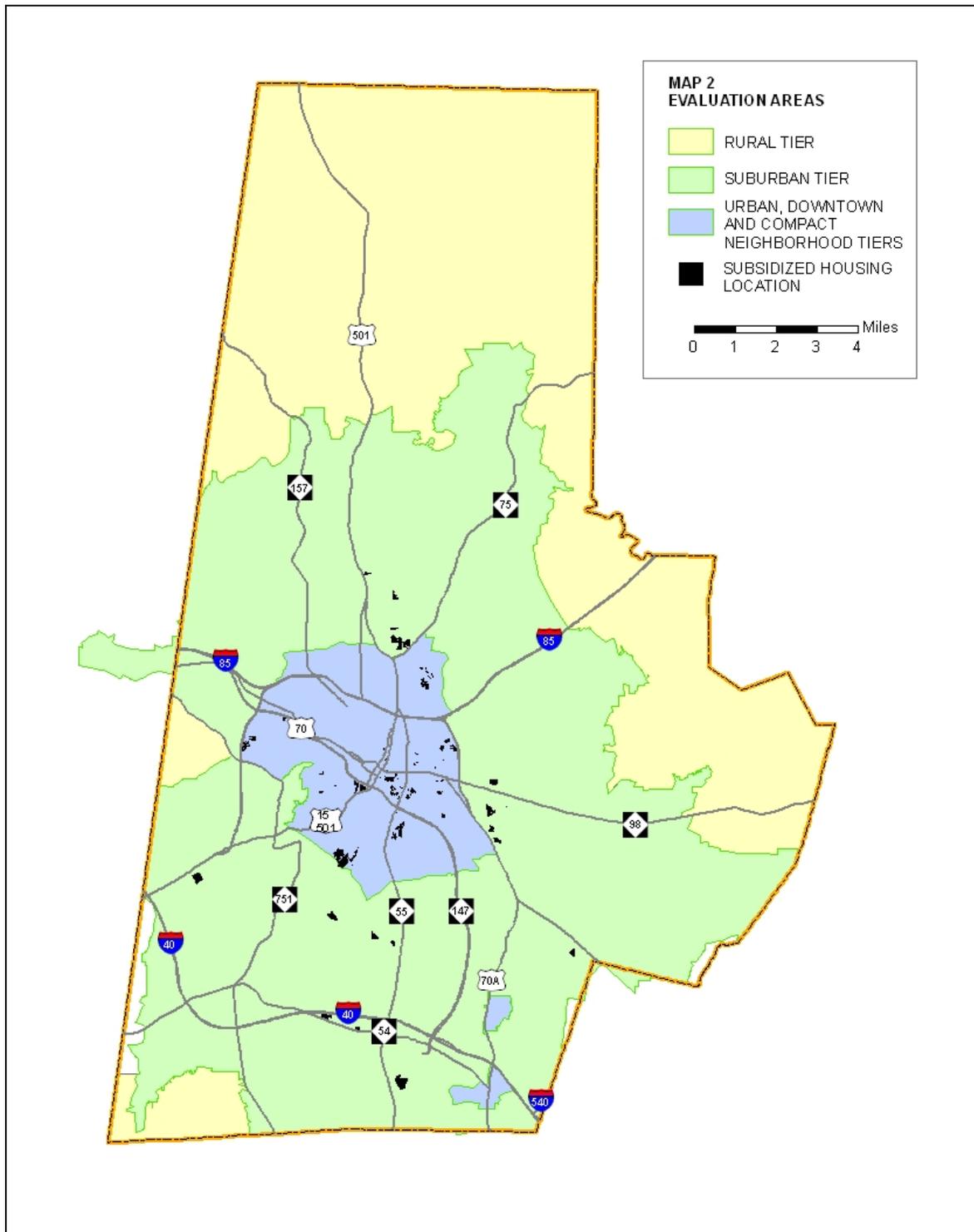


Figure 3 - DELETE

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY



Unless expressly exempted below, new federally subsidized (Public Housing Agency) multi-family developments should not exceed 50 units per site regardless of the Evaluation Area in which they are proposed to be located.

## EXEMPTIONS

Proposed Subsidized Housing that meets any of the following criteria shall be exempt from the location guidelines of this Policy:

- a. Rental housing proposals with four (4) or fewer units.
- b. Home-ownership proposals of fewer than 100 single-family detached housing units.
- c. Home-ownership proposals with 12 or fewer condominiums or other attached dwelling units.
- d. Group homes, shelters, and homes for persons with special needs that have an occupant capacity of no more than 24 individuals.
- e. Elderly housing with 60 or fewer dwelling units.
- f. Renovation, rehabilitation and/or replacement of existing dwellings. The total number of units in a replacement housing development shall not exceed the total number of units in the development prior to the replacement program. When replacement housing is being located on a different site the total number of subsidized units shall not exceed 50 units.
- g. Housing assistance provided directly to owner-occupants or tenants, and is not reflected in rent, income or purchase price limits that are attached to the home or land (such as down payment assistance, second mortgages, mortgage tax credits, Section 8 or other rental assistance, or TANF).
- h. Dwellings to be built in compliance with a city-approved plan for a “Redevelopment Area” consistent with the provisions of the North Carolina Redevelopment Law (Article 22), a “Neighborhood Revitalization Area,” or a City-approved application for the HOPE VI program. Development proposals in these Focus Areas must be implemented in accordance with the plan approved by the City Council for these areas. ~~As an example, Map 4 indicates the geographic areas covered by any of these Focus Areas.~~

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

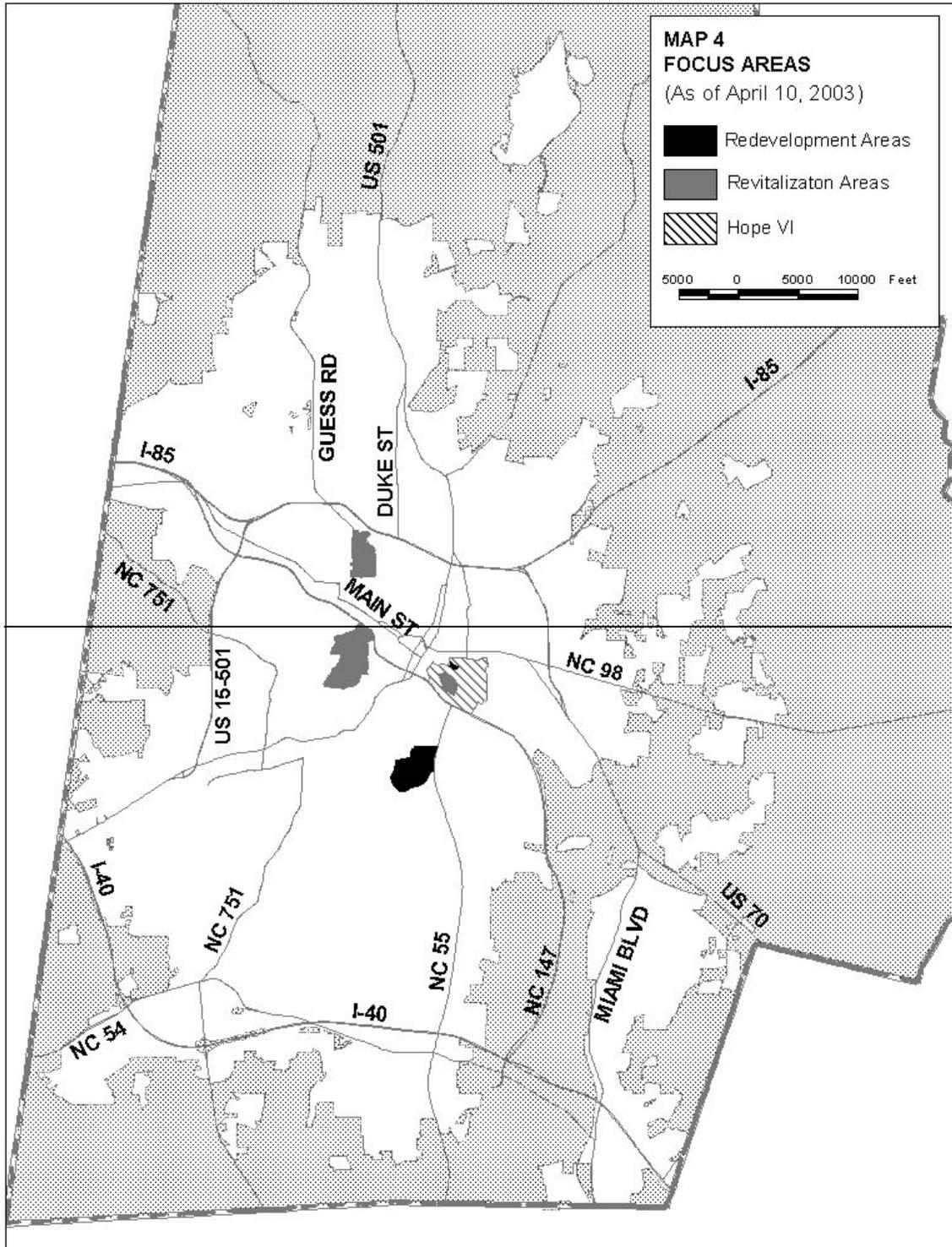


Figure 4 - DELETE

## RECOMMENDATIONS FOR ADDITIONAL WORK

No policy is static. As circumstances change or additional information is gathered, the data and assumptions underlying the Policy may change. Accordingly, the following recommendations should be directed as a part of this policy.

- ~~1. During the development of the Subsidized Housing Location Policy in 2003, residents expressed concern that the Policy might be ignored or forgotten over time. To address this concern and to increase the visibility of the Policy within the City's guidelines for its growth and development, the Policy should be reinforced and supported in the Durham Comprehensive Plan. The Policy should be presented to the Comprehensive Plan Steering Committee for incorporation as part of the Housing Element of the Comprehensive Plan.~~

The data ~~that much of~~ upon which the Subsidized Housing Location Policy is based are changeable. Every housing development (whether subsidized or not) will impact the concentrations of subsidized units in the City. Accordingly, the databases on the locations and number of housing units by block group, the locations of block groups with a concentration of Subsidized Housing, and the locations of Focus Areas should be revised to reflect the best available data. These revisions should, at a minimum, be done annually.

- ~~3. During the public meetings on the Policy, some citizens expressed concern that the Policy restricted the provision of Subsidized Housing in some locations while providing no guidance to developers, agencies charged with Subsidized Housing provision, or citizens on suitable locations for future Subsidized Housing. These citizens felt that the Policy therefore appeared to restrict rather than encourage broader housing options. To address this concern, the City should look for opportunities to more proactively encourage affordable housing rather than simply restricting the location of Subsidized Housing. Among the actions that should be pursued are:~~
  - ~~a. Revise the Affordable Housing Density Bonus provisions of the Zoning Ordinance (Section 8.1.28). As written, the provisions only provide for an increase in density with no provisions for a corresponding reduction in lot size. While revisions should be minimal, the entire section should be reviewed to ascertain what other changes that might make the bonus option more attractive to developers.~~
  - ~~b. Clarify the City's ability to pursue inclusionary zoning. The City's Charter currently provides the City with the ability to offer incentives to developers who voluntarily commit to providing affordable housing (Section 94.2). It is not clear that the City has the ability to require the provision of affordable housing in any development with a residential~~

## APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

~~component. Legislation clarifying the charter provisions in this regard should be pursued.~~

- ~~4. The Subsidized Housing Location Policy should be reevaluated periodically to ensure that it has met the purpose that was intended and that its application has not discouraged the provision of an adequate supply of decent, safe, affordable housing for Durham's neediest and most vulnerable citizens. At least every five years, the City Council should be given a report on the effectiveness of the Policy.~~

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

**APPENDIX A (SUBSIDIZED HOUSING DATABASE)**

**As of April 10, 2003**

PROJECT	ADDRESS	TRACT BLOCK GROUP	TOTAL UNITS	PROGRAM	STATUS
JFK Towers	Old Farm Rd.	17.08/1	178	Sec. 8 Elderly	Exempt from Policy
Carver Creek	531 E. Carver St.	17.09/3	48	Elderly/Bonds	Exempt from Policy
Carver Pond	4001 Meriweather Dr.	17.09/3	250	LIHTC	Covered by Policy
Preiss Steele Place	Tickwood Trail	17.09/3	102	Elderly/ LIHTC Bonds	Exempt from Policy
Oxford Manor	3800 Dearborn Dr.	17.09/3	172	CPH	Covered by Policy
Woodridge Commons	1602 Sedgefield St.	3.01/1	30	Sec. 8	Covered by Policy
S. W. Reid Homes	212 Corbun St.	15.02/1	22	202 Elderly	Exempt from Policy
New Bethel Homes	2700 Crest St.	15.02/1	22	202 Elderly	Exempt from Policy
Iredell St. Duplex	923 Iredell St.	4.02/1	2	LIHTC	Covered by Policy
Morrenne Rd. Apts.	1125 Morrenne Rd.	15.02/1	42	CPH	Covered by Policy
Cheek Rd. Apts.	1835 Cheek Rd.	10.02/1	100	CPH	Covered by Policy
Damar Court	3300 Glasson St.	15.02/2	102	CPH	Covered by Policy
Naples Terrace	1222 Naples Pl.	10.02/1	161	Sec. 8	Covered by Policy
Mangum Arms	Mangum St.	2/2	5	LIHTC/Bonds	Covered by Policy
Sherwood Park	500 McCallie Ave.	10.02/1	71	LIHTC/Bonds	Covered by Policy
Glendale Apts.	823 N. Mangum St.	8.02/1	29	Sec. 8 Rehab	Covered by Policy
Scattered Sites	1521-1529 N. Hyde Park Ave.	9/1	4	SSPH	Covered by Policy
Wingate Duplex	1504 N. Hyde Park Ave.	9/1	2	LIHTC	Covered by Policy
Elizabeth St. Residence	807 N. Elizabeth St.	9/2	1	LIHTC	Covered by Policy
Gray Ave. Residence	605 Gray Ave.	9/2	1	LIHTC	Covered by Policy
Murdoch Place	206 Gray Ave.	8.02/1	32	Sec. 8 NC	Covered by Policy
Scattered Sites	1206 N. Hyde Park Ave.	9/1	2	SSPH	Covered by Policy
Scattered Sites	1103-1113 Lowry St.	9/1	6	SSPH	Covered by Policy
Fiske Apts.	925 Fiske St.	10.02/4	2	LIHTC/Bonds	Covered by Policy
Genesis Home	408 Carlton Ave	11/1	12	Spec. Pop.	Exempt from Policy
Phoenix House	602 Holloway St.	11/1	9	SpePop/Bond	Exempt from Policy
Community Shelter	111 Liberty St.	8.01/2	95	SpePop/Bond	Exempt from Policy
Liberty Street	533 E. Main St.	11/1	108	CPH	Covered by Policy
Oldham Towers	519 E. Main St.	11/1	106	ElderlyPH	Exempt from Policy
Watkins Duplex	716 Liberty St.	11/1	2	LIHTC	Covered by Policy
Hopkins St. Apts.	705 Hopkins St.	11/1	4	LIHTC	Covered by Policy
Threshold	609 Gary St.	10.02/2	4	SpePop/Bond	Exempt from Policy
Rochelle Manor	2800 Rochelle St.	18.02/1	75	Sec. 8	Covered by Policy
J.J. Henderson	807 S. Duke St.	7/1	178	ElderlyPH	Exempt from Policy
Willow Terrace	901 S. Duke St.	7/1	10	Hsg. Bonds	Covered by Policy
Morehead Hills	411 Cobb St.	7/2	54	Sec. 8 Elderly	Exempt from Policy
Morehead Glen	1100 Rock St.	5/4	20	NCCLT/Bond	Covered by Policy
Durham Hosiery Mill	804 Angier Ave.	11/2	150	Sec. 8 Elderly	Exempt from Policy
Forest Hills Heights	601 South St.	12.01/1	55	ElderlyPH	Exempt from Policy
Trailwood	1311 Palmer St.	5/4	44	LIHTC/Bonds	Covered by Policy
Edgemont Elms	300 S. Elm St.	11/2	58	City/LIHTC	Covered by Policy
Lovett Square	211 Stokes St.	11/2	60	LIHTC	Covered by Policy
Clements Duplex	1404 E. Main St.	11/2	2	LIHTC/Bonds	Covered by Policy

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

PROJECT	ADDRESS	TRACT BLOCK GROUP	TOTAL UNITS	PROGRAM	STATUS
Fayetteville Street	1101 Fayetteville St.	12.02/1	200	CPH	Covered by Policy
Clements Triplex	109 Young St.	11/2	3	LIHTC	Covered by Policy
Harrell Smith Apts.	1401-1405 Mathison St.	14/2	3	LIHTC/Bonds	Covered by Policy
Hoover Road	1126 S. Hoover Rd.	10.01/3	54	CPH	Covered by Policy
Rockwood Cottages	100 Rock Cottage Ct.	7/3	24	LIHTC/Elderly/Bonds	Exempt from Policy
Lynnhaven Apts.	917 Wadesboro St.	18.02/2	75	Sec. 8	Covered by Policy
McDougal Terrace	1200 Sima St.	14/2	360	CPH	Covered by Policy
Lincoln Apts.	1400 Lakeland St.	14/1	150	Sec. 8	Covered by Policy
Springwood Park	304 Ivy Wood Ln.	18.04/4	100	Sec. 8 NC	Covered by Policy
Nash St. Duplex	510 Nash St.	13.04/1	2	LIHTC	Covered by Policy
Ivy Commons	415 Pilot St.	13.03/2	223	Sec. 8	Covered by Policy
Cornwallis Road	200 E. Cornwallis Rd.	13.04/1	200	CPH	Covered by Policy
Mutual Manor	3136 Fayetteville St.	13.04/1	18	Hsg. Bonds	Covered by Policy
Wellington Place	4230 Garrett Rd.	20.16/1	225	LIHTC	Covered by Policy
Lakeside Gardens	500 MLK Pkwy.	20.10/3	160	LIHTC	Covered by Policy
Lakemoor	500 MLK Pkwy.	20.10/3	160	LIHTC	Covered by Policy
Grandview Forest	300 MLK Pkwy.	20.10/2	160	LIHTC	Covered by Policy
Laurel Oaks	100 E. Cornwallis Rd.	20.10/2	30	CPH	Covered by Policy
Foxridge Apts.	2415 Page Rd.	18.05/2	92	LIHTC	Covered by Policy
Greens of Pine Glen	6201 Pine Glen Trl.	20.12/3	168	LIHTC	Covered by Policy
Savannah Place	1545 NC 54 Hwy.	20.14/1	84	Sec. 8	Covered by Policy
West End Apts, Exum St.	827 Exum St.	5/2	3	LIHTC/Bonds	Covered by Policy
West End Apts, Carroll St.	811 Carroll St.	5/3	4	LIHTC/Bonds	Covered by Policy
Crestview	2809 Crest St.	15.02/1	65	Sec. 8/Bonds	Covered by Policy
Scattered Sites	200-300 Gary St. & 2400 Mozelle St.	10.02/2	38	SSPH	Covered by Policy
Falls Pointe Apartments	5400 S. Alston Ave.	20.14-2	172	LIHTC	Covered by Policy
Pendleton Townhomes*	300 S. Woodcrest St.	18.02-2	88	LIHTC	Covered by Policy

\*Approved but not yet built

**Notes:**

- (1) Home-ownership projects will be added following City Council approval of the Subsidized Housing Location Policy.
- (2) In order to meet the formatting requirements of this document, some data fields have been deleted. For a copy of the complete data table, please call the Durham City/County Planning Department at (919) 560-4137.
- (3) The data in this table should not be regarded as static. Planning staff may add new data fields from time to time in order to improve the usefulness and accuracy of the database.

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

**SUBSIDIZED HOUSING LOCATION POLICY  
APPENDIX – 2012 SUBSIDIZED HOUSING LIST**

Parcel ID	PIN	Project Name	Address	Total Units	Subsidized Units	Status (Covered or Exempt)
111842	0831-13-24-2920	CALVERT PLACE	930 E MAIN ST	75	75	COVERED
120660	0831-08-88-4489	CAMBRIDGE VILLAGE	1332 FIDELITY DR	83	83	COVERED
172105	0833-01-25-2469	CARVER CREEK APTS	531 E CARVER ST	48	48	EXEMPT
172103	0833-14-24-1045	CARVER POND APTS	4001 MERIWETHER DR	160	159	COVERED
172109	0833-14-23-9428	CARVER POND APTS PHASE II	3800 MERIWETHER DR	96	96	COVERED
112152	0831-14-33-8877	CLEMENTS DUPLEX	1404 E MAIN ST	2	2	EXEMPT
112129	0831-14-43-4511	CLEMENTS TRIPLEX	109 YOUNG AVE	3	3	EXEMPT
129172	0832-07-67-6862	CLUB BOULEVARD	1223 E CLUB BLVD	1	1	COVERED
129173	0832-07-67-6718	CLUB BOULEVARD	1221 E CLUB BLVD	1	1	COVERED
129193	0832-07-68-3549	CLUB BOULEVARD	2442 GLENBROOK DR	1	1	COVERED
129194	0832-07-68-2579	CLUB BOULEVARD	2444 GLENBROOK DR	1	1	COVERED
129195	0832-07-68-2509	CLUB BOULEVARD	2446 GLENBROOK DR	1	1	COVERED
129196	0832-07-68-1548	CLUB BOULEVARD	2448 GLENBROOK DR	1	1	COVERED
129197	0832-07-68-0588	CLUB BOULEVARD	2450 GLENBROOK DR	1	1	COVERED
129198	0832-07-68-0528	CLUB BOULEVARD	2452 GLENBROOK DR	1	1	COVERED
129199	0832-07-58-9567	CLUB BOULEVARD	2500 GLENBROOK DR	1	1	COVERED
129200	0832-07-58-9610	CLUB BOULEVARD	2504 GLENBROOK DR	1	1	COVERED
129201	0832-07-58-8686	CLUB BOULEVARD	2508 GLENBROOK DR	1	1	COVERED
129202	0832-07-58-8792	CLUB BOULEVARD	2512 GLENBROOK DR	1	1	COVERED
129203	0832-07-58-9718	CLUB BOULEVARD	2514 GLENBROOK DR	1	1	COVERED
129204	0832-07-58-9834	CLUB BOULEVARD	2516 GLENBROOK DR	1	1	COVERED
129207	0832-07-59-9084	CLUB BOULEVARD	2524 GLENBROOK DR	1	1	COVERED
129208	0832-07-67-2680	CLUB BOULEVARD	2401 GLENBROOK DR	1	1	COVERED
129209	0832-07-67-2645	CLUB BOULEVARD	2405 GLENBROOK DR	1	1	COVERED
129210	0832-07-67-2722	CLUB BOULEVARD	2407 GLENBROOK DR	1	1	COVERED
129211	0832-07-67-2749	CLUB BOULEVARD	2409 GLENBROOK DR	1	1	COVERED
129223	0832-07-68-4020	CLUB BOULEVARD	2419 GLENBROOK DR	1	1	COVERED
129224	0832-07-68-4037	CLUB BOULEVARD	2423 GLENBROOK DR	1	1	COVERED
129225	0832-07-68-4113	CLUB BOULEVARD	2425 GLENBROOK DR	1	1	COVERED
129226	0832-07-68-3199	CLUB BOULEVARD	2429 GLENBROOK DR	1	1	COVERED
129227	0832-07-68-3274	CLUB BOULEVARD	2431 GLENBROOK DR	1	1	COVERED
129228	0832-07-68-3350	CLUB BOULEVARD	2433 GLENBROOK DR	1	1	COVERED
129229	0832-07-68-3336	CLUB BOULEVARD	2435 GLENBROOK DR	1	1	COVERED
129230	0832-07-68-3402	CLUB BOULEVARD	2439 GLENBROOK DR	1	1	COVERED
129231	0832-07-68-2444	CLUB BOULEVARD	2445 GLENBROOK DR	1	1	COVERED
129232	0832-07-68-1484	CLUB BOULEVARD	2447 GLENBROOK DR	1	1	COVERED
129233	0832-07-68-1423	CLUB BOULEVARD	2449 GLENBROOK DR	1	1	COVERED

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

129234	0832-07-68-0444	CLUB BOULEVARD	1 DUBONNET PL	1	1	COVERED
129235	0832-07-68-0349	CLUB BOULEVARD	3 DUBONNET PL	1	1	COVERED
129236	0832-07-68-0342	CLUB BOULEVARD	7 DUBONNET PL	1	1	COVERED
129237	0832-07-68-0297	CLUB BOULEVARD	11 DUBONNET PL	1	1	COVERED
129238	0832-07-68-1344	CLUB BOULEVARD	17 DUBONNET PL	1	1	COVERED
129239	0832-07-68-2314	CLUB BOULEVARD	19 DUBONNET PL	1	1	COVERED
129240	0832-07-68-2268	CLUB BOULEVARD	21 DUBONNET PL	1	1	COVERED
129241	0832-07-68-2282	CLUB BOULEVARD	22 DUBONNET PL	1	1	COVERED
129242	0832-07-68-2166	CLUB BOULEVARD	20 DUBONNET PL	1	1	COVERED
129243	0832-07-68-2102	CLUB BOULEVARD	18 DUBONNET PL	1	1	COVERED
129244	0832-07-68-1142	CLUB BOULEVARD	16 DUBONNET PL	1	1	COVERED
129250	0832-07-58-8386	CLUB BOULEVARD	4 DUBONNET PL	1	1	COVERED
129251	0832-07-58-9403	CLUB BOULEVARD	2501 GLENBROOK DR	1	1	COVERED
129252	0832-07-58-8437	CLUB BOULEVARD	2503 GLENBROOK DR	1	1	COVERED
129253	0832-07-58-7592	CLUB BOULEVARD	2505 GLENBROOK DR	1	1	COVERED
129174	0832-07-67-5755	CLUB BOULEVARD	1219 E CLUB BLVD	1	1	COVERED
129175	0832-07-67-4791	CLUB BOULEVARD	1215 E CLUB BLVD	1	1	COVERED
129205	0832-07-58-9950	CLUB BOULEVARD	2518 GLENBROOK DR	1	1	COVERED
129254	0832-07-58-7567	CLUB BOULEVARD	2507 GLENBROOK DR	1	1	COVERED
129255	0832-07-58-7643	CLUB BOULEVARD	2509 GLENBROOK DR	1	1	COVERED
129245	0832-07-68-0173	CLUB BOULEVARD	14 DUBONNET PL	1	1	COVERED
129246	0832-07-68-0115	CLUB BOULEVARD	12 DUBONNET PL	1	1	COVERED
129247	0832-07-58-9169	CLUB BOULEVARD	10 DUBONNET PL	1	1	COVERED
129248	0832-07-58-9224	CLUB BOULEVARD	8 DUBONNET PL	1	1	COVERED
129176	0832-07-67-4617	CLUB BOULEVARD	2400 GLENBROOK DR	1	1	COVERED
129177	0832-07-67-3795	CLUB BOULEVARD	2406 GLENBROOK DR	1	1	COVERED
129178	0832-07-67-4821	CLUB BOULEVARD	2410 GLENBROOK DR	1	1	COVERED
129179	0832-07-67-4884	CLUB BOULEVARD	2414 GLENBROOK DR	1	1	COVERED
129182	0832-07-68-5074	CLUB BOULEVARD	2420 GLENBROOK DR	1	1	COVERED
129183	0832-07-68-5180	CLUB BOULEVARD	2422 GLENBROOK DR	1	1	COVERED
129184	0832-07-68-5166	CLUB BOULEVARD	2424 GLENBROOK DR	1	1	COVERED
129186	0832-07-68-5242	CLUB BOULEVARD	2426 GLENBROOK DR	1	1	COVERED
129187	0832-07-68-5227	CLUB BOULEVARD	2430 GLENBROOK DR	1	1	COVERED
129249	0832-07-58-9209	CLUB BOULEVARD	6 DUBONNET PL	1	1	COVERED
129256	0832-07-58-7730	CLUB BOULEVARD	2511 GLENBROOK DR	1	1	COVERED
129257	0832-07-58-7756	CLUB BOULEVARD	2513 GLENBROOK DR	1	1	COVERED
129258	0832-07-58-7872	CLUB BOULEVARD	2515 GLENBROOK DR	1	1	COVERED
129259	0832-07-58-7888	CLUB BOULEVARD	2517 GLENBROOK DR	1	1	COVERED
129260	0832-07-58-7984	CLUB BOULEVARD	2521 GLENBROOK DR	1	1	COVERED
129188	0832-07-68-5303	CLUB BOULEVARD	2432 GLENBROOK DR	1	1	COVERED
129189	0832-07-68-4389	CLUB BOULEVARD	2434 GLENBROOK DR	1	1	COVERED

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129190	0832-07-68-4465	CLUB BOULEVARD	2436 GLENBROOK DR	1	1	COVERED
129191	0832-07-68-4541	CLUB BOULEVARD	2438 GLENBROOK DR	1	1	COVERED
129192	0832-07-68-4507	CLUB BOULEVARD	2440 GLENBROOK DR	1	1	COVERED
107192	0820-15-55-5245	CORNWALLIS ROAD	540 E CORNWALLIS RD	40	40	COVERED
107365	0820-11-46-8172	CORNWALLIS ROAD	2507 S ROXBORO ST	100	100	COVERED
107195	0820-11-56-2771	CORNWALLIS ROAD	2425 S ROXBORO ST	60	60	COVERED
108803	0812-06-20-7484	DAMAR COURT	3300 GLASSON ST	72	72	COVERED
108805	0812-18-30-1675	DAMAR COURT	1202 MORREENE RD	64	64	COVERED
108806	0812-06-20-9203	DAMAR COURT	3400 MORCEDAI ST	64	64	COVERED
108807	0812-18-30-3470	DAMAR COURT	3301 MORDECAI ST	24	24	COVERED
116131	0820-12-87-7091	DUPLEX	510 NASH ST	2	2	EXEMPT
111844	0831-13-14-8811	DURHAM HOSIERY MILL	804 ANGIER AVE	150	100	COVERED
111845	0831-13-14-8255	EDGEMONT ELMS	912 ANGIER AVE	53	53	COVERED
154025	0737-01-36-0962	FALLS POINTE AT THE PARK	100 CASCADE FALLS LN	312	173	COVERED
113741	0831-07-77-4517	FISKE APARTMENTS	925 FISKE ST	2	2	EXEMPT
155641	0729-02-95-4951	FOREST GLEN	401 MARTIN LUTHER KING JR	36	36	COVERED
155643	0729-02-95-7792	FOREST GLEN	101 LYNN FOREST DR	56	56	COVERED
119424	0821-16-84-0762	FOREST HILLS HEIGHTS	108 LAKEWOOD AVE	55	55	EXEMPT
164040	0759-04-53-1666	FOX RIDGE APTS	200 FOX RIDGE CRES	92	91	COVERED
207040	0831-14-34-9614	FRANKLIN VILLAGE	124 N HOLMAN ST	83	74	COVERED
110189	0831-05-09-9889	GLENDALE APTS	823 N MANGUM ST	29	29	COVERED
152813	0728-03-35-4316	GREENS OF PINE GLEN PH II	6201 PINE GLEN TRL	168	168	COVERED
117990	0831-18-21-5646	HARRELL-SMITH APTS	1405 HARRELL AVE	7	7	COVERED
121153	0831-20-81-4371	HOOVER ROAD	1126 S HOOVER RD	72	72	COVERED
111439	0831-10-26-7110	HOPKINS STREET APARTMENTS	709 HOPKINS ST	4	4	EXEMPT
111442	0831-10-26-6140	HOPKINS STREET APTS	705 HOPKINS ST	4	4	EXEMPT
172631	0824-04-82-5667	JFK TOWERS	4900 OLD FARM RD	114	64	COVERED
114865	0821-11-75-1567	JJ HENDERSON	807 S DUKE ST	236	176	COVERED*
146698	0729-01-48-4102	LAKEMOOR APTS	205 KENT LAKE DR	160	154	COVERED
146697	0729-01-38-9597	LAKESIDE GARDENS	820 MARTIN LUTHER KING PKWY	160	160	COVERED
155779	0739-03-14-9993	LAUREL OAKS	1910 E CORNWALLIS RD	30	30	COVERED
102895	0831-09-16-6191	LIBERTY STREET	533 E MAIN ST	108	108	COVERED
117672	0830-05-28-2973	LINCOLN APARTMENTS	1102 DAYTON ST	21	21	COVERED
117684	0830-05-29-0020	LINCOLN APARTMENTS	1400 LAKELAND ST	19	19	COVERED
117701	0830-05-28-2484	LINCOLN APARTMENTS	1502 WABASH ST	38	38	COVERED
117705	0830-05-18-9550	LINCOLN APARTMENTS	1510 LAKELAND ST	19	19	COVERED
111931	0831-14-23-6634	LOVETT SQUARE	211 STOKES ST	60	56	COVERED
132038	0840-06-49-7835	LYNNHAVEN APARTMENTS	917 WADESBORO ST	45	45	COVERED
132037	0840-07-49-5590	LYNNHAVEN APARTMENTS	917 WADESBORO ST	30	30	COVERED
117835	0830-06-39-2860	MACDOUGALD TERRACE	1205 RIDGEWAY AVE	40	40	COVERED

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117836	0830-06-39-0610	MACDOUGALD TERRACE	1207 E LAWSON ST	50	50	COVERED
117865	0830-06-39-2199	MACDOUGALD TERRACE	1304 E LAWSON ST	11	11	COVERED
117873	0830-06-29-9251	MACDOUGALD TERRACE	1301 WABASH ST	29	29	COVERED
117874	0830-06-28-8799	MACDOUGALD TERRACE	1401 WABASH ST	51	51	COVERED
117919	0831-18-30-2323	MACDOUGALD TERRACE	1524 SIMA AVE	32	32	COVERED
117920	0831-18-30-0113	MACDOUGALD TERRACE	1510 SIMA AVE	22	22	COVERED
117630	0830-06-29-6891	MACDOUGALD TERRACE	1202 SIMA AVE	58	58	COVERED
203902	0833-01-29-2660	MAGNOLIA POINTE	4801 DANUBE LN	266	156	COVERED
110069	0832-17-10-1609	MANGUM ARMS	915 N MANGUM ST	5	5	COVERED
108630	0821-10-26-8731	MAPLEWOOD SQUARE	1520 CHAPEL HILL RD	32	32	EXEMPT
119425	0821-16-74-2787	MOREHEAD HILLS	411 COBB ST	75	75	EXEMPT*
111795	0831-14-34-1888	MORNING GLORY SENIOR VILLAGE	203 N ALSTON AVE	25	25	EXEMPT
125295	0812-18-31-8298	MORRENNE ROAD	1125 MORRENE RD	102	102	COVERED
110343	0831-05-18-1516	MURDOCH PLACE	206 GRAY ST	32	32	COVERED
107201	0820-15-64-7925	MUTUAL MANOR	3146 FAYETTEVILLE ST	14	14	COVERED
130312	0832-17-90-7079	NAPLES TERRACE APTS	1237 NAPLES PL	159	159	COVERED
130137	0832-20-80-9955	OAKLEY SQUARE APARTMENTS	1835 CHEEK RD	100	99	COVERED
102896	0831-09-16-2005	OLDHAM TOWERS	519 E MAIN ST	106	106	COVERED
172108	0833-14-24-8139	OXFORD COMMONS	500 PICKWICK TRL	102	52	COVERED
171833	0833-14-33-9485	OXFORD MANOR	3700 DEARBORN DR	42	42	COVERED
171834	0833-14-33-6145	OXFORD MANOR	3817 DEARBORN DR	40	40	COVERED
171836	0833-14-43-0808	OXFORD MANOR	100 KEYSTONE PL	58	58	COVERED
171835	0833-14-33-4566	OXFORD MANOR	3800 DEARBORN DR	32	32	COVERED
131736	0841-19-41-5819	PENDLETON TOWNHOMES	300 S WOODCREST ST	88	88	COVERED
110870	0831-06-38-0731	RESIDENCE	605 GRAY AVE	1	1	EXEMPT
110914	0831-05-28-2884	RESIDENCE	807 N ELIZABETH ST	1	1	EXEMPT
131631	0841-10-45-7679	ROCHELLE MANOR	2815 ROCHELLE ST	75	75	COVERED
107661	0821-18-20-4521	ROCKWOOD COTTAGES	1 ROCK COTTAGE CT	21	20	EXEMPT
107662	0821-18-20-4796	ROCKWOOD NORTH	11 WOOD COTTAGE CT	24	24	COVERED
152983	0728-04-73-4748	SAVANNAH PLACE	1519 SAVANNAH PLACE DR	84	84	COVERED
111658	0831-14-44-2057	SCATTERED SITES	110 N GOLEY ST	1	1	EXEMPT
114155	0831-16-74-6272	SCATTERED SITES	2408 MOZELLE ST	1	1	EXEMPT
114156	0831-16-74-7262	SCATTERED SITES	2400 MOZELLE ST	1	1	EXEMPT
114190	0831-16-84-2397	SCATTERED SITES	300 GARY ST	1	1	EXEMPT
114192	0831-16-84-2253	SCATTERED SITES	212 GARY ST	1	1	EXEMPT
114193	0831-16-84-2146	SCATTERED SITES	208 GARY ST	1	1	EXEMPT
114188	0831-16-84-2593	SCATTERED SITES	600 GARY ST	1	1	EXEMPT
114189	0831-16-84-2496	SCATTERED SITES	600 GARY ST	1	1	EXEMPT
114202	0831-16-74-8438	SCATTERED SITES	2419 MOZELLE ST	1	1	EXEMPT
114203	0831-16-74-9408	SCATTERED SITES	2423 MOZELLE ST	1	1	EXEMPT
114204	0831-16-74-9488	SCATTERED SITES	2427 MOZELLE ST	1	1	EXEMPT

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114205	0831-16-84-0484	SCATTERED SITES	2429 MOZELLE ST	1	1	EXEMPT
114206	0831-16-84-0592	SCATTERED SITES	309 GARY ST	1	1	EXEMPT
114195	0831-16-84-0156	SCATTERED SITES	211 GARY ST	1	1	EXEMPT
114196	0831-16-84-0277	SCATTERED SITES	2428 MOZELLE ST	1	1	EXEMPT
114197	0831-16-74-9281	SCATTERED SITES	2424 MOZELLE ST	1	1	EXEMPT
114198	0831-16-74-9211	SCATTERED SITES	2420 MOZELLE ST	1	1	EXEMPT
114199	0831-16-74-8231	SCATTERED SITES	2416 MOZELLE ST	1	1	EXEMPT
114200	0831-16-74-6488	SCATTERED SITES	2411 MOZELLE ST	1	1	EXEMPT
114201	0831-16-74-7458	SCATTERED SITES	2415 MOZELLE ST	1	1	EXEMPT
131760	0841-15-63-2069	SCATTERED SITES	3035 WEDGEDALE DR	1	1	EXEMPT
131936	0841-19-62-6475	SCATTERED SITES	3120 WEDGEDALE DR	1	1	EXEMPT
111686	0831-14-34-8095	SCATTERED SITES	104 N BLACKNALL ST	1	1	EXEMPT
111687	0831-14-33-9919	SCATTERED SITES	1401 E MAIN ST	1	1	EXEMPT
111689	0831-14-43-0953	SCATTERED SITES	1411 E MAIN ST	1	1	EXEMPT
111808	0831-10-25-9016	SCATTERED SITES	1010 WORTH ST	1	1	EXEMPT
111037	0831-07-58-1222	SCATTERED SITES	1206 N HYDE PARK AVE	2	2	EXEMPT
111122	0831-06-47-8819	SCATTERED SITES	1101 LOWRY AVE	6	6	COVERED
131843	0841-15-52-7866	SCATTERED SITES	128 CUSHMAN ST	1	1	EXEMPT
131845	0841-15-52-6853	SCATTERED SITES	6 PLUMMER PL	1	1	EXEMPT
110971	0831-06-49-9424	SCATTERED SITES	1521 HYDE PARK AVE	4	4	EXEMPT
120521	0832-20-80-3133	SHERWOOD PARK APTS	500 MCCALLIE AVE	50	50	COVERED
120522	0832-20-80-4332	SHERWOOD PARK APTS	500 MCCALLIE AVE	20	20	COVERED
158464	0840-07-58-4171	SPRINGWOOD PARK APTS	3004 IVY WOOD LN	100	100	COVERED
107200	0820-11-65-7718	THE IVY COMMONS	412 E PILOT ST	138	138	COVERED
107303	0820-12-76-2633	THE IVY COMMONS	412 E PILOT ST	84	84	COVERED
107933	0821-14-24-7329	TRAILWOOD APTS	1718 PALMER ST	44	44	COVERED
111438	0831-10-26-8292	WATKINS DUPLEX	716 LIBERTY ST	2	2	EXEMPT
140089	0800-04-63-8427	WELLINGTON PLACE APTS	4230 GARRETT RD	301	240	COVERED
115016	0821-10-45-6287	WEST PARK APTS & MOREHEAD GLEN	1112 ROCK ST	20	20	COVERED
115051	0821-11-75-1209	WILLOW TERRACE	901 S DUKE ST	16	16	COVERED
113207	0831-07-59-0294	WINGATE DUPLEX	1504 N HYDE PARK AVE	2	2	EXEMPT
104649	0812-16-83-1818	S.W. REID HOMES	212 CORBUN ST	22	22	EXEMPT
104645	0812-16-73-9812	NEW BETHEL HOMES	2700 CREST ST	22	22	EXEMPT
110527	0831-09-17-2115	GENESIS HOUSE	408 CARLTON AVE	12	12	EXEMPT
111375	0831-09-26-3842	PHOENIX HOUSE	602 HOLLOWAY ST	9	9	EXEMPT
111189	0831-11-56-2392	COMMUNITY SHELTER	111 LIBERTY ST	95	95	COVERED
113765	0831-12-85-3868	THRESHOLD	609 GARY ST	4	4	EXEMPT
111377	0831-09-26-4814	ANDOVER APARTMENTS	606 HOLLOWAY ST	10	10	EXEMPT
113782	0831-12-75-7719	SHIRLEY STROEBEL PLACE	1711 LIBERTY ST	12	12	EXEMPT

\*115 UNITS ARE COVERED BY POLICY

\*\*15 UNITS ARE COVERED BY POLICY

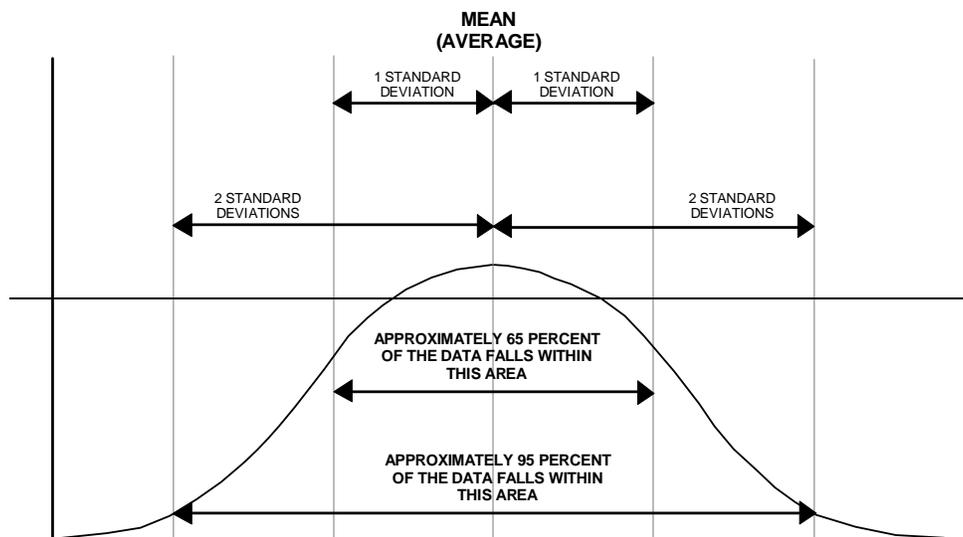
## APPENDIX B (TECHNICAL APPENDIX)

This appendix discusses the techniques employed by staff in the preparation of Map 2, “Concentrations of Subsidized Housing and Poverty.” Staff used two sources of data to compile Map 2, data from the U.S. Census of 2000 and the Subsidized Housing Database, compiled by staff in July 2002 and subsequently updated. Staff used simple descriptive statistics to map concentrations of poverty and utilized map overlay analysis to identify concentrations of Subsidized Housing.

### Statistical Method Used in Mapping Poverty Concentration

Staff mapped unusually high concentrations of poverty by census block group, using data from the 2000 Census. The **mean**, or average, concentration of persons in poverty was determined to be 13.78 percent for Durham block groups. The **standard deviation** was then used to establish a threshold of significant poverty concentration. Standard deviation is a statistic that tells how tightly all of the data are clustered around the mean. In a normal distribution of data, a graph of the data will form a bell-shaped curve (see Figure below).

In any data set, one standard deviation outward from the mean in both directions accounts for approximately 68 percent of all the data in the set. Two standard deviations away from the mean account for roughly 95 percent, and three standard deviations account for about 99 percent.



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~~One standard deviation was determined to be 13.28 percent. In order to map statistically significant concentrations, staff identified two standard deviations above the mean as the appropriate threshold. The threshold of significance was therefore 40.12 percent, rounded to 40 percent for simplicity. The concentration threshold for poverty recognized in studies conducted by HUD as the point at which disinvestment in neighborhoods begins to become significant is 40 percent.~~

### **~~Subsidized Housing Concentration~~**

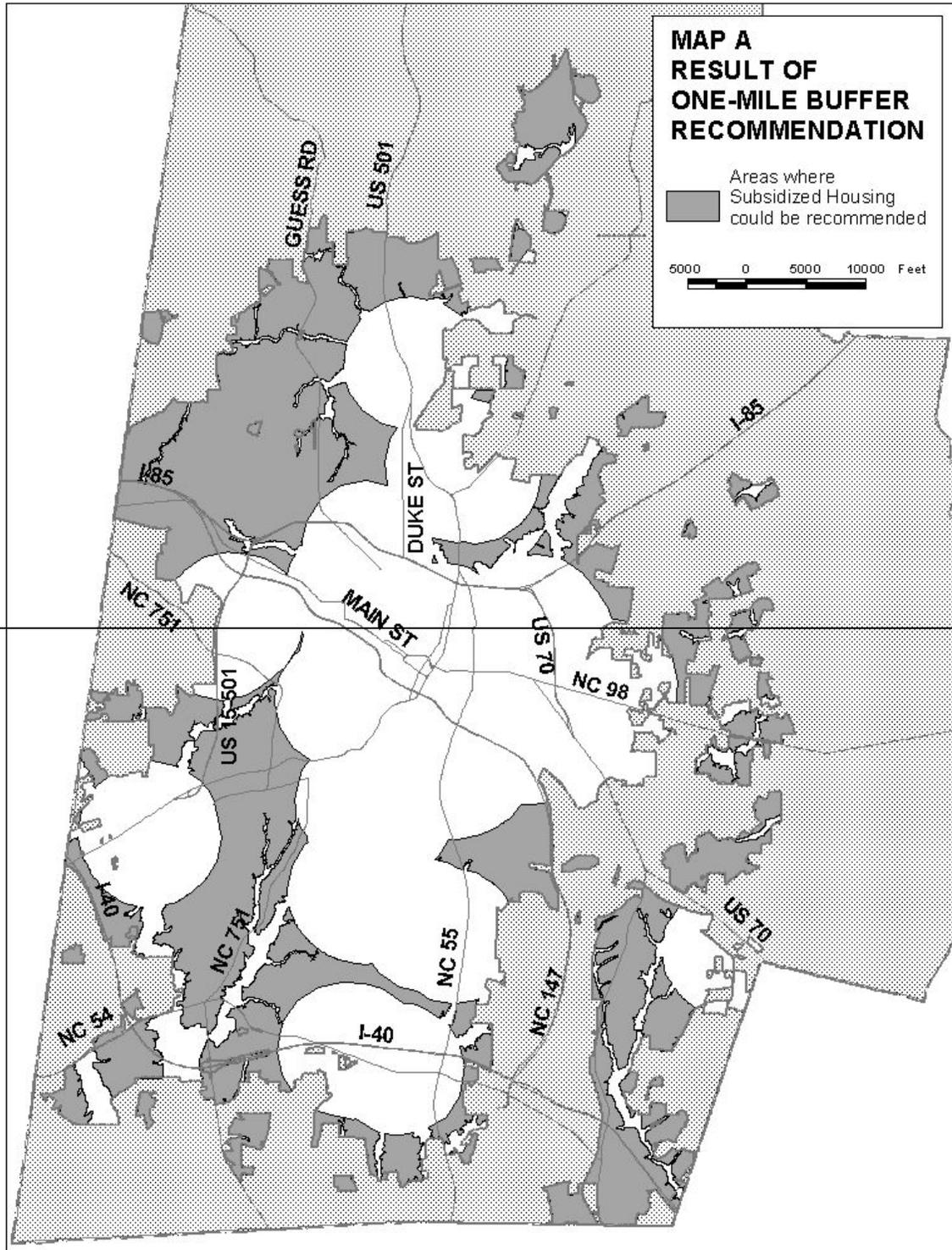
~~Staff performed a map overlay analysis to assign existing Subsidized Housing to Census Block Groups and determine the concentration of Subsidized Housing within each Block Group. In order to be consistent with the Policy's location criteria for Evaluation Areas, staff used a threshold of significant concentration of 20 percent for the Urban Core and Central City and a threshold of 25 percent for the Outer City.~~

### **~~Other Approaches Researched by Staff~~**

*~~Affordable Housing Concentrations.~~* ~~Staff mapped concentrations of “affordable housing” and considered inclusion of affordable housing concentration as one of the criteria used in Map 2 to identify Census Block Groups where no more Subsidized Housing should be recommended at the present time. For the purposes of the study, staff defined “affordable” as affordable to households earning no more than 60 percent of the mean household income for Durham in 2000. Mean household income for the City of Durham in 2000 was \$41,160. Staff used income and monthly housing cost data from the 2000 Census to estimate the number of affordable housing units in each Census Block Group. Staff then applied the same statistical techniques discussed above to map the areas with affordable housing concentrations two or more standard deviations above the mean concentration for Durham.~~

~~Staff ultimately decided against using concentration of affordable housing as a criterion for evaluating Subsidized Housing proposals. The data derived were less certain than data for poverty because the methodology relied on an estimation technique. Additionally, staff used map overlay analysis to determine that there was little correlation between high concentrations of affordable housing, high concentrations of poverty, and high concentrations of Subsidized Housing.~~

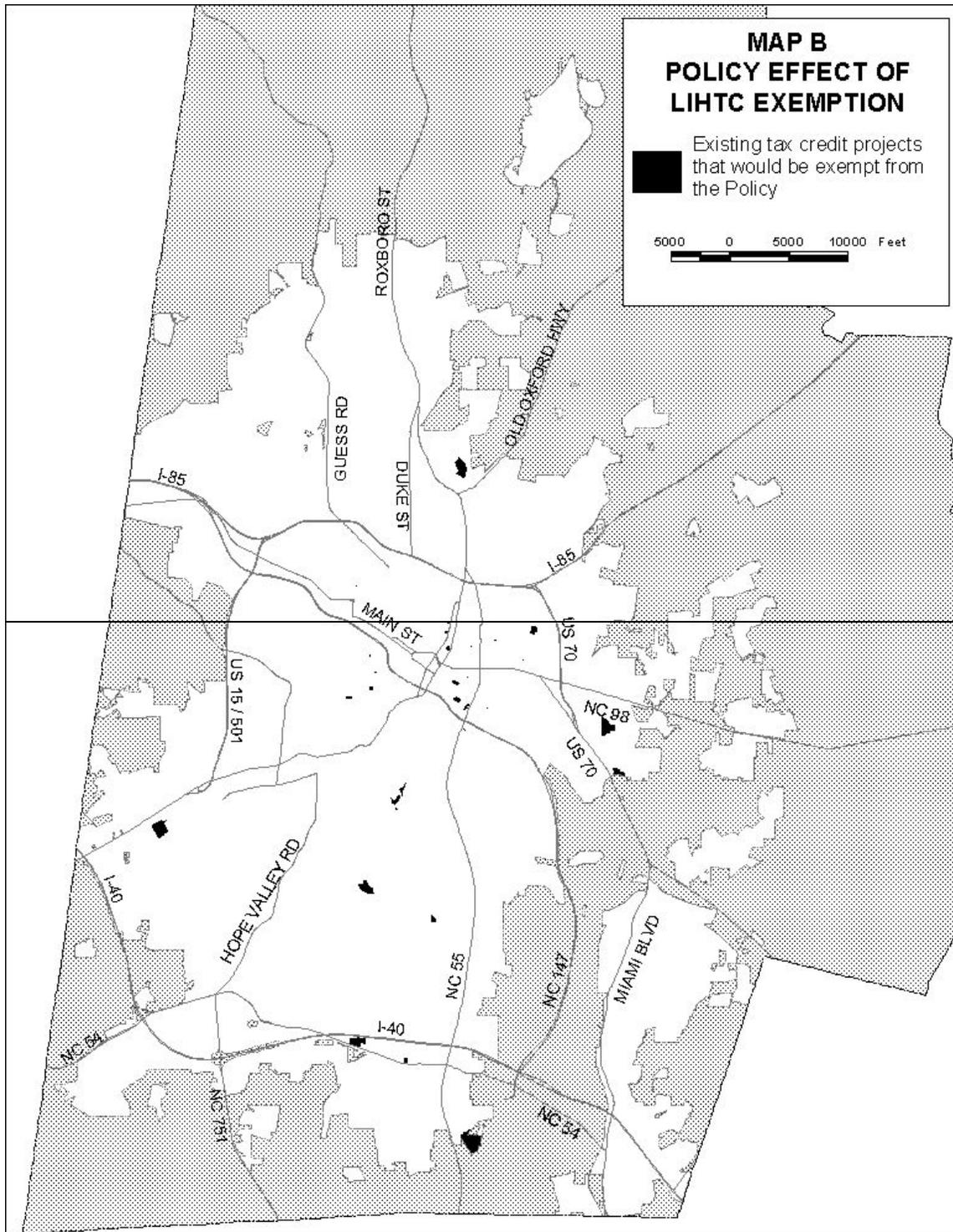
*~~Spatial Separation.~~* ~~Staff researched a citizen recommendation to require a spatial separation of one mile for all Subsidized Housing. The result of such a requirement is shown in Map A. The map subtracts out all areas within one mile of an existing Subsidized Housing project, the 100-year floodplains and all land designated for industrial use in the 2020 Plan. Approximately 57 percent of the land area of the City would be excluded as possible locations for new Subsidized Housing if the recommendation were included in the Housing Location Policy. Staff therefore felt the recommendation was too exclusionary to be incorporated into the Policy.~~



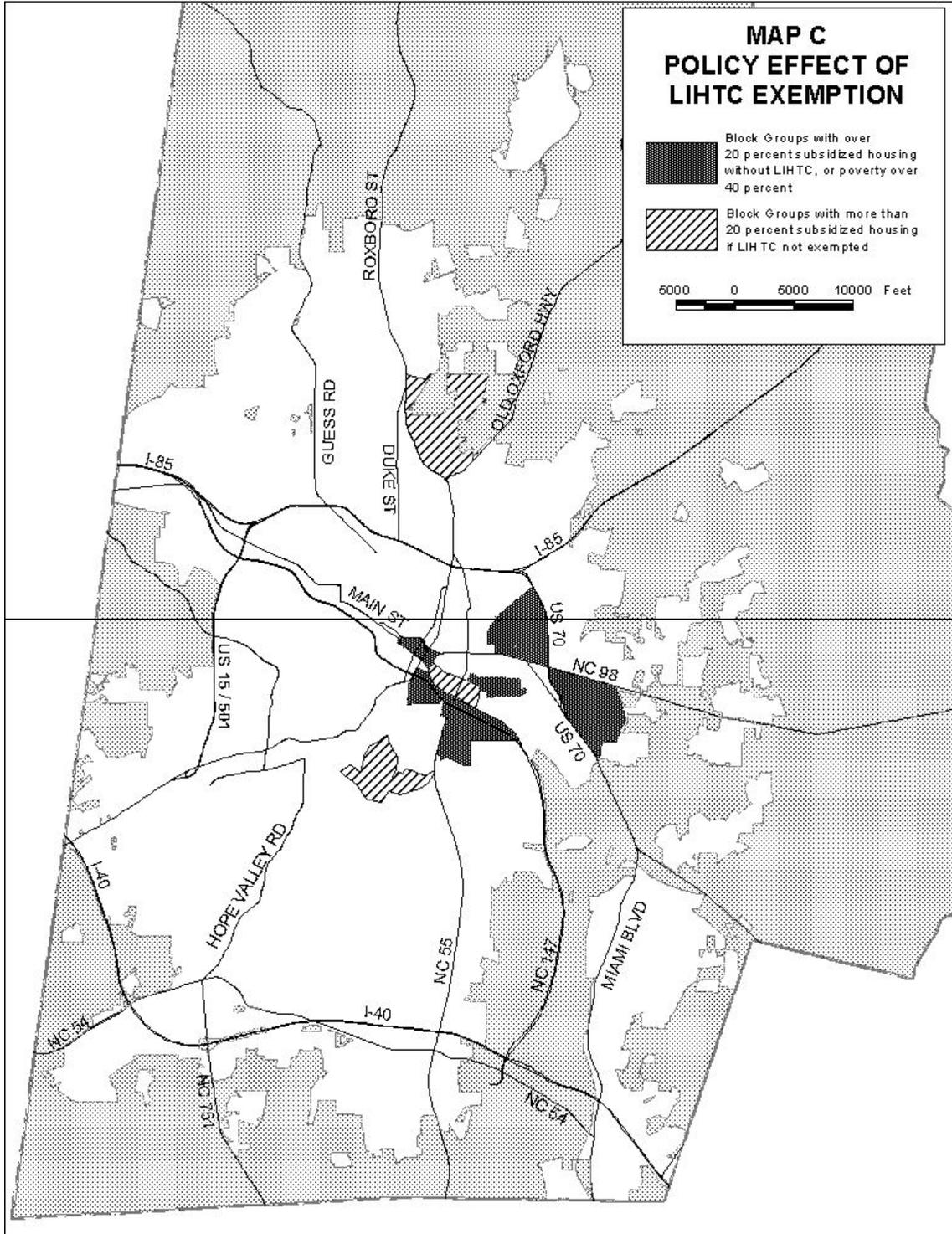
*Exemption for Tax Credit Projects.* During the discussion of the draft Policy at the Council Work Session of March 20, 2003, a speaker recommended exempting all projects subsidized through the Low-Income Housing Tax Credit (LIHTC) program. Staff researched the effects of this exemption. It was found that just over one half of all subsidized housing units in Durham were wholly or partly funded through the use of tax credits, including the Pendleton project that initiated Council desire to revise the 1996

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Housing. Many of these units were located outside the areas of concentration shown in Map 2 (see page 5). Maps B and C indicate the subsidized housing units that would be affected if tax credit projects were exempted and show how areas of subsidized housing concentration would change.



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**APPENDIX C (CITIZEN COMMENTS)**

MEETING LOCATION		MEETING DATE	
City Hall, Planning Conference Room B (Meeting with the ad hoc Committee)		November 20, 2002	
City Hall, Committee Room		January 8, 2003	
Merrick Moore Elementary School		February 13, 2003	
Southwest Elementary School		Cancelled (inclement weather)	
Hillandale Elementary School		February 20, 2003	
City Hall, Committee Room		February 27, 2003	
City Hall, Committee Room		March 13, 2003	
COMMENTS/RECOMMENDATIONS	DATE RECEIVED		INCLUDED IN POLICY?
	GENERAL		
The Interim Policy is negative and restricts rather than encourages housing opportunities.	2/27		Not applicable
Ensure that citizen comments are presented to City Council.	2/27		Yes (Appendix C)
Make the Policy user friendly.	2/20		Yes
Hold staff accountable for mistakes in applying the Policy.	2/13		Not applicable
The Housing Department should refer all proposals to Planning for review based on the Impact Policy.	2/13		Yes (See Procedures)
The policy should be adopted as an ordinance.	2/13; 2/20		Not applicable
DOCUMENT FORMAT			
Add a Definitions Section.	2/13		Yes
Define "transitional housing."	2/27		Yes
Define "special needs housing."	2/20		Yes
Combine the exemption of Redevelopment and Revitalization Areas with the exemption for approved Hope VI applications.	1/8		Yes
POLICY CONTENT			
Utilize Census Block Group boundaries to redefine the boundaries of the "Priority Areas"	11/20		Yes
Identify concentrations of Subsidized Housing and poverty by Census Block Group.	11/20		Yes
Define the threshold for "high concentration of poverty" as two standard deviations above the mean concentration in Durham.	11/20		Yes
The statement of purpose should be revised to be more "positive."	1/8		Yes
Define the review procedures in the policy.	2/20		Yes
Address the areas with high concentrations of Subsidized Housing first.	2/13		Yes
Use the policy to set a minimum allowable distance between subsidized projects.	2/13		No
Establish a minimum one-mile distance between subsidized projects.	2/13; 2/20		No
Make the policy consistent with the 1991 East Central Durham Plan	2/13		No

APPENDIX C – SUBSIDIZED HOUSING LOCATION POLICY

COMMENTS/RECOMMENDATIONS	DATE RECEIVED	INCLUDED IN POLICY?
<b>POLICY CONTENT (CONTINUED)</b>		
The Policy should focus on concentration of Subsidized Housing rather than physical separation.	2/27	Yes
Continue the use of established radii and Subsidized Housing percentage allowed in the current policy.	2/13	Yes
Consider rent-to-own programs as Subsidized Housing covered by the Policy.	2/13	Yes
Track Section 8 Housing vouchers.	2/13; 2/20	No
Make realtors assist with data collection about Section 8 voucher residents.	2/13	No
Define a concentration threshold based on poverty.	2/27	Yes
Do not base the policy on concentration thresholds for Subsidized Housing.	2/27	No
The policy should not utilize a concentration threshold for affordable housing.	2/27	Yes
<b>POLICY EXEMPTIONS</b>		
Revise the exemption of home-ownership programs, exempting only projects with fewer than 100 units.	11/20; 1/8; 2/13; 2/20	Yes
The Subsidized Housing database needs to be improved to allow for tracking of expiration dates for some types subsidies.	2/27	No***
Clarify the exemption requirements for offsite replacement of existing Subsidized Housing.	2/27	Yes
Simplify and clarify the language concerning the types of rental assistance exempted by the Policy.	2/27	Yes
Group homes should be exempt only if they accommodate 24 or fewer persons.	2/20; 2/27	Yes
Consider "sweat equity" programs as Subsidized Housing covered by the Policy	2/13	No
Do not exempt large rental complexes that accept Section 8 vouchers	2/13	No
The Policy should cover apartment complexes with 51 percent or more Section 8 recipients.	2/13	No
Exempt mixed income projects.	2/20	No
Retain the exemptions identified in the Interim Policy.	2/27	Yes
<b>CODE ENFORCEMENT/MAINTENANCE</b>		
Improve enforcement of the Minimum Housing Code.	2/13	Not applicable
Consider strengthening the Minimum Housing Code.	2/13	Not applicable
The Policy should address the problem of substandard subsidized units.	2/13	No*
<b>INCENTIVES FOR AFFORDABLE AND SUBSIDIZED HOUSING PROVISION</b>		
Identify appropriate sites for future subsidized and affordable housing.	2/27	No*
Provide incentives (e.g., density bonuses) to encourage developers to build Subsidized Housing in identified low-concentration areas.	2/13	No*

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COMMENTS/RECOMMENDATIONS	DATE RECEIVED	INCLUDED IN POLICY?
<b>INCENTIVES FOR AFFORDABLE AND SUBSIDIZED HOUSING PROVISION (CONTINUED)</b>		
Provide funds for home ownership rehabs in areas of high concentration.	2/20	No*
Look at revising "density bonus" option as an incentive for encouraging Subsidized Housing in areas of low concentration.	2/20	No*
<b>RECOMMENDATIONS FOR ADDITIONAL WORK</b>		
Map transitional and group housing.	2/20	No
Move forward with the effort to get enabling legislation for Fair Share Housing Policies.	2/13	Not applicable
Prepare a map of areas with low concentrations of Subsidized Housing.	2/13	Yes**
Encourage mixed income development in areas of high concentration of poverty, subsidized and affordable housing.	2/13	No
<p>*Staff is researching how this recommendation can be incorporated into the Durham Comprehensive Plan.</p> <p>**Staff mapped low concentrations of Subsidized Housing but did not include the map in the Policy.</p> <p>***Staff will be implementing this recommendation by adding data fields to the Subsidized Housing Database that will allow tracking of this data.</p>		

