



# *Steele Creek Area Plan*

Charlotte-Mecklenburg Planning Department



CHARLOTTE

Adopted by Charlotte City Council    February 27, 2012

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*Executive  
Summary*



# Executive Summary

The Steele Creek Area Plan defines the vision and land use policies for the plan area and provides specific direction to guide future growth and development, consistent with the *Centers, Corridors and Wedges Growth Framework*. This Executive Summary provides the highlights of the plan document, however, much more detailed information can be found in Part I: Concept Plan.

## Plan Boundary

The Steele Creek plan area is approximately 27,000 acres and has a population of approximately 35,000. The plan area is bounded generally by Shopton Road on the north, and South Carolina state line on the south, the Catawba River on the west, and I-485 on the east. See **Map 1, Area Plan Boundary**.

The area encompasses a diverse mixture of residential, retail, office and industrial land uses. A large portion of the area, particularly closer to I-485, I-77 and S. Tryon Street (NC 49), includes more intense development primarily located within four Activity Centers—RiverGate and Whitehall / Ayrley Mixed Use Activity Centers; the Westinghouse Industrial Center; and the portion of the Shopton Road Industrial Center that is included within the plan area boundary. Several large industrial parks are also located in the plan area, providing employment opportunities with companies like International Paper, Siemens, Shutterfly and Time Warner Cable.

## Vision Statement

The vision for the Steele Creek area is to create a unique and sustainable community that is a great place to live, work, and recreate, while preserving the community's character by incorporating natural and historic features into new development. The community will implement this vision through the following actions:

- Protecting the Catawba River and its access, McDowell Nature Center and Preserve, natural features and historic places;
- Providing a balanced mixture of land uses with enhanced public facilities that include quality schools;
- Developing a safe, accessible and efficient transportation system for pedestrians, bicyclists, transit users and motorists;
- Encouraging community design that recognizes the natural environment; and
- Creating an interconnected network of parks, greenways and open space amenities.

Much of the plan area is within a Wedge and includes low to moderate density residential developments like Yorkmont, The Crossings, The Sanctuary and The Palisades. The McDowell Nature Center and Preserve is also located within the Wedge and is the oldest nature preserve in Mecklenburg County. Ninety percent of the preserve is undeveloped, forested, rolling terrain along the banks of Lake Wylie. The plan area also includes additional public facilities such as schools, parks, libraries and greenways.

**Key Opportunities and Constraints** Opportunities and constraints that were identified through public input and an examination of the existing conditions helped to focus the planning process. Key opportunities identified include proximity to the Catawba River and interstate access, both of which contribute to the uniqueness of this area. Other opportunities include preservation of neighborhoods and natural environmental features; convenience of Activity Centers for shopping, entertainment and employment; and, availability of parks and greenways, and recognition of the historical significance of “York Road (NC 49)” in street signage along S. Tryon St/York Rd (NC 49). Some of the major constraints that were identified include the impact of increased development on the natural environment and lack of public facilities and local street connectivity.

**Summary Of Goals And Policies** The Steele Creek Area Plan provides goals and detailed policies to ensure that the future envisioned for this area is achieved. Below are the plan goals and a brief summary of the policies.

### Land Use

**GOAL:** Establish a land use pattern that offers a mix of land uses and the opportunity to live, work and recreate in close proximity.

#### Key Policies Highlights

##### Wedge

- Development in the Wedge should remain predominantly lower density residential, typically up to 4 dwelling units per acre.
- Neighborhood supporting land uses and moderate density housing are encouraged at strategic locations, primarily along thoroughfares as shown on **Map 3, Recommended Future Land Use.**
- The community-size retail center approved as part of the Palisades mixed use town center is appropriate to expand to serve the needs of the growing population in this area.

##### Activity Centers

- Future development/redevelopment in the RiverGate and Whitehall/Ayrsley Mixed Use Activity Centers should facilitate the transition to a more pedestrian-oriented environment.
- Westinghouse Industrial Center transverses through the center of the

plan area and is the largest industrial core in the Carolinas. While this area is developed with over 20 million square feet of industrial development, additional industrial development and employment serving retail land uses are appropriate in strategic locations within this Activity Center.

### Community Design

**GOAL:** Encourage development that promotes accessibility for pedestrians and cyclists while integrating green amenities and protecting environmentally sensitive features.

#### Key Policies Highlights

- Building and site design in Steele Creek should be reflective of its surrounding built and natural environment and respect existing neighborhoods.
- Development should orient towards an internal street network and provide a landscaped buffer along S. Tryon St/ York Rd (NC 49) to improve the aesthetic quality of the roadway.
- Improved pedestrian connections and accommodations for cyclists and motorists should be provided throughout the Steele Creek area to encourage a safe pedestrian and vehicular network for all users.

**GOAL:** Provide a safe, accessible and efficient street network for all users.

### **Key Policies Highlights**

- Improve area connectivity by providing streets, cross access, internal site circulation and multiple entrances.
- Upgrade farm-to-market roads and extend/widen key thoroughfares.
- Improve intersections for both vehicular and pedestrian safety and mobility.
- Enhance the pedestrian and bicycle network and encourage bikeway connections to greenways as development occurs.

### **Infrastructure & Public Facilities**

**GOAL:** Provide public facilities to maintain and improve service levels to area residents

### **Key Policies Highlights**

- Encourage new development and redevelopment to incorporate open space (either natural and/or improved) so that it is a prominent component and an amenity.
- Link greenways with other greenways, parks, preserves, neighborhoods, schools, retail centers, Activity Centers and employment areas.
- Provide pedestrian and bicycle access to recreational amenities as development occurs.

### **Natural Environment**

**GOAL:** Encourage environmentally sensitive land development practices that enhance the area's land, air and water quality.

### **Key Policy Highlights**

- Preserve tree canopy, native plants and other environmental features by

incorporating them into development, and using sensitive site design and construction techniques.

- Target environmentally sensitive areas for preservation when acquiring land for public purposes.
- Develop a network of green spaces that include greenways, nature preserves, parks and open spaces.
- Encourage floodplain preservation and support floodplain reclamation along the major creeks in the area.

### **Key Implementation Strategies**

The Implementation Guide identifies strategies to implement the policies in the Concept Plan and is not adopted by elected officials. The Implementation Guide includes a number of improvement projects and is intended to be a guide for staff. Some of the key implementation strategies are:

- Utilize land use and community design recommendations to guide and evaluate development proposals.
- Seek street connections as development occurs to improve connectivity within the area.
- Enhance a number of intersections in the plan area to improve traffic flow, area accessibility and safety.
- Explore funding sources for local government participation in development of the street network that will be constructed through the land development process.
- Request easements and/or dedications during the land development process to expand the Walker Branch Greenway.





# Part I

## *Concept Plan*

# Part I Concept Plan

## Plan Context

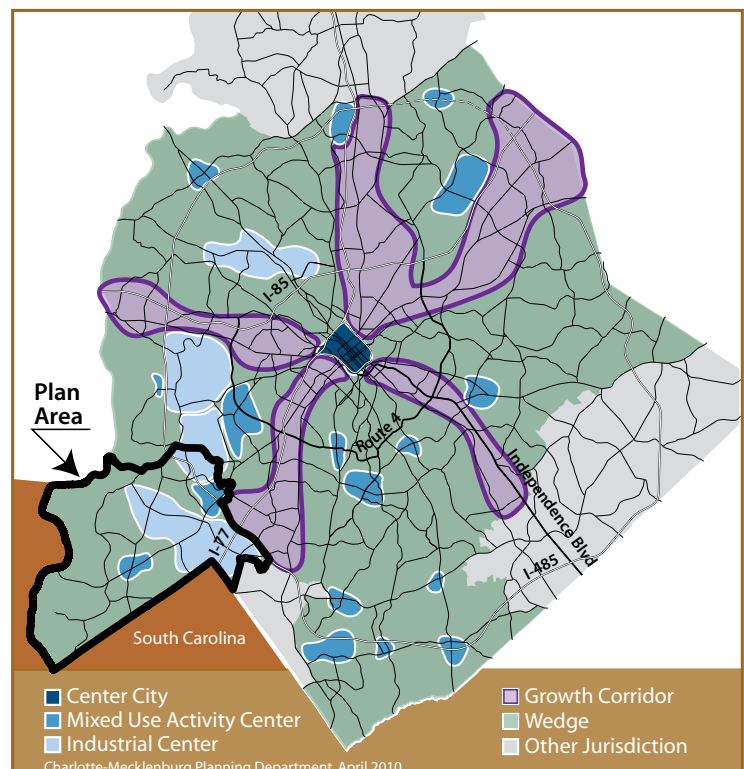
### Purpose

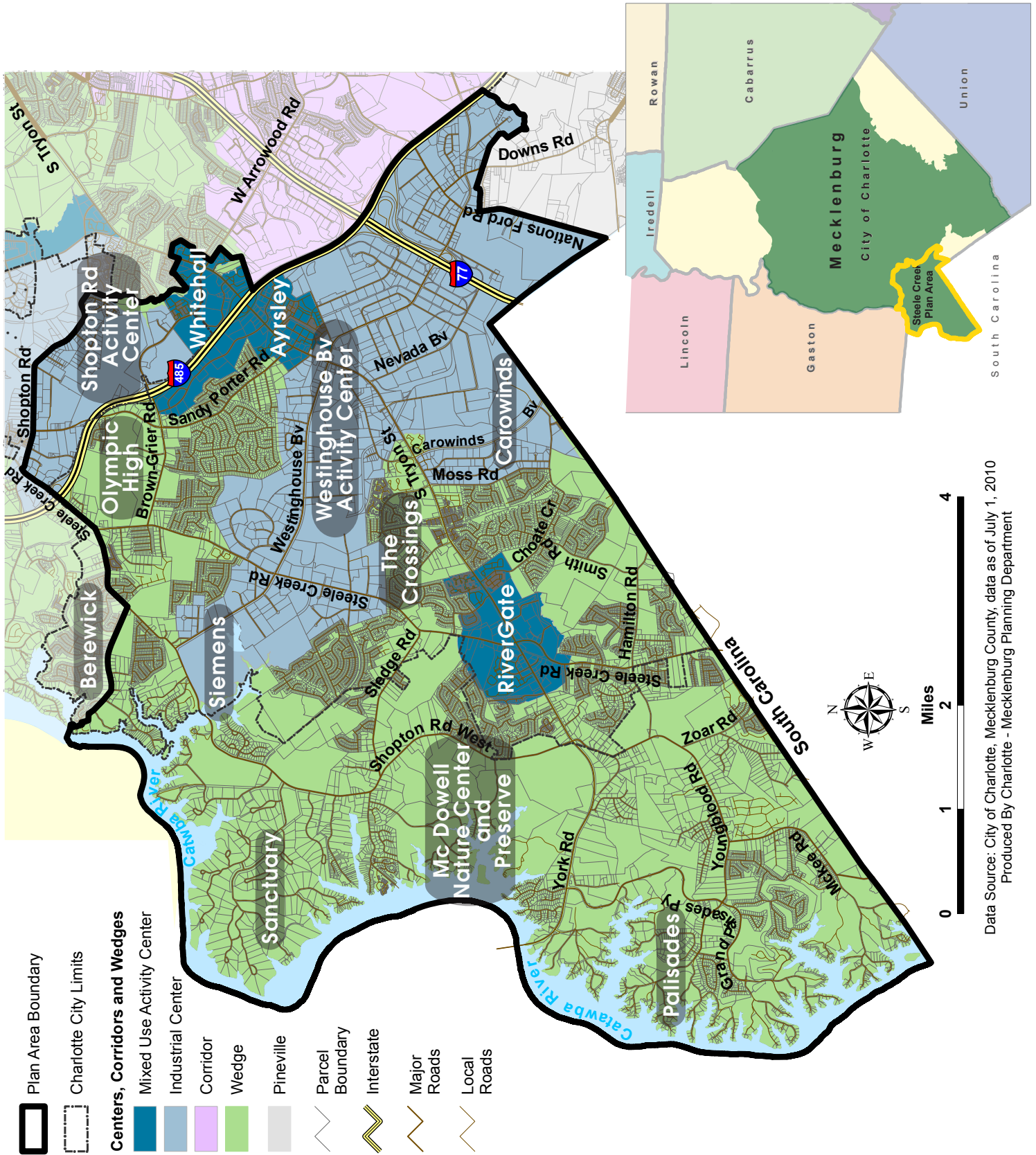
This document establishes a vision for the plan area and provides policy direction to guide future growth and development consistent with the *Centers, Corridors and Wedges Growth Framework*. Once adopted, this plan will:

- update existing plans for the area, including the *Southwest District Plan (1991)*, *Lower Steele Creek (1992)*, *I-485 Interchange Analysis (1999)* and *Westside Strategic Plan (2000)*;
- refine boundaries for the four Activity Centers and Wedge in the plan area;
- address key land use, transportation, urban design and development issues identified during the planning process;
- provide guidance for future land use and infrastructure decisions; and
- function as the official streetscape plan.

### Plan Boundaries

The Steele Creek plan area covers approximately 27,000 acres and has an estimated population of approximately 35,000 based on the County Metrolina Regional Travel Demand Model estimates. The plan area is bounded generally by Shopton Road on the north, South Carolina state line on the south, the Catawba River on the west, and I-485 on the east (See **Map 1, Area Plan Boundary.**)





- Plan Area Boundary
- Charlotte City Limits
- Centers, Corridors and Wedges**
- Mixed Use Activity Center
- Industrial Center
- Corridor
- Wedge
- Pineville
- Parcel Boundary
- Interstate
- Major Roads
- Local Roads



Data Source: City of Charlotte, Mecklenburg County, data as of July 1, 2010  
Produced By Charlotte - Mecklenburg Planning Department

The area encompasses a diverse mixture of residential, retail, office and industrial land uses and a large portion of the area, particularly closer to I-485, I-77 and South Tryon, includes more intense development. The more intense development is located within Rivergate and Whitehall/Ayrsley Mixed Use Activity Centers; and the Westinghouse Industrial Center. Several large industrial parks are also located in the plan area, providing employment opportunities with companies like International Paper, Siemens, Shutterfly and Time Warner Cable.

Seventy percent of the plan area is within a Wedge and includes low to moderate density residential developments like The Crossings, Yorkshire, The Sanctuary and The Palisades. The McDowell Nature Center and Preserve is also located within the Wedge and is the oldest nature preserve in Mecklenburg County. Ninety percent of the preserve is undeveloped, forested, rolling terrain along the banks of Lake Wylie. The plan area also includes additional public facilities such as schools, parks, a library and greenways.

## Organization of this Document

This document is organized into three parts:  
 Part I: The Concept Plan includes the Purpose, Vision Statement, Plan Goals and Policies. Only Part I will become adopted City policy. Part II, Implementation Guide, contains action steps identified to carry out plan policies, and will be used primarily to guide staff work. Part III, Appendix, provides supporting information such as the existing conditions report, market trends and forecasts, and other data used to develop the plan.

### Area Plan Document

#### Part 1: Concept Plan

- Purpose
- Vision Statement
- Goals
- Policies

*Concept Plan is adopted by City Council and will act as a policy guide for future decision making.*

#### Part 2: Implementation Guide

- Action Steps identified to Carry Out Plan Policies

*Provides direction to staff in implementing plan policies*

#### Part 3: Appendix

- Existing Conditions Report
- Trends & Forecasts
- Other Supporting Information

*Provides additional, supporting information*

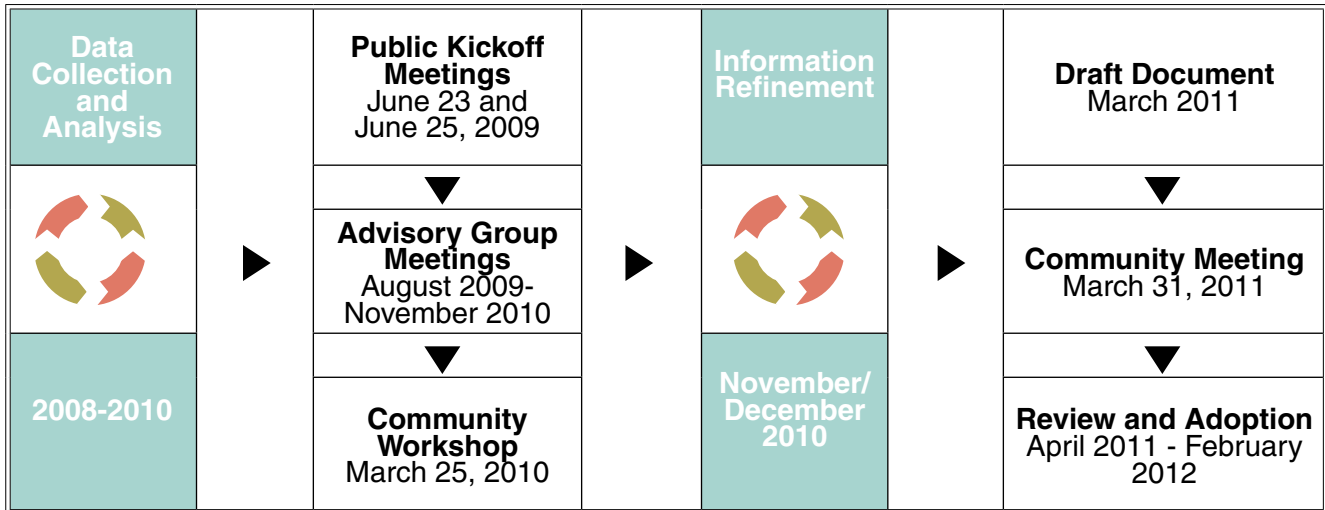
## Planning Process

Development of a plan for the Steele Creek area was identified as a priority to respond to significant increases in population and development activity. The draft *Steele Creek Area Plan* was prepared over a period of 21 months and included the following key public involvement opportunities:

- public kick off meetings held on June 23 and 25, 2009 with approximately 250 people in attendance;
- 62-member Citizen Advisory Group met 16 times over the course of approximately two years to assist staff in developing plan policies;
- final public meetings held on March 31, 2011 with approximately 100 people in attendance.

In addition to these public input opportunities, the Planning Committee of the Charlotte-Mecklenburg Planning Commission hears citizen comments, reviews the area plan and makes a recommendation to the Charlotte City Council. The City Council also hears citizen comments and makes the final decision concerning adoption of the plan.

### Steps in the Area Plan Process



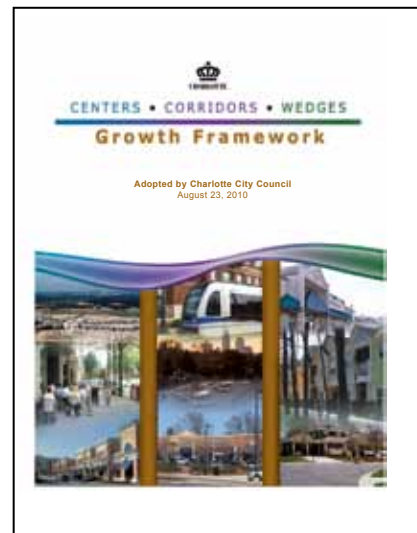
## Policy Framework

The following key documents provided guidance and direction for this plan:

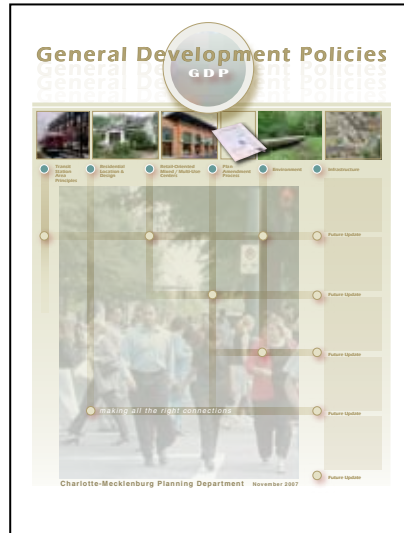
*Centers, Corridors and Wedges Growth Framework* establishes a vision for future growth and development. It does this by identifying three geographic types used to categorize land in Charlotte and its sphere of influence, and outlining the desired characteristics of each of these geographies:

- Activity Centers are generally appropriate for new growth, with the type and intensity of development corresponding to the Center type.
- Some parts of Growth Corridors are often priority locations for new growth, especially in identified Transit Station Areas.
- Wedges are envisioned to remain predominately low density residential with limited higher density housing and neighborhood serving commercial uses.

Much of Charlotte’s future moderate to higher intensity development is expected to occur within the five Growth Corridors and in designated Activity Centers. This will help maximize existing infrastructure and services. This growth framework is important as the Steele Creek plan area encompasses four Mixed Use Activity Centers and a Wedge. The framework provides direction for intensification and mixing of uses within the Mixed Use Activity Centers while creating opportunities for lower intensity residential and supporting services in the Wedge area, consistent with plans for future infrastructure improvements.

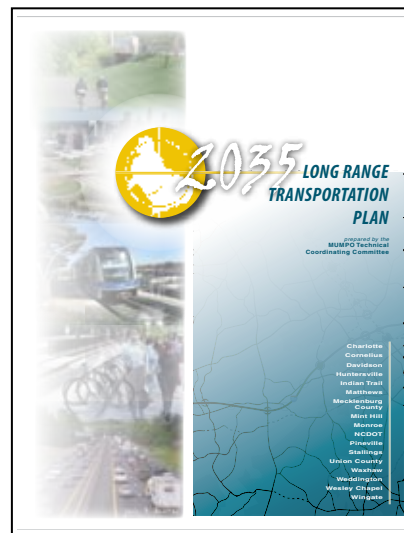


General Development Policies are adopted policies on various topics relevant to development and redevelopment in Charlotte-Mecklenburg. In particular, they address residential location and design, retail-oriented mixed/multi-use centers and transit supportive development. Additionally, the General Development Policies provide guidance to minimize the negative environmental impacts of land development and to more closely link land use and development decisions to the availability of infrastructure to support it. This area plan builds upon the General Development Policies' guidance in these areas: Residential Location and Design, Retail-Oriented Mixed-Multi-Use Centers, Natural Environment and Infrastructure. They also were used to improve the integration of transportation and land use by strategically locating land uses to increase opportunities for transportation choices.



Adopted Land Use Plans include six geographic districts which make up the City of Charlotte's planning jurisdiction: the Northeast, East, South, Southwest, Northwest and Central districts. Each of these areas have a district plan that addresses a wide range of physical development issues and provides parcel-specific land use recommendations for all properties within that district plan. This plan will update the Southwest District Plan.

2035 Long Range Transportation Plan defines the policies, programs and projects to be implemented over the next twenty years, providing transportation choices in Mecklenburg and western Union County. Several Long Range Transportation Projects have been identified within the Steele Creek area and were considered when developing this plan.



Transportation Action Plan defines short and long-term policies for accommodating motor vehicles, transit riders, bicyclists and pedes-

trians together with an implementation "blueprint" for improvements. The Transportation Action Plan's comprehensive "toolbox" of transportation programs will help implement the recommendations made in this plan.

2030 Transit Corridor System Plan is a long-range multi-modal transportation plan that identifies five transportation corridors, a series of Center City improvements, and enhanced bus service and facility improvements throughout the region.

Urban Street Design Guidelines offer a comprehensive approach to designing new and modified streets within the City. They are also a key component of the Transportation Action Plan, and were used in developing this plan to assist with street classifications and cross-sections that will guide the design and redesign of streets. The Urban Street Design Guidelines also address integrating land use and transportation to create synergy between the streets and the land uses adjacent to them.

Greenway Master Plan Update identifies an expanded greenway network and greenway trail system throughout Mecklenburg County. As land is acquired and set aside over time, the greenway system should also improve water quality by reclaiming natural floodplains, protect wildlife habitats and open space, and provide recreational and educational opportunities for residents. The Greenway Master Plan provided guidance on the existing and proposed locations for park and recreational facilities such as the McDowell Nature Center and Preserve, Capps Community Park, T. M. Winget Park and the Walker Branch, Polk Ditch, Steele Creek and Big Sugar Creek Greenways.



# Vision Statement

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The vision for the Steele Creek area is to create a unique and sustainable community that is a great place to live, work, and recreate, while preserving the community's character by incorporating natural and historic features into new development. The community will seek to achieve this vision through the following actions:

- Protecting the Catawba River and its access, McDowell Nature Center and Preserve, natural features and historic places;
- Encouraging a balanced mixture of land uses with enhanced public facilities that include quality schools;
- Developing a safe, accessible and efficient transportation system for pedestrians, bicyclists, transit users and motorists;
- Encouraging community design that recognizes the natural environment; and
- Creating an interconnected network of parks, greenways and open space amenities.

## **Key Opportunities and Constraints Summary**

An understanding of existing conditions, including feedback received from the public during the planning process, reveals opportunities to build upon and constraints to overcome. Key opportunities and constraints were discussed at the first public meeting and formed the basis for the vision statement and ultimately, plan policies.

Key opportunities identified include the area's proximity to the Catawba River, multiple interstate access, preservation of neighborhoods, convenience of Activity Centers and availability of parks, greenways and other natural environmental features. Other opportunities include preservation of neighborhoods and natural environmental features; convenience of Activity Centers for shopping, entertainment and employment; and, availability of parks and greenways, and recognition of the historical significance of "York Road (NC 49)" in street signage along S. Tryon St/York Rd (NC49). Some of the major constraints that were identified include the impact of increased development on the natural environment and lack of public facilities and local street connectivity.





# Goals

To achieve the future envisioned for the plan area, the following goals have been identified. Consideration was given to the opportunities, constraints and vision for the area when developing these goals. The goals build upon adopted plans and policies.

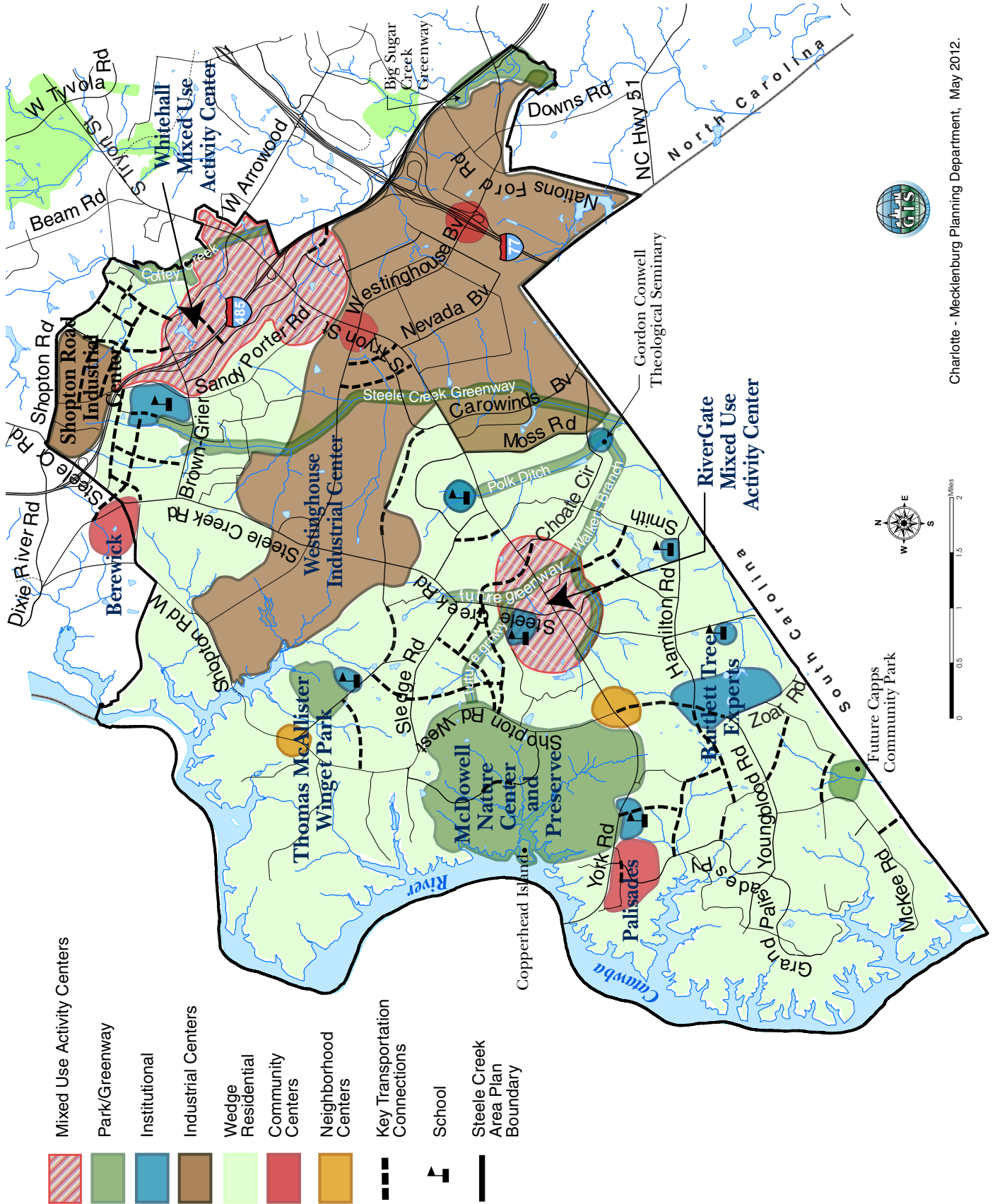
**Land Use Goal:** Establish a land use pattern that offers a variety of land uses and the opportunity to live, work and recreate in close proximity.

**Community Design Goal:** Encourage sustainable development that promotes accessibility for pedestrians and cyclists while integrating green amenities and environmentally sensitive features.

**Transportation Goal:** Provide a safe, accessible and efficient street network for all users.

**Infrastructure and Public Facilities Goal:** Provide public facilities to maintain and improve service levels to area residents.

**Natural Environment Goal:** Encourage environmentally sensitive land development practices that enhance the area's land, air and water quality.



Charlotte - Mecklenburg Planning Department, May 2012.

# Overall Plan Concept

Taking the vision statement and goals into consideration, **Map 2, Concept**, illustrates the recommended development pattern for the plan area. The basic premise is to guide growth and development in a way that protects the area's unique natural environment by preserving open space and focusing retail, industrial and office development in the Activity Centers. The plan strategically places mixed use and moderate density residential developments along major thoroughfares in the Wedge, while keeping the majority of the Wedge area as lower density residential with neighborhood supporting land uses.

## Concept Plan Land Use Patterns

AREA	CHARACTER	Examples of LAND USE	Examples of BUILDING TYPES
<p><b>Industrial Center</b></p> 	<p>Primarily Single Use Office and Industrial with Supporting Retail</p>	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Warehouse</li> <li>• Flex</li> <li>• Retail</li> <li>• Office</li> </ul>	
<p><b>Wedge Residential</b></p> 	<p>Primarily Low to Moderate Density Residential</p>	<ul style="list-style-type: none"> <li>• Single Family Homes</li> <li>• Townhomes</li> <li>• Duplexes, Quadriplexes, Triplexes</li> <li>• Condos</li> <li>• Apartments</li> </ul>	
<p><b>Mixed Use Activity Center</b></p> 	<p>Mixed/Multi Use Retail, Office and Residential</p>	<ul style="list-style-type: none"> <li>• Retail</li> <li>• Apartment Homes</li> <li>• Townhomes</li> <li>• Condos</li> <li>• Storefront Commercial/Retail</li> <li>• Office</li> </ul>	

# Plan Policies

## Overview

The following sections set forth plan policies for land use, community design, transportation, infrastructure and public facilities and the natural environment to realize the vision and goals for the plan area. Goals for each section are briefly stated and followed by the recommended plan policies. Plan policies will guide future land use, zoning and other growth and development decisions.

## Land Use

### GOAL:

Establish a land use pattern that offers a mix of land uses and the opportunity to live, work and recreate in close proximity.

This section establishes future land use policies for the area and recommends appropriate land uses to realize the plan vision. In developing these policies, transportation and community design issues were also considered and incorporated as appropriate. However, separate sections for transportation and community design policies follow and build upon the policies discussed in the land use section.

The land use policies seek to enhance the relationship between land use and transportation in the plan area. The land use policies are organized into two major geographic areas – Wedge and Activity Center as illustrated on **Map 3, Recommended Future Land Use**. The Steele Creek area is largely located within a Wedge, but also a significant Industrial Activity Center, two Mixed Use Activity Centers (RiverGate and Whitehall), and a portion of the Shopton Road Industrial Center. The *Centers, Corridors and Wedges Growth Framework* provides the starting point for developing plan recommendations. This area plan will also help to refine the boundaries of the Activity Centers and Wedge areas within the plan boundary.

Each land use policy has a corresponding implementation strategy detailed in the Implementation Guide of this document.

## Land Use Policies

These land use policies will update land use recommendations from previously adopted plans as well as guide future growth and development. The single family and multi-family land use categories used in the *Southwest District Plan* will be updated to residential with an assigned density for properties within the plan boundary upon the adoption of this area plan. This change will help to implement the community vision by accommodating a variety of housing types at a density appropriate for the specified location.

### I.

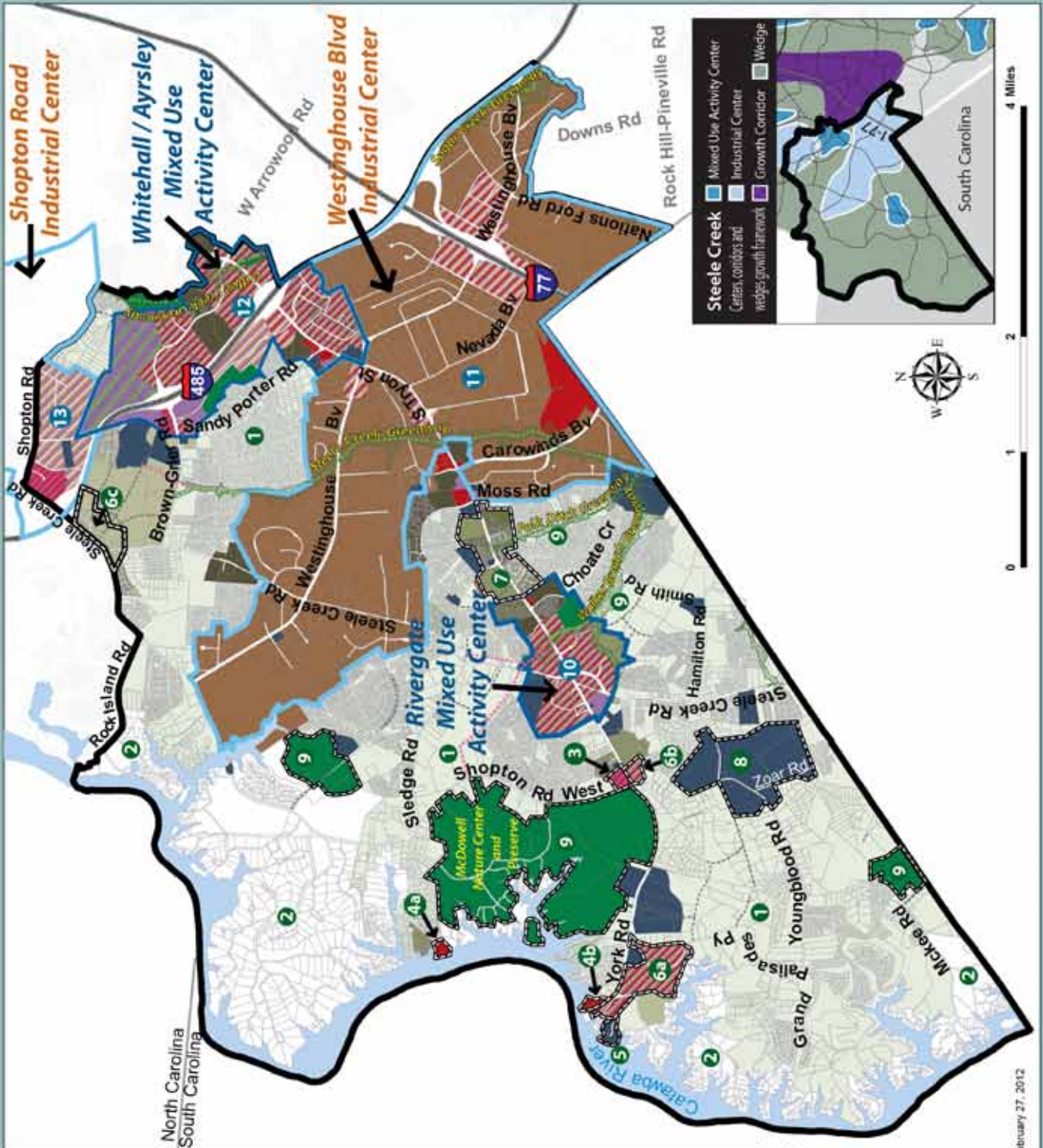
## Wedge Areas

Wedges are the large areas between Growth Corridors primarily comprised of lower density residential neighborhoods. The Wedges provide a range of housing choices as well as supporting facilities and services. Most of the Steele Creek area, approximately 70 percent, is located within a Wedge as defined by the *Centers, Corridors and Wedges Growth Framework*. This area is primarily developed with, and zoned for, residential development. However, there are some nonresidential land uses that support the surrounding residential development. The intent of the land use policies is to preserve the character and integrity of neighborhoods in the Wedge, while improving connectivity and access to green spaces and neighborhood serving land uses. Development in the Wedge should remain predominantly lower density residential, typically up to four dwelling units per acre. Some neighborhood supporting land uses and moderate density housing will also be appropriate as shown on **Map 3, Recommended Future Land Use**, where the street network can accommodate such development. Appropriate locations are also shown for future institutional, office, retail, and mixed use development in the Wedge, primarily along S. Tryon St/York Rd (NC 49).

In addition to preserving neighborhood character, the Wedge land use policies will contribute to the protection of the environment in the areas where it's most vulnerable, mainly around the river, creeks and streams.

Following is a more detailed discussion of the land use policies for the Wedge that are called out with numbers on **Map 3, Recommended Future Land Use**.

# Recommended Future Land Use



**Recommended Land Use**

- Residential <= 1 DUA (See Policy 2, Page 15)
- Residential <= 4 DUA
- Residential <= 5 DUA
- Residential <= 8 DUA
- Residential <= 8 DUA
- Residential <= 12 DUA
- Residential <= 17 DUA
- Institutional
- Office
- Retail
- Industrial-Warehouse-Distribution
- Park/ Open Space
- Residential/ Office/ Retail
- Residential/ Office
- Office/ Retail
- Office/ Industrial-Warehouse-Distribution
- Office/ Retail/ Industrial-Warehouse-Distribution
- Wedge Land Use Recommendation
- Activity Center Land Use Recommendation

**Activity Centers**

- Mixed Use
- Industrial
- Proposed Street
- Plan Area Boundary
- 100 Year Floodplain

**Greenways**

- Developed
- Approved (Greenway Master Plan)
- Recommended

\* Note: The location of the proposed streets is conceptual. Alternative locations, consistent with the intent of the proposed network, will also be considered. Additional streets may be requested to facilitate improved network and connectivity.

Data Source: City of Charlotte, Mecklenburg County, data as of February 27, 2012  
Produced By: Charlotte - Mecklenburg Planning Department

## Wedge Policies

1. **Low density residential development, up to four dwelling units per acre (DUA), should remain the predominant land use in the Wedge area as shown on Map 3, *Recommended Future Land Use*.** Along with maintaining a lower intensity of development in this area, the form and design of future development will be especially important to ensure long-term sustainability. Following the guidance provided in the Community Design section of this document will help to ensure that future development is both environmentally and economically sustainable.
  
2. **Residential development in this area along the Catawba River and in The Sanctuary development should remain low density.** Residential development at a density of up to 1.5 dwelling units per acre is appropriate adjacent to the river and 1.0 dwelling unit per acre in The Sanctuary subdivision. The location of this area within the Lower Lake Wylie Watershed, along with the topography challenges it presents, makes it conducive to continue low density residential development. Although the recommended densities are up to 1.5 and 1.0 dwelling units per acre this is recommended as the average density. A slightly higher density may be appropriate in some areas; when development is encouraged to cluster to preserve environmental features. However, most waterfront properties will not be able to exceed 1.5 dwelling units per acre because of existing deed restrictions limiting lot sizes to approximately  $\frac{3}{4}$  acre.

Most of the parcels along the river are currently zoned R-3 and R-5 (allowing up to three or five dwelling units per acre, respectively); however, regulatory constraints make it difficult to develop at these densities. These zoning districts do, however, provide an opportunity to cluster development to lessen environmental impacts in particularly sensitive areas.

The Sanctuary is currently zoned MX-1 (Innovative). The approved site plan allows for approximately 26 percent of the 1,828-acre

site to be developed. This subdivision is developed with single family homes on large lots and preserves a large amount of open space. Any future development should continue to take into consideration the environmental features in the area.

- 3a. **A convenience size retail center is recommended for the intersection of Shopton Road West and the future connection of Winget Road.** This convenience center (70,000 square feet maximum) would benefit an underserved area, where the nearest proposed retail center is more than three miles away and not yet built. However, if the Winget Road connection does not take place, consideration should be given to an alternate site if it is located on a thoroughfare, has pedestrian and vehicular access and is oriented toward a collector or local street.
  
- 3b. **Allow a mixture of office and retail land uses in the northeast quadrant of York Road (NC 49) and Shopton Road West.** A large amount of office and retail development exists elsewhere in the plan area; therefore, a convenience center (70,000 square feet maximum) is recommended at this location to serve the surrounding residential area.
  
- 4a. **Small scale retail land uses are appropriate at the end of Pine Harbor Road on Lake Wylie.** Retail development at this location should be limited to marina related uses such as boat storage, bait and tackle shop, restaurants (no drive-thru) and other convenience type uses.
  
- 4b. **A commercial marina with supportive retail land uses is appropriate on York Road (NC 49) at Lake Wylie.** These uses could include restaurants (no drive-thru), convenience type uses such as a bait and tackle shop and other marina related retail uses limited to 10,000 square feet.
  
5. **The Red Fez Club which is located on Lake Wylie just south of York Road (NC 49) is an institutional use.** However, if the site were to redevelop from institutional, consideration will be given to a retail use such as a restaurant. This site is also appropriate for consideration to provide public access to the Catawba River.

**6a. Recognize the mixed use center approved as part of The Palisades development.** The approved site plan for The Palisades, a large mixed use development located off York Road (NC 49) near Lake Wylie, allows for 225,000 square feet of retail and office land uses. However, the approved plan notes that an additional 100,000 square feet of retail is allowed with a plan amendment. This additional 100,000 square feet is warranted to serve the needs of the large number of residential units in the vicinity of the Palisades neighborhood.

Additional residential, office and/or retail development may be considered if part of a well designed master plan that is pedestrian-oriented and that meets the community design and transportation guidance provided in this plan. In particular, buildings should be oriented toward the street and well integrated into the overall town center site, with on-street and/or shared parking provided internal to the site. Scale (floor area and building height) should be compatible with scale and character of adjacent Palisades neighborhood. The size and number of free standing single tenant buildings should be kept to a minimum so as not to compromise walkability or to overburden the surrounding transportation network. Civic and/or cultural facilities are also appropriate if well integrated with surrounding uses.

**6b. Allow a mixture of residential, office and retail land uses on the southeast corner of York Road (NC 49) and Youngblood Road** to serve the immediate area. One or any combination of these uses is appropriate. Development should be limited to a convenience size center (70,000 square feet maximum). Residential densities should not exceed eight dwelling units per acre and should serve as a transition to the adjacent residential development.

**6c. Recommend residential up to 6 dwelling units per acre (dua).** However, consideration will be given to a mixture of residential, office and retail land uses along Steele Creek Road. Retail development should be limited to a convenience size center (70,000 square feet maximum).

**7. Residential land uses ranging in density from 6 to 12 dwelling units per acre are appropriate in close proximity to the Activity Centers** where supporting infrastructure and services are generally in place. These locations are specified on **Map 3, Recommended Future Land Use.**

Several parcels located along S. Tryon Street (NC 49) between the RiverGate Mixed Use Activity Center and the Westinghouse Boulevard Industrial Center are appropriate for moderate density residential land uses. S. Tryon Street (NC 49) is a major thoroughfare, the RiverGate Mixed Use Activity Center provides a mix of uses to serve residents and the Westinghouse Boulevard Industrial Center has a large employment base. Therefore, Area 7 can support higher density development. However, multi-family developments should be designed in accordance with the Community Design section of this plan, especially regarding pedestrian circulation, building orientation and site design.

**8. Institutional land uses such as churches, schools and daycares are appropriate at various locations** as indicated on **Map 3, Recommended Future Land Use.** The plan generally recognizes existing institutional land uses; and does not specify appropriate locations for all future institutional land uses.

**Bartlett Tree Experts-Tree Research Laboratories**, a large institutional use in the area, is a learning and research facility that covers over 400 acres. It has an extensive collection of over 2,000 species of trees, shrubs and other plants as well as display gardens. This facility is an important asset to the area but if the site redevelops in the future, the recommended land use is for residential at a density of four dwelling units per acre.

**9. Park and open space land uses, including greenway connections should be provided throughout the Wedge area.** Active open spaces that can serve as a gathering space for area residents as well as greenways and trails that link areas and protect environmental features are important to the livability and sustainability of the plan area.

## II. Activity Centers

Activity Centers are focal points of economic activity typically planned for concentrations of compact development. Many existing Activity Centers are appropriate locations for significant new growth along with enhancements to the supporting infrastructure. There are three types of Activity Centers: Center City, Mixed Use Activity Centers and Industrial Centers. Several portions of the plan area, approximately 30 percent, lie within identified Activity Centers. See **Map 3, Recommended Future Land Use**. The S. Tryon Street (NC 49) and I-485 Interchange area and the intersection of S. Tryon Street (NC 49) and Steele Creek Road are located within Mixed Use Activity Centers (Whitehall/Ayrsley and RiverGate, respectively). Properties located along both sides of Westinghouse Boulevard and properties located on the south side of Shopton Road and along both sides of Sandy Porter Road are located within Industrial Activity Centers (Westinghouse and Shopton Road, respectively).

### Activity Center Policies

#### RiverGate Mixed Use Activity Center

The RiverGate Mixed Use Activity Center currently includes office, institutional, residential and retail land uses. Hospitals are generally considered institutional land uses but Carolinas Medical Center – Steele Creek functions as an office use. This facility primarily provides medical office and outpatient emergency care. Institutional uses in the Center include Southwest Middle School and Steele Creek Branch Library.

Retail includes the RiverGate Shopping Center with approximately 600,000 square feet of existing retail and office uses, developed around a power center format, which is at the core of this Mixed Use Activity Center. Additionally, approximately 1,775 residential units have been approved at RiverGate but not yet built. Other retail centers in the area include Steele Creek Crossing located across S. Tryon Street (NC 49) from RiverGate; this center is approximately over 70,000 square feet and includes a grocery store and drug store. Steelescroft Shopping Center, located at the northwest corner of S. Tryon Street (NC 49) and Steele Creek Road, has approximately 80,000 square feet of retail space and includes a grocery store and other retail uses. Together these shopping centers total approximately

750,000 square feet which constitutes a super regional size center as defined in the General Development Policies (GDP).

While the RiverGate shopping center is already developed with retail and office uses, in the future, higher density and more intense development that incorporates a mix of retail, office and residential uses may be appropriate, if it addresses the community design and transportation guidance provided in this plan. In particular, future development should be more compact and better connected so that people can easily walk between the various uses. Street connections within the center should reduce block sizes and provide interconnectivity for not only automobile drivers but transit riders, cyclists and pedestrians.

New streets should include pedestrian amenities like pedestrian scale lighting, benches, trash receptacles, on-street parking and walking surface texture. Existing surface parking lots could transition over time to decked parking structures wrapped with active ground-floor uses.

Building heights in this area should not exceed four stories. In areas designated for residential, office and retail land uses, two or any combination of retail, office and/or residential uses is appropriate. If the vertical integration of uses is not feasible, the area should develop and redevelop with a horizontally integrated mix of office, retail and / or residential uses that are interconnected so that buildings function collectively with common pedestrian connections and open space.

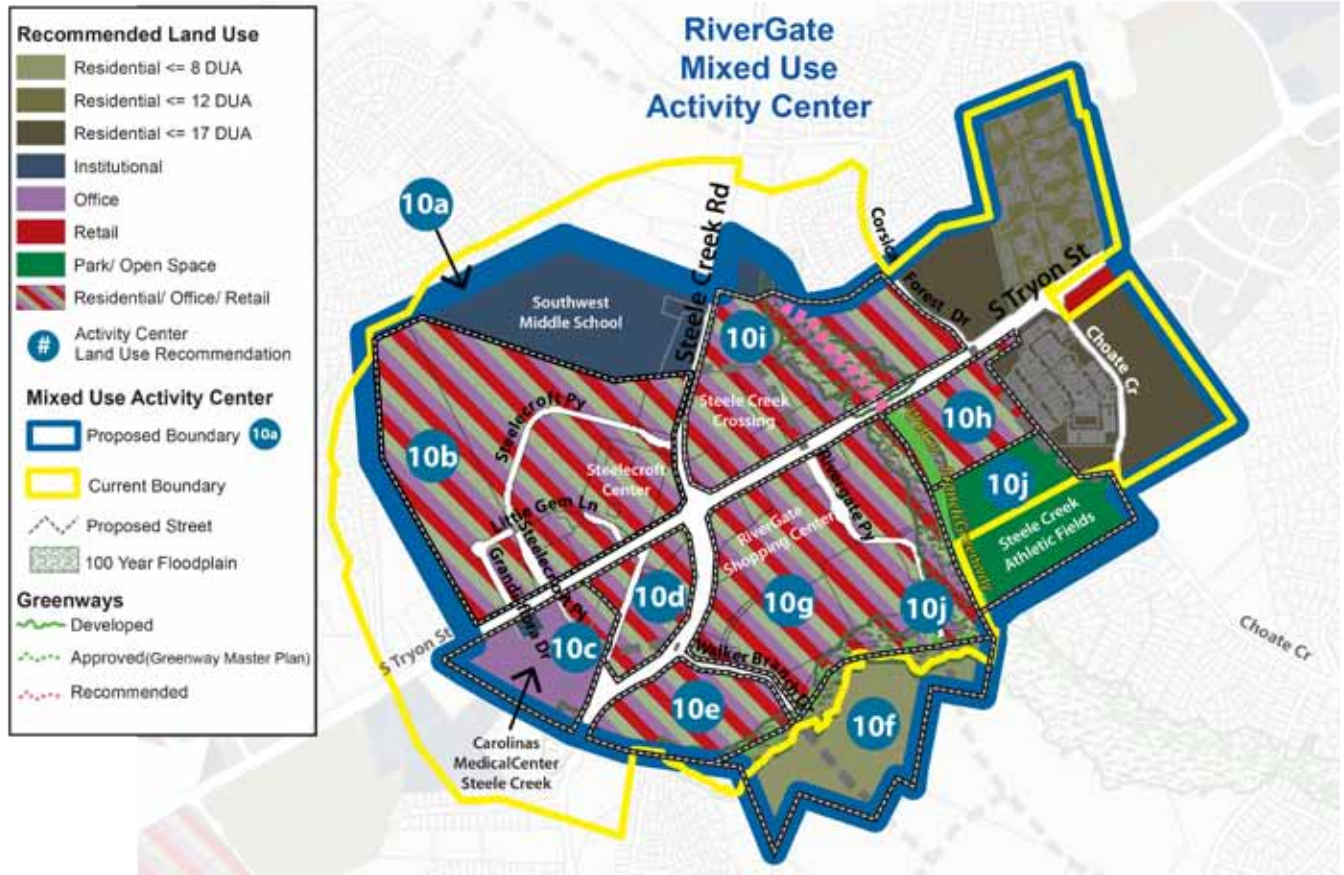
More specific policies for the RiverGate Mixed Use Activity Center follow and are illustrated in **Graphic 1**.

**10a. Refine the boundaries of the RiverGate Mixed Use Activity Center** as shown on Graphic 1 to include parcels that are appropriate for more intense development and to remove parcels that better relate to the surrounding Wedge area.

- The parcel located on the southeast corner of S. Tryon Street (NC 49) and Choate Circle that is zoned and recommended for retail land uses should be added to the RiverGate Mixed Use Activity Center.



**Graphic 1:**  
RiverGate Mixed Use Activity Center (refer to Policy 10)



- In addition, the parcel that is located on the southerly side of Walker Branch Greenway and recommended for residential up to eight dwelling units per acre should be included in the Activity Center. This provides the opportunity to better orient the residential development to the greenway and Activity Center.
- Several parcels that are located on the periphery of the Activity Center and primarily zoned and recommended for residential land uses are to be included in the Wedge Area.

**10b. Residential, office and retail land uses are appropriate in the northwest quadrant of York (NC 49) and Steele Creek roads.** This area is currently developed with office and retail land uses along York Road (NC 49) and residential development to the rear. This quadrant should continue to function as a neighborhood center (up to 100,000 square feet of retail and 30,000 square feet of office).

**10c. Office land uses are recommended for this area.** Carolinas Medical Center recently opened a medical office and emergency care facility on this site. Buildings should front streets with parking at the rear of the site and consideration may also be given to on-street parking along internal streets. Strong pedestrian connections should be provided to surrounding uses and amenities. Building heights should not exceed four stories.

**10d.** This area is currently vacant and zoned for office and residential uses. **If it does not develop within the existing zoning; residential, office and / or retail land uses are appropriate.** Buildings should front streets with parking at the rear of the site and consideration may also be given to on street parking along internal streets. Development should focus on improving internal and external pedestrian connectivity. Building heights should not exceed six stories.

**10e.** This area is currently vacant and zoned for residential development. **If it does not develop within the existing zoning; residential, office and / or retail land uses are appropriate.** Building heights should not exceed four stories, outparcels are discouraged and parking structures should be wrapped with active ground floor uses. Buildings should make use of the greenways and open space amenities, front Walker Branch Drive and Steele Creek Road with parking at the rear of the site. On street parking may be considered along Walker Branch Drive.

**10f. Residential up to eight dwelling units per acre is appropriate in this area.** This could include a combination of single family and multi-family uses such as detached single family homes, duplexes/quadrplexes and townhomes. The highest intensity of development should be closest to the retail core of the Activity Center and transition to lower intensity near the Wedge area. Walker Branch Drive and Rivergate Parkway should be extended through the subject property to improve connectivity to adjacent parcels. Strong pedestrian connections are encouraged to link surrounding uses and amenities. The Walker Branch Greenway is adjacent to the property and can be used as an amenity to this area. Buildings could face the greenway and the greenway can provide pedestrian access to other areas.

**10g.** The **RiverGate Shopping Center site may intensity** with infill development concentrated around the core of the Activity Center. Future development should be compact and better connected so that people can easily walk between various uses. Infilling surface parking lots with residential, office and retail development is appropriate with the following considerations: buildings should not exceed six stories and should front an internal street network with strong pedestrian connections to surrounding uses and amenities. Future development may also include infill surface parking structures wrapped with active ground floor uses and should adhere to the community design and transportation guidance provided in this plan.

**10h.** This area is currently vacant and zoned for residential development. **However, a mix-**

**ture of residential, office and / or retail land uses are appropriate.** Building heights should not exceed four stories, outparcels are discouraged and parking structures should be wrapped with active ground floor uses. Buildings should make use of the Walker Branch Greenway and open space amenities.

**10i. The northeast quadrant of S. Tryon Street (NC 49) and Steele Creek Road is recommended for a mix of residential, office and / or retail land uses.** Property located along S. Tryon Street (NC 49) is developed with a retail center. Property to the rear of the shopping center is zoned for office land uses, while other parcels are zoned for residential land uses. Building heights should not exceed four stories, outparcels are discouraged and parking structures should be wrapped with active ground floor uses. Buildings should make use of the Walker Branch Greenway and open space amenities.

**10j. Park and open space land uses, including greenway connections should be provided throughout the RiverGate Mixed Use Activity Center.** Active open spaces that serve as a gathering space, incorporate greenways and trails, link areas and preserve environmental features are an important asset to this Center. Existing parks and open spaces in the Center are Walker Branch Greenway, Steele Creek Greenway and Steele Creek Athletic Fields.

### **Westinghouse Industrial Center**

The Westinghouse Industrial Center is the largest industrial sub market in North Carolina, and provides employment opportunities for people throughout the region. It is anticipated that the area will continue to attract more industrial and office uses, especially given its location along two major interstates (I-77 and I-485) and the large number of businesses that exist in the area.

The continued development of industrial land uses is appropriate in this Industrial Center along with some retail and office uses that support area employees and visitors. These supporting retail and office land uses should be focused around the intersections of S. Tryon Street (NC 49)/Westinghouse

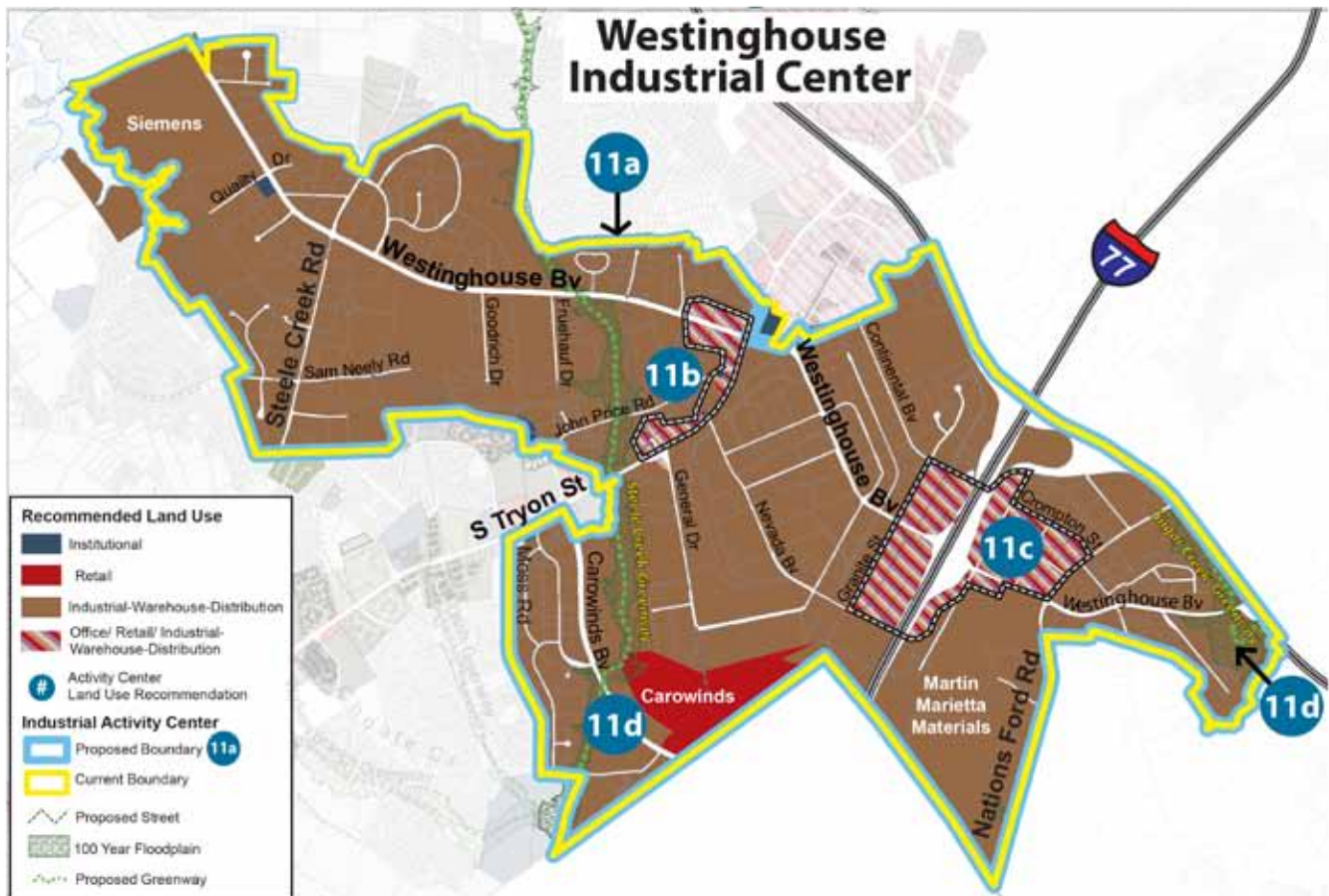
Boulevard and I-77 / Westinghouse Boulevard or be internal to industrial / business parks. Additional street connections may be needed to improve access, circulation, and support future development within the Industrial Center.

**11a. Property located on the northerly side of Westinghouse Boulevard east of S. Tryon Street (NC 49) is adjacent to the Whitehall/ Ayrley Mixed Use Activity Center and should be included in the Activity Center.** Refer to **Graphic 2**. A couple of the parcels are recommended for institutional land uses while the remaining parcels are recommended for a mixture of residential, office and retail land uses. These uses at this location are considered more appropriate in the Activity Center.

**11b. Properties located along S. Tryon Street (NC 49), extending from Westinghouse Boulevard to the proposed Steele Creek Greenway, are appropriate for office, civic, and convenience type retail uses that serve the Industrial Center.** There is existing vacant retail space in this area that offers redevelopment opportunities. In addition, the new Charlotte-Mecklenburg Police Department Steele Creek Division Police Station is planned for the southwest corner of S. Tryon Street (NC 49) and Westinghouse Boulevard.

**11c. Office, retail and industrial warehouse distribution land uses are appropriate at the intersection of I-77 and Westinghouse Boulevard which is the key gateway to this major industrial and employment area.** This area is predominantly developed with a mixture of retail and industrial land uses. In the future, one or any combination of these uses is appropriate. However, the landscaping and

**Graphic 2:**  
Westinghouse Boulevard Industrial Center (refer to Policy 11)



pedestrian network needs to be well integrated into future development and future development should not compromise the accessibility of the interchange.

- 11d. Support the proposed greenways in the area.** The proposed Steele Creek Greenway generally extends from Brown-Grier Road south to the County Line and the proposed Big Sugar Creek Greenway is located near the intersection of Westinghouse Boulevard and I-485. These proposed greenways provide the opportunity to preserve open space, provide pedestrian amenities and protect environmental features in the area.

#### **Whitehall/Ayrsley Mixed Use Activity Center**

This Activity Center was initially developed with mainly office and industrial land uses and in more recent years, new developments have incorporated retail and residential uses. Ayrsley Town Center, located across S. Tryon Street (NC 49) from Whitehall, southwest of the I-485 interchange, is part of the Whitehall Mixed Use Activity Center. This Mixed Use Activity Center, previously referred to as the Whitehall Mixed Use Activity Center, should be renamed Whitehall/Ayrsley Mixed Use Activity Center to recognize Ayrsley, as a significant mixed use development within the Center boundaries. Future development in the Ayrsley area should continue to be designed to be compact and pedestrian oriented.

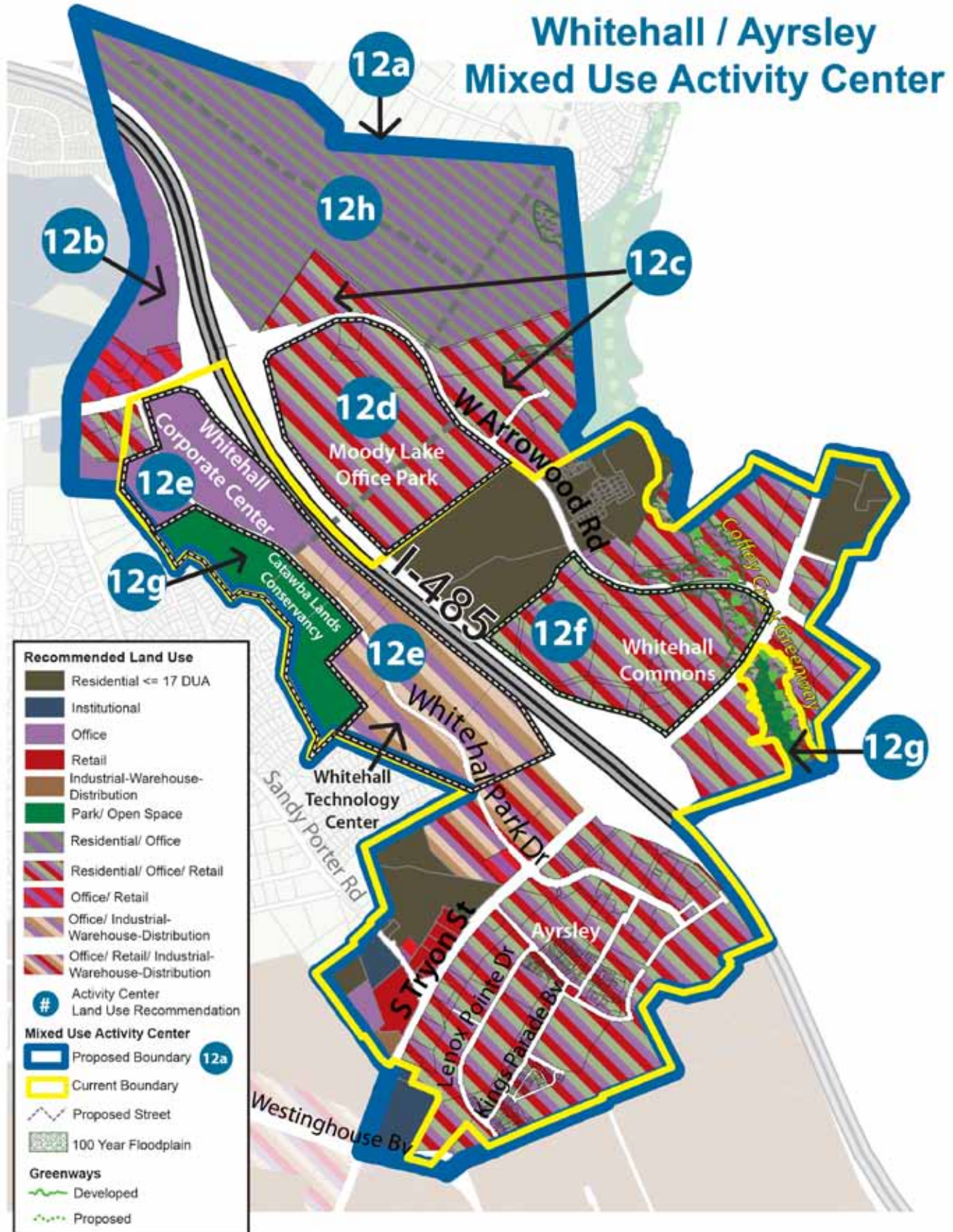
- 12a. Modify the Whitehall/Ayrsley Mixed Use Activity Center boundaries as shown on *Graphic 3* to include additional parcels that are appropriate for a greater mixture and intensity of development.** Property located along the westerly side of I-485 north of W. Arrowood Road and property located along the easterly side of I-485 and north and south of W. Arrowood Road should be added to the Mixed Use Activity Center. Previously these parcels were included in the Wedge area. However, the recommended mix of residential, office and retail land uses is appropriate in the Activity Center. The Moody Lake Office Park is located in this area.

Parcels located off the southerly side of S. Tryon Street (NC 49) along the Coffey Creek Greenway (currently in the Wedge area) as well as property located on the northeast corner of S. Tryon Street (NC 49) and Westinghouse Boulevard (currently in the Westinghouse Boulevard Industrial Center) are recommended to be included in this Mixed Use Activity Center.

- 12b. Office and retail land uses are recommended along the west side of I-485 north of W. Arrowood Road.** A mixture of office and retail land uses is appropriate near the intersections transitioning to office land uses.
- 12c. A mixture of residential, office and / or retail land uses are appropriate adjacent to Moody Lake Office Park.** Building heights should not exceed four stories and outparcels are discouraged. Buildings should make use of the greenways and open space amenities.
- 12d. Recognize the Moody Lake development at Arrowood Road and I-485, which was approved in 2008, as a mixed use development.** The approved site plan allows for 1.8 million square feet of office space, 40,000 square feet of retail and 400 residential units.
- 12e. The west side of I-485 along Whitehall Park Drive should continue to develop with office and industrial-warehouse distribution uses, with a higher concentration of office at the intersection of Arrowood / Brown Grier Road and I-485.** Building heights in this area should not exceed six stories. It is important in this area that future development does not compromise the accessibility of the interchange.
- 12f. Future infill development may include office, retail and residential land uses concentrated around the intersection of Arrowood Road and S. Tryon Street (NC 49).** Currently, this area is developed with retail (Wal Mart Shopping Center), light industrial, and multi-family residential land uses. Development in this area may intensify in the future. Infilling the surface parking lots with development is appropriate with the following considerations: buildings should front an internal street network with strong pedestrian connections

**Graphic 3:**

Whitehall/Ayrsley Mixed Use Activity Center (refer to Policy 12)

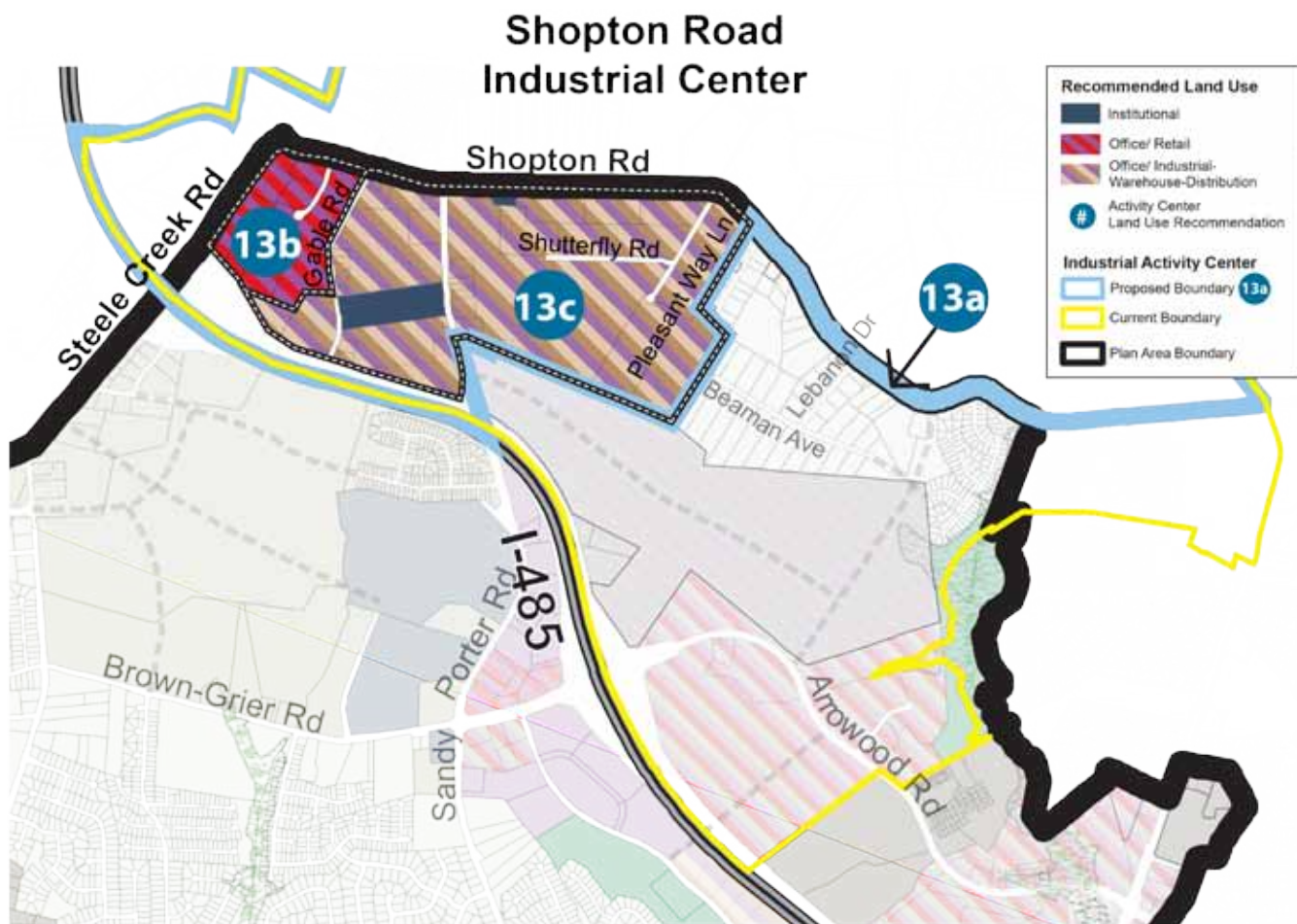


to surrounding uses and amenities. Buildings should not exceed six stories. More intense development is appropriate for this site if it is compact and better connected so that people can easily walk between the various uses and it adheres to the community design and transportation guidance provided in this plan. Also, future development should not compromise the accessibility of the interchange.

**12h. A mixture of residential and office land uses are appropriate in this area.** However, residential development should serve as a buffer between existing single family development and non residential development.

**12g. Provide open space and greenways.** Land adjacent to Whitehall Technology Park is owned by the Catawba Lands Conservancy and is to be preserved as open space. Also, portions of the Coffey Creek Greenway are located in this area and recommended to expand in the future.

**Graphic 4:**  
Shopton Road Industrial Center (refer to Policy 13)



### Shopton Road Industrial Center

The portion of the Shopton Road Industrial Center within the plan area boundaries is mostly vacant and sparsely developed with a few industrial / warehouse distribution, and residential land uses.

- 13a. Modify the boundaries of the Shopton Road Industrial Center to exclude the residential portions along Shopton Road, Lebanon Drive and Beaman Avenue as shown on *Graphic 4*.** Include this existing residential neighborhood in the Wedge. Properties located along both sides of Arrowood Road, which includes the Moody Lake development, are recommended to be included the Whitehall / Ayrley Mixed Use Activity Center (See **Policy 12A**).
- 13b. Retail and / or office land uses are appropriate closer to the intersection of Shopton Road and Steele Creek Road; as well as the interchange with I-485.** It will be important in this area that future development does not compromise the accessibility of the interchange.
- 13c. This area is appropriate to develop over time with more industrial / warehouse distribution land uses, due to its proximity to I-485 and the airport, just north of this area.** Industrial uses adjacent to residential should provide appropriate buffers and screening and be designed to lessen any negative impacts on the neighborhood.

## Community Design

Community design policies help to ensure that new development complements the existing or desired character of the Steele Creek community. While design policies alone do not dictate land use or zoning, they are used to strengthen how various land uses fit together. These policies consider not only the built environment in conjunction with the natural environment, but also consider how people move through those spaces as pedestrians, bicyclists or automobile drivers.

### GOAL:

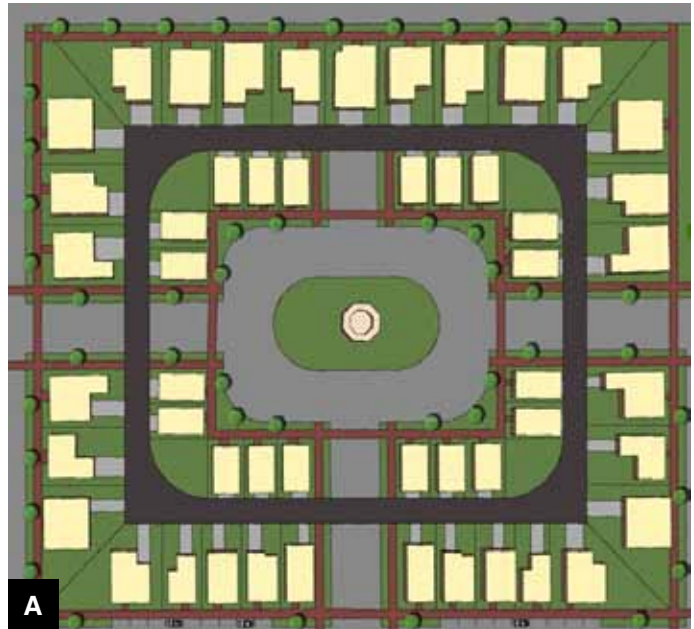
Encourage development that promotes accessibility for pedestrians and cyclists while integrating green amenities and protecting environmentally sensitive features.



*Pleasant streetscape created with sidewalks, pedestrian scale lighting, street trees and on-street parking.*

**C**lose attention to building design serves to enhance the community. Design policies do not result in conformity of design, but provide direction for both new and infill development.

RESIDENTIAL Design Policies <sup>1</sup>				
14 Building Architecture and Site Design	Policy Number	Graphic Reference	Single Family Detached	Single Family Attached and Multi-Family
<i>Preserve historically or architecturally significant structures.</i>	14A		●	●
<i>Avoid blank walls along pedestrian circulation areas and public rights-of-way.</i>	14B		●	●
<i>Orient building towards internal street network (unless a thoroughfare) or common open space and provide pedestrian access to the street.</i>	14C	<b>A</b>	●	●
<b>Encourage clustered development where appropriate, such as areas where the preservation of open space and/or environmentally sensitive areas is particularly important.</b>	14D		●	●
<b>Provide a variety of housing types.</b>	14E	<b>B</b>	●	●
<b>Blend the scale and height of development with respect to single family neighborhoods.</b>	14F			●
<b>Locate service areas and dumpsters away from pedestrian circulation areas.</b>	14G			●
<sup>1</sup> Adopted by City Council, the <i>General Development Policies (GDP)</i> provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. <b>Additional, plan-specific policies are shown in bold font.</b> Plan-specific policies augment the GDP design guidelines.				



**A** Buildings are oriented away from South Tryon Street and towards an internal street network.



**B** Provide a variety of housing types.



*These policies provide direction to accommodate growth and change while protecting the natural environment on which we depend, including the quality of our air, water and land.*

RESIDENTIAL Design Policies <sup>1</sup>				
15 Natural Environment	Policy Number	Graphic Reference	Single Family Detached	Single Family Attached and Multi-Family
<i>Provide a meaningful amount of usable and accessible open space. In single family development, consider incorporating common open space.</i>	15A		●	●
<i>Incorporate functional, unique, natural, and/or historical elements into the open space.</i>	15B		●	●
<i>Preserve steep slopes along streams or adjacent to significant natural landscape features.</i>	15C	<b>C</b>	●	●
<i>Comply with Tree Ordinance.</i>	15D		●	●
<b>Provide and encourage accessibility to the Catawba River and other natural amenities through better connected streets, sidewalks and trails.</b>	15E	<b>D</b>	●	●
<b>Design open space to create a network of green spaces.</b>	15F		●	●
<b>Use low maintenance native vegetation as much as possible.</b>	15G		●	●
<b>Preserve prominent stands of existing trees, whenever feasible.</b>	15H		●	●
<b>Buffer development along South Tryon St/York Road (NC49) with landscaping.</b>	15I	<b>E</b>	●	●

<sup>1</sup> Adopted by City Council, the *General Development Policies (GDP)* provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. **Additional, plan-specific policies are shown in bold font.** Plan-specific policies augment the GDP design guidelines.



**C**  
Preserve steep slopes along creek and stream beds.



**D**  
Provide access to the Catawba River through a system of trails, sidewalks and greenways.



**E**  
Buffer development along South Tryon Street with landscaping to reduce noise impacts.

**P**roviding a safe, accessible and comfortable network of streets, sidewalks and pathways for all modes of transportation is an important step in establishing a livable community. The policies below provide guidance for achieving mobility and connectivity for pedestrians, bicyclists and automobile drivers. For additional policies concerning transportation, please see the Transportation section of the plan, as well as the *City of Charlotte Urban Street Design Guidelines (2003)*.

RESIDENTIAL Design Policies <sup>1</sup>				
16 Pedestrian and Vehicular Network	Policy Number	Graphic Reference	Single Family Detached	Single Family Attached and Multi-Family
<i>Provide pedestrian amenities such as street furniture and pedestrian scale lighting.</i>	16A	<b>F</b>		•
<i>Provide bicycle parking in appropriate common areas (for example, playground, swimming pools.)</i>	16B		•	•
<i>Provide pedestrian/bicycle connections to nearby parks, greenways, bikeways and trails.</i>	16C		•	•
<i>Provide direct pedestrian and bicycle connections between all abutting or adjacent developments and transit stops.</i>	16D		•	•
<i>Design streets with pedestrian safety and comfort in mind.</i>	16E		•	•
<i>Design street system to calm traffic.</i>	16F		•	•
<i>Align collectors at thoroughfare intersections to promote safe crossings for pedestrians, cyclists and automobile drivers.</i>	16G		•	•
<i>Encourage on-street parking along public and private streets where appropriate to reduce the size of surface parking lots.</i>	16H	<b>G</b>		•
<i>Provide multiple vehicular entry points.</i>	16I		•	•
<i>Design an internal street system with spine road, including:</i> <ul style="list-style-type: none"> <li>• <i>parallel parking, street trees, and sidewalks;</i></li> <li>• <i>driveways or secondary streets to connect parking lots and primary street; and</i></li> <li>• <i>sidewalks on secondary streets.</i></li> </ul>	16J	<b>H</b>		•
<b>Reduce driveway cuts along S. Tryon St/ York Rd (NC 49) and other thoroughfares.</b>	16K		•	•
<b>Locate parking to the side or rear of buildings and screen parking from public rights-of-way.</b>	16L			•
<sup>1</sup> Adopted by City Council, the <i>General Development Policies (GDP)</i> provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. <b>Additional, plan-specific policies are shown in bold font.</b> Plan-specific policies augment the GDP design guidelines.				



Amenities such as street furniture and pedestrian scaled lighting can make an environment more pleasurable to the pedestrian.



On street parking is encouraged where feasible to provide easy access for visitors.



Create a spine street with on street parking, planting strips and sidewalks in accordance with USDG standards.

## Development Scenario

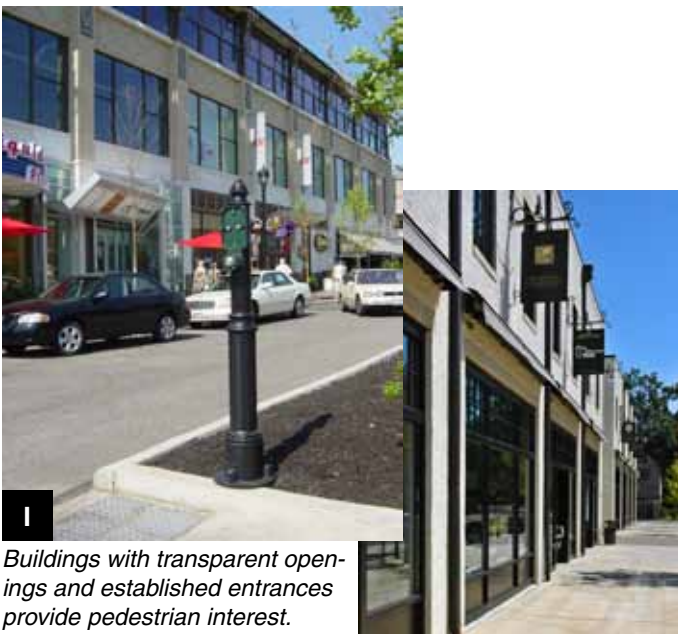


Shown above is a conceptual plan for a site located along S. Tryon Street (NC 49) in the Steele Creek plan area. The recommended future land use for this area is a mix of residential, office and retail land uses. This scenario is presented to demonstrate some of the community design principles discussed in the plan.

Architecture and landscape design define streets and public spaces as areas of shared use. Streets lined by buildings and trees rather than vast expanses of parking lots provide a visually rich and physically safe environment.

NON-RESIDENTIAL Design Policies <sup>1</sup>							
17 Building Architecture and Site Design	Policy Number	Graphic Reference	Retail-Oriented Mixed/Multi Use	Retail	Office	Mixed Use	Industrial
<i>Design buildings with transparent openings, ornamentation, and architectural character.</i>	17A	I	●	●	●	●	
<i>Establish entrances with pedestrian interest.</i>	17B	I	●	●	●	●	
<i>Orient buildings towards street and provide pedestrian access.</i>	17C		●	●	●	●	
<i>Arrange buildings in an orderly block pattern.</i>	17D		●	●	●	●	
<i>Discourage tearing down historic or architecturally significant structures.</i>	17E		●	●	●	●	●
<i>Minimize impacts of drive-thru development.</i>	17F		●	●	●	●	
<i>Design for pedestrian safety.</i>	17G		●	●	●	●	●
<i>Locate dumpsters and service areas away from residential areas.</i>	17H		●	●	●	●	●
<b>Vary horizontal and vertical plane of elevations to break up the mass and scale of large buildings.</b>	17I	J	●	●	●	●	●
<b>Break down the mass of the building horizontally and vertically to provide for human scale and visual interest.</b>	17J		●	●	●	●	
<b>Blend the scale and height of development with respect to single family neighborhoods.</b>	17K		●	●	●	●	●

<sup>1</sup> Adopted by City Council, the *General Development Policies (GDP)* provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. **Additional, plan-specific policies are shown in bold font.** Plan-specific policies augment the GDP design guidelines.



**I**  
*Buildings with transparent openings and established entrances provide pedestrian interest.*



**J**  
*Distinguish the ground level of retail and mixed use buildings and provide variation in massing, materials, roof lines, etc. for visual interest.*

NON-RESIDENTIAL Design Policies <sup>1</sup>							
18 Natural Environment	Policy Number	Graphic Reference	Retail-Oriented Mixed/Multi Use	Retail	Office	Mixed Use	Industrial
	<i>Preserve steep slopes along stream beds or adjacent to significant natural landscape features.</i>	18A		•	•	•	•
<i>Provide a meaningful amount of usable and accessible common open space and integrate the tree canopy into it.</i>	18B	<b>K</b>	•	•	•	•	•
<i>Minimize impervious areas.</i>	18C		•	•	•	•	•
<i>Avoid piping creeks and minimize channelization. Use a bridge, rather than a culvert at existing creeks when possible.</i>	18D		•	•	•	•	•
<i>Retain existing landscaping when possible. Mass clearing is not preferable and existing tree canopy should be preserved where practical.</i>	18E		•	•	•	•	•
<b>Provide large natural buffers between industrial uses and surrounding areas, including the Catawba River.</b>	18F						•
<b>Buffer development along S. Tryon St/York Rd (NC 49) through a combination of landscaping treatments and/or existing landscaping.</b>	18G		•	•	•	•	•

<sup>1</sup> Adopted by City Council, the *General Development Policies (GDP)* provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. **Additional, plan-specific policies are shown in bold font.** Plan-specific policies augment the GDP design guidelines.



**K** Provide usable and common open space throughout mixed use developments.

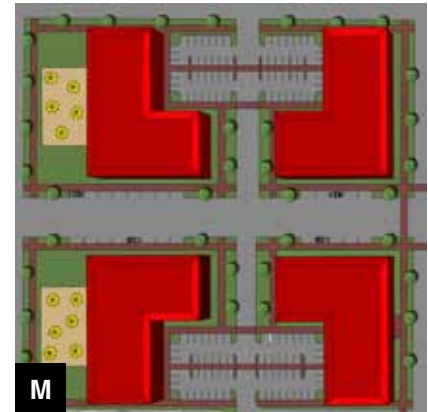
Circulation in and through a site should be comfortable, safe, secure and efficient for pedestrians, bicyclists and automobile drivers.

NON-RESIDENTIAL Design Policies <sup>1</sup>							
19 Pedestrian and Vehicular Network	Policy Number	Graphic Reference	Retail-Oriented Mixed/Multi Use	Retail	Office	Mixed Use	Industrial
<i>Create an interconnected sidewalk system.</i>	19A	<b>L</b>	•	•	•	•	•
<i>Design short blocks with an organized street pattern.</i>	19B		•	•	•	•	•
<i>Provide pedestrian/bicycle connections to nearby parks, greenways, bikeways and trails.</i>	19C		•	•	•	•	•
<i>Design streets with pedestrian safety and comfort in mind.</i>	19D		•	•	•	•	•
<i>Provide ample sidewalk width to accommodate pedestrian circulation, congregation, outdoor dining, and amenities such as street furnishings, trash receptacles, art work and trees.</i>	19E		•	•	•	•	•
<i>Establish clear "way-finding" signage for pedestrians and automobile drivers where appropriate.</i>	19F	<b>L</b>	•	•	•	•	•
<i>Provide safe pedestrian circulation throughout the development, including through parking lots and decks.</i>	19G	<b>M</b>	•	•	•	•	•
<i>Provide safe transit waiting facilities.</i>	19H		•	•	•	•	•
<i>Establish a central vehicular access into the site from the more auto-oriented street and provide secondary access options from the minor streets.</i>	19I		•	•	•	•	•
<i>Design access from surrounding neighborhood so that the appearance is residential in character.</i>	19J		•	•	•	•	•
<i>Integrate landscaping with seating along facades when and where appropriate. When practical, work to integrate the existing tree canopy into the site design.</i>	19K		•	•	•	•	•
<b>Reduce driveway cuts along South Tryon Street and other thoroughfares.</b>	19L		•	•	•	•	•
<i>Encourage shared driveways and alleys within the development.</i>	19M		•	•	•	•	•
<b>Orient buildings away from South Tryon Street.</b>	19N		•	•	•	•	•
<i>Provide bicycle parking and storage areas.</i>	19O		•	•	•	•	•
<i>Design parking lots on a street/block pattern and break up large surface lots with landscaping.</i>	19P	<b>M</b>	•	•	•	•	•
<i>Encourage commercial or residential uses in parking decks fronting pedestrian circulation areas.</i>	19Q		•	•	•	•	•
<i>Provide structured parking where feasible to conserve land and minimize surface parking.</i>	19R		•	•	•	•	•
<b>Locate parking to the side or rear of buildings and screen parking from public rights-of-way.</b>	19S	<b>M</b>	•	•	•	•	•

<sup>1</sup> Adopted by City Council, the *General Development Policies (GDP)* provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. **Additional, plan-specific policies are shown in bold font.** Plan-specific policies augment the GDP design guidelines.



A well designed wayfinding system allows pedestrians to find their way around the development.



An interconnected sidewalk system creates a safe pedestrian environment.

*Freestanding single tenant buildings (out parcels) can be classified as either independent or interconnected. Independent buildings function separate of the surrounding complex while interconnected buildings share parking and site amenities with other buildings in the same complex whether independent or interconnected. The design of freestanding single tenant buildings should be sensitive to the surrounding neighborhood, both built and natural environments.*

NON-RESIDENTIAL Design Policies <sup>1</sup>							
20 Freestanding Single Tenant Buildings	Policy Number	Graphic Reference	Retail-Oriented Mixed/Multi Use	Retail	Office	Mixed Use	Industrial
<i>Design buildings to relate to the scale, height and configuration of the center.</i>	20A		●	●	●	●	●
<i>If drive-thru(s) are included, they must not compromise pedestrian circulation.</i>	20B	<b>N</b>	●	●	●	●	●
<i>Design to facilitate walking to the freestanding building from other buildings within the center. Provide safe pedestrian pathways and crossings without creating conflicts with automobiles.</i>	20C		●	●	●	●	●
<i>Design the site so that dumpsters, service areas or auxiliary storage do not interfere with, and are not visible from the pedestrian circulation area and do not negatively impact surrounding residential areas.</i>	20D		●	●	●	●	●
<i>The site layout should be clustered in a village arrangement around shared amenities.</i>	20E		●	●	●	●	●

<sup>1</sup> Adopted by City Council, the *General Development Policies (GDP)* provide guidance for the location, intensity and form of future development and redevelopment throughout the community. Many of the residential and mixed/multi-use center policies for the plan area are based upon these adopted GDP policies. Plan policies that appear in italic text are based upon those previously adopted GDP policies. **Additional, plan-specific policies are shown in bold font.** Plan-specific policies augment the GDP design guidelines.



*A well-designed drive thru fits into the context of the development and is sensitive to the pedestrian environment.*

# Transportation

Streets connect people to places. The resulting street network has a direct impact on the community's quality of life. If the design of the street network is efficient, the community can benefit from a range of travel choices, route options, emergency access, a mix of land uses and pedestrian and bicycle options. To help guide the creation of an efficient street network, the following transportation goal was developed with the community for the Steele Creek plan area.

**GOAL:**  
Provide a safe, accessible and efficient street network for all users.



Sidewalks are being built along parts of Sledge Road by developers of adjacent property. A “farm-to-market road upgrade” may complete remaining gaps as part of a future City capital project.

Achieving this transportation goal will require not only strengthening the relationship between land use and transportation, but also advancing key transportation investments, consistent with the *Transportation Action Plan (TAP)* and improving connectivity throughout the area.

Because the Steele Creek area is challenged by limited road capacity, minimal street network and a sparse bicycle and pedestrian network, it will require significant transportation infrastructure investment to accommodate the anticipated growth. However, the lack of funding available for transportation improvements in this area will likely continue to be a sig-

nificant challenge. (See **Transportation Improvements & Costs** table in the Implementation Guide, page 56.)

Within much of the Steele Creek area, the transportation focus should be on completing the street network and improving the capacity of the existing transportation system. In addition, the focus should be on ensuring that the Steele Creek area develops consistent with the land use and design guidance provided in this area plan to minimize impacts on the transportation system.

The following policies provide guidance for creating a well-connected system of streets and improving the overall transportation system in the Steele Creek Area.

## Transportation/Street Design Policies

This section outlines transportation policies addressing both proposed new streets and enhancements to existing streets to make them more pedestrian and bicycle-friendly. These improvements will likely be accomplished in conjunction with new development and redevelopment. The general locations of the improvements are noted on **Map 4**, page 35.

### 21. Upgrade Farm-to-Market Roads

As shown on **Map 4**, *Future Transportation Network*, page 35, farm-to-market upgrades include:

- Choate Circle
- Erwin Road
- Hamilton Road
- Nations Ford Road
- Sandy Porter Road
- Shopton Road
- Shopton Road West
- Sledge Road
- Smith Road
- Youngblood Road
- Zoar Road

These fairly narrow roads were historically “farm-to-market” rural roads but increasingly serve as the primary routes for new suburban development. As growth has occurred, these roads have become overburdened by traffic resulting in significant congestion.

The City's *Transportation Action Plan*, adopted in 2006, recommended additional funding to upgrade farm-to-market roads within Charlotte's city limits.



Typical improvements include adding curbs, gutters, sidewalks, additional lane width and turning lanes to improve traffic flow and build a complete street serving multiple types of users (drivers, pedestrians and cyclists).

The *Transportation Action Plan* identified 23 miles of farm-to-market roads within the Steele Creek plan area and estimated that it would cost approximately \$173 million (2010 dollars) to upgrade them. At this time, there is little funding available to begin to address these needed upgrades. (The appendix of this Plan provides more information on transportation project cost estimates.)

## 22. Extend and widen key thoroughfares

The following major thoroughfare projects are recommended to keep pace with area growth:

- Widen Brown-Grier Road (2 to 4 lanes) from Arrowood Road to Steele Creek Road (NC160)
- Widen Carowinds Boulevard from S. Tryon Street (NC 49) to Sam Neely and Winget roads
- Widen Carowinds Boulevard (2 to 4 lanes) from S. Tryon Street (NC 49) to Choate Circle
- Widen S. Tryon Street (NC 49) (4 to 6 lanes) from Arrowood Road to Steele Creek Road (NC 160)
- Widen Steele Creek Road (NC 160) (2 to 4 lanes) from Shopton Road West to State Line (SC)
- Widen Westinghouse Boulevard (2 to 4 lanes) from S. Tryon Street (NC 49) to Shopton Road West

Extending and widening area thoroughfares should continue to be coordinated through the land development process. These improved thoroughfares will provide more direct routes for longer distance trips crossing the Steele Creek area, many of which are destined for interchanges on Interstates 77 and 485.

Similar to the situation with farm to market roads, while there are numerous thoroughfare and intersection improvements that are needed in the Steele Creek area, there is currently no funding identified

to address them. Today, Steele Creek Road operates at an unacceptable level of service and has been identified for widening. Unfortunately, widening Steele Creek Road is not included in the *2035 Long Range Transportation Plan (LRTP)*, meaning that it may not be funded prior to 2035.

## 23. Realign Choate Circle to South Tryon Street

To increase accessibility for Steele Creek residents, Choate Circle should be realigned to S. Tryon Street opposite Corsica Forest Drive. This would likely occur as a part of private development project or through a public-private partnership.

## 24. Improve intersections

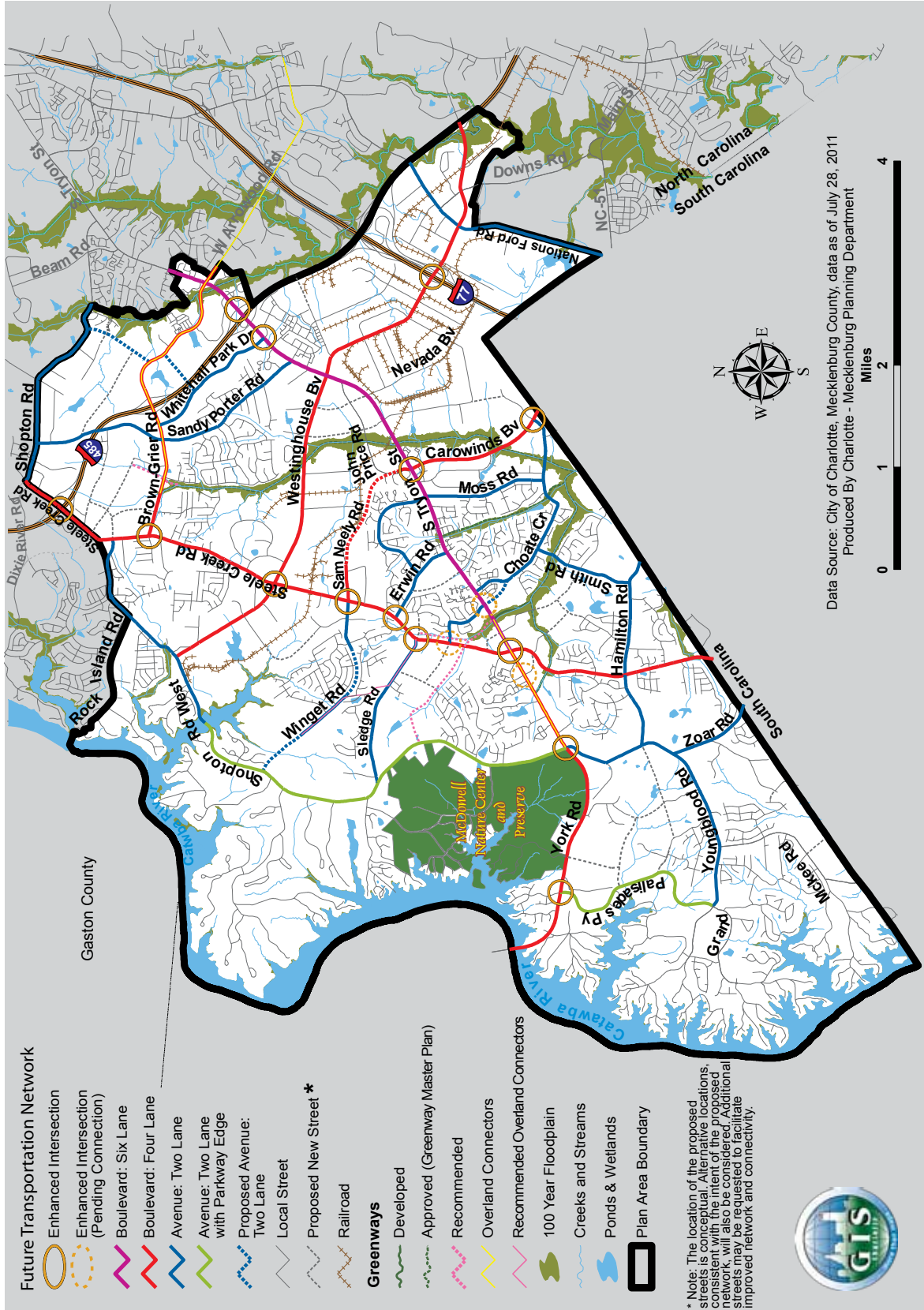
Intersection improvements may include a combination of geometric design changes, traffic signals, roundabouts, pedestrian countdown signals, painted crosswalks, curb ramps and pedestrian refuge islands. Such improvements will enhance traffic flow, accessibility and safety. As shown on **Map 4**, intersections recommended to be improved include:

- Carowinds Boulevard at Choate Circle
- Steele Creek Road (NC 160) at Brown-Grier Road
- Steele Creek Road (NC 160) at Huntington Meadow Lane
- Steele Creek Road (NC 160) at Erwin Road
- Steele Creek Road (NC 160) at Sam Neely Road
- Steele Creek Road (NC 160) at Sledge Road
- Steele Creek Road (NC 160) at Westinghouse Boulevard
- S. Tryon Street (NC 49) at Carowinds Boulevard
- S. Tryon Street (NC 49) at Interstate 485
- S. Tryon Street (NC 49) at Shopton Road West
- S. Tryon Street (NC 49) at Steele Creek Road (NC 160)
- S. Tryon Street (NC 49) and Steelescrot Parkway
- S. Tryon Street (NC 49) at Whitehall Park Drive

- S. Tryon Street (NC 49) at Corsica Forest Drive pending Choate Circle Realignment
- Westinghouse Boulevard at Interstate 77
- York Road (NC 49) at Grand Palisades Parkway
- Steele Creek Road (NC 160) and I-485

## 25. Provide key “connector” streets

Connectors form a system of parallel local streets that offer alternatives to thoroughfares for local trips. Depending on the scale and accessibility of surrounding development, these key connections will likely need to be implemented in a variety of ways including via private land development, the City’s Connectivity Program or funding partnerships. These conceptual new streets are shown on **Map 4** (see also detailed list of proposed key connector streets on **Map 5**, *Future Transportation Projects*, page 55 in the Implementation Guide).



**26. Facilitate cross-access and parallel connections on either side of S. Tryon St/York Rd (NC 49)**

Local trips along S. Tryon Street/York Rd (NC 49) should have alternative route choices other than having to use this high-volume, fast-moving, regional corridor. New development should incorporate multiple access points, not using S. Tryon Street/York Rd (NC 49), cross-access driveways and parallel street connections.

**27. Revisit major thoroughfare alignments**

Coordinate the land development process to set up more constructible alignments of Carowinds Boulevard Extension and Youngblood Road. The currently adopted centerline for Carowinds Extension is challenged by crossing a railroad twice, while the adopted realignment of Youngblood Road bisects the institutional use of a tree research farm.

**28. Install new sidewalks along thoroughfares**

The Steele Creek area has limited sidewalks along most of the existing thoroughfare system (see **Map 13, Existing Pedestrian Facilities**). As development occurs, new sidewalks are required to be constructed along existing thoroughfares, following adopted streetscape standards. Additionally, five-foot minimum sidewalks are required on all new local streets.

**29. Reduce gaps in the sidewalk system within existing residential areas**

Some neighborhoods do not have sidewalks because they were built prior to standards requiring sidewalks. The City's sidewalk program will slowly address these gaps, prioritizing continuous and direct routes linking residential areas to parks, schools and shopping (see **Map 13, Existing Pedestrian Facilities**). In many cases, constructing these sidewalks may require support through a petition based process.

**30. Construct bicycle lanes along all thoroughfares**

As infrastructure development occurs, new bicycle lanes should be included along any thoroughfare with a new or relocated curb line. Cross-sections for all Avenue- and Boulevard-classified streets (see **Map 4, Future Transportation Network**) should include bicycle lanes. Shopton Road West, near Steele Creek Road, is a newly improved thoroughfare that has bike lanes.

**31. Complete greenways in the Steele Creek area**

Planning of the greenway trail system should be coordinated with the Mecklenburg County Park and Recreation Department and other partners. (See also the Park and Recreation policies contained in the Infrastructure and Public Facilities section of this area plan.)

**32. Encourage bikeway and pedestrian connections to primary greenways**

Tributaries and streams leading to Steele Creek provide contiguous open spaces, create focal points for development and make key connections to the greenway system. These areas should be considered for dedication during the land development process. (See also the Park and Recreation policies contained in the Infrastructure and Public Facilities section of this area plan.)



*Shopton Road West near Steele Creek Road is an example of a newly improved thoroughfare, including new turn lanes, median islands, bicycle lanes, planting strips and sidewalks.*

### 33. Implement a parallel shared-use path or paved shoulders along Shopton Road West

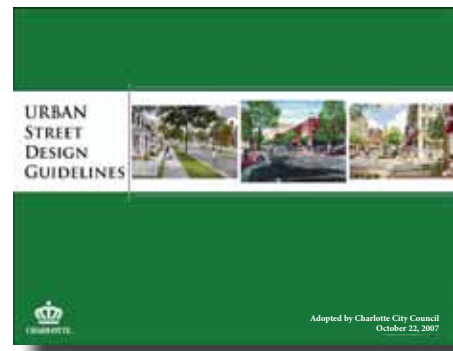
Bicycle/pedestrian accommodations are needed along farm-to-market roads until other improvements can be fully implemented. As development occurs, provision of an 8'-10' foot minimum shared-use path should be requested along Shopton Road West to connect with the overland connector along York Road (NC 49) to McDowell Nature Center and Preserve.

### 34. Expand transit service to major nodes of activity

As new activity nodes develop, such as the planned "Palisades Town Center" off York Road (NC 49) and existing nodes intensify, CATS should consider expanding service to these areas. Additionally, park-and-ride opportunities should be created as possible termini or major stops for expanded transit service.

## Street Cross-Sections

The following recommendations for future street cross-sections and streetscape development standards help define the function and visual appeal of the Steele Creek area's proposed street network. The streetscape development standards specifically define the character and width of the area behind the curbs, between buildings and the existing curb line, including accommodations for sidewalks and landscaping. The cross-section specifications show typical conditions and may vary upon further study and in unique circumstances.






Based on the City's *Urban Street Design Guidelines*, the future cross-sections have been determined for Steele Creek area streets (see *Proposed Streetscape Details*, page 39 and refer to **Map 4** for specific locations), with the exception of neighborhood areas, where little change to existing streets is expected. The street types on the following page are recommended for this plan area:



*Palisades Parkway is an example of an Avenue with Parkway Edge on one side. This treatment is also recommended for the future cross-section of Shopton Road West.*

## Description of Street Types\*

Street Type	  			
	BOULEVARDS	AVENUES	LOCAL STREETS	
Description / Function	<p>Intended to move large numbers of vehicles, often as through traffic, from one part of the city to another and to other lower level streets in the network. The most common type of Boulevard is 4-lane Standard.</p>	<p>The most common (non-local street) providing access from neighborhoods to commercial areas. Designed to provide a balance of service for all modes of transportation. The most common type of Avenue is 2-lane Standard.</p>		
Proposed Street Classification	<ul style="list-style-type: none"> <li>• Arrowood Rd</li> <li>• Brown-Grier Rd</li> <li>• Carowinds Bv (east of Steele Creek Rd)</li> <li>• S. Tryon St (NC 49)** (north of Steele Creek Rd)</li> <li>• S. Tryon St (NC 49) (south of Steele Creek Rd)</li> <li>• Steele Creek Rd</li> <li>• Westinghouse Bv</li> </ul>	<ul style="list-style-type: none"> <li>• Arrowood-Shopton Conn</li> <li>• Arrowood-Whitehall Conn</li> <li>• Carowinds Bv (west of Steele Creek Rd)</li> <li>• Choate Circle</li> <li>• Erwin Rd</li> <li>• Hamilton Rd</li> <li>• McKee Rd</li> <li>• Moss Rd</li> <li>• Nations Ford Rd</li> <li>• Palisades Pkwy ***</li> </ul>	<ul style="list-style-type: none"> <li>• Sam Neely Rd</li> <li>• Sandy Porter Rd</li> <li>• Shopton Rd</li> <li>• Shopton Rd West *** (southwest of Withers Rd)</li> <li>• Sledge Rd</li> <li>• Smith Rd</li> <li>• Whitehall Park Dr</li> <li>• Winget Rd</li> <li>• Youngblood Rd</li> <li>• Zoar Rd</li> </ul>	<p>All remaining streets</p>

\* A complete description of all street types are provided in the **Urban Street Design Guidelines**

\*\* Six lane boulevard only applies to S. Tryon St (NC 49), north of Steele Creek Rd

\*\*\* Parkway edge only applies to Palisades Pkwy and Shopton Rd West southwest of Withers Rd

Source: Charlotte Department of Transportation, 2010

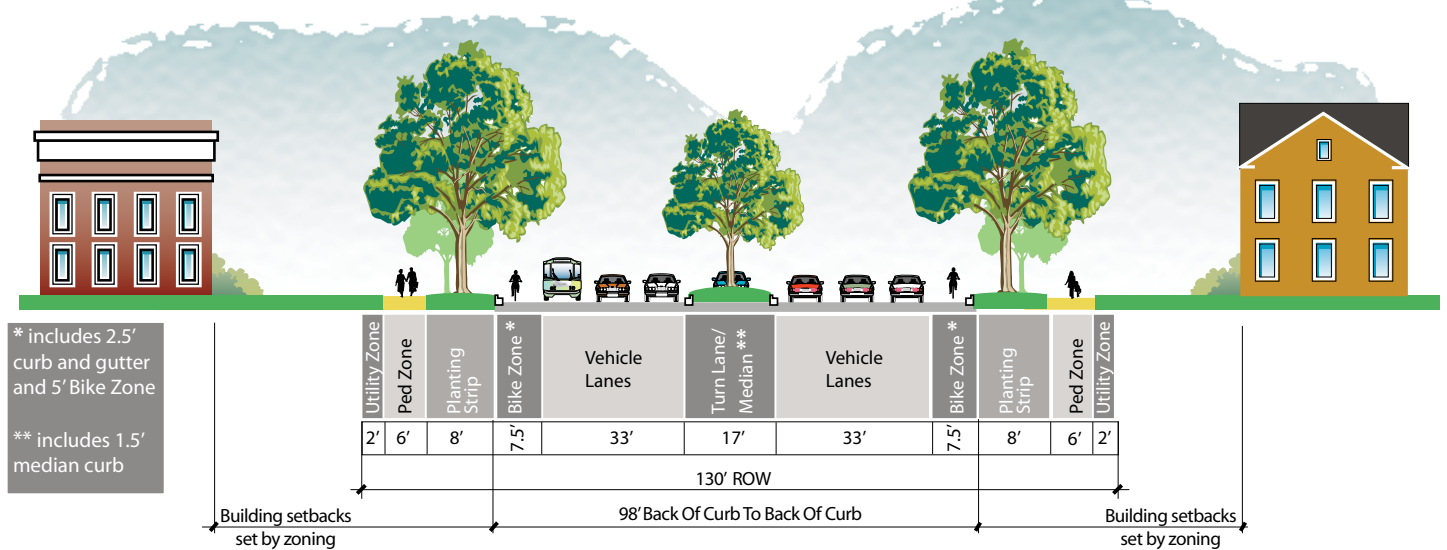


# Proposed Streetscape Details

## Boulevard~ Six Lane

**Width:** 98' from back of curb to back of curb; ROW is 130'.

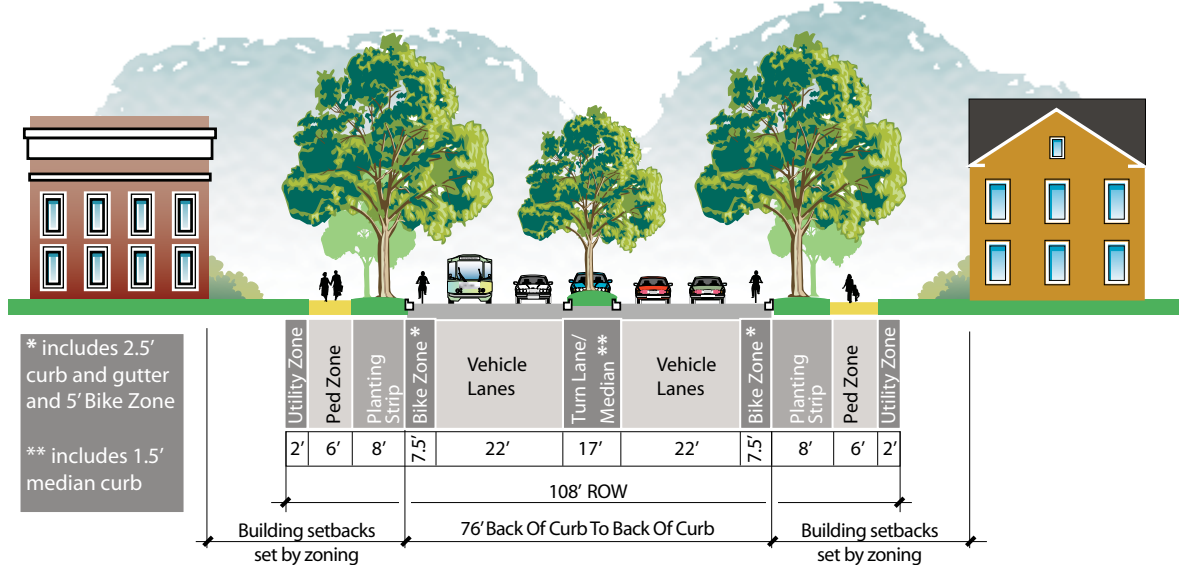
**Cross Section:** Three lanes in each direction with a wide median to accommodate turn lanes, bike zone, planting strip, sidewalk and utility zone. Building setbacks will vary by zoning districts.



## Boulevard ~ Four Lane

**Width:** 76' from back of curb to back of curb; ROW is 108'.

**Cross Section:** Two lanes in each direction with a wide median to accommodate turn lanes, bike zone, planting strip, sidewalk and utility zone. Building setbacks will vary by zoning districts.



**NOTE:** These dimensions reflect typical street sections at mid-block locations. They will be used by Charlotte Department of Transportation, in consultation with the Charlotte-Mecklenburg Planning Department, to determine the location of the ultimate curb lines. Variations from the typical street sections, where needed to address physical conditions, enhance operations, or better meet the intent of this area plan, may be identified during future design and analysis phases.

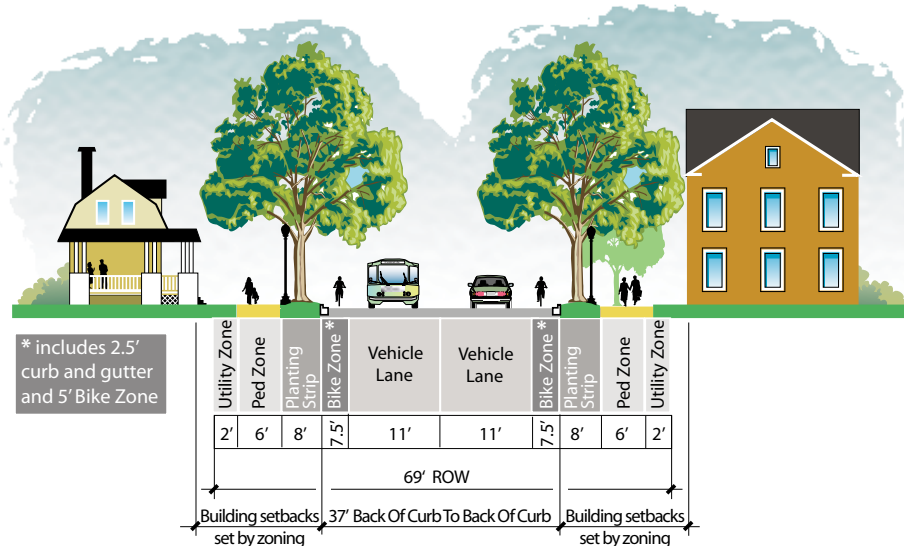
## Proposed Streetscape Details

not to scale

### Avenue ~ Two Lane Undivided

**Width:** 37' from back of curb to back of curb. ROW is 69'.

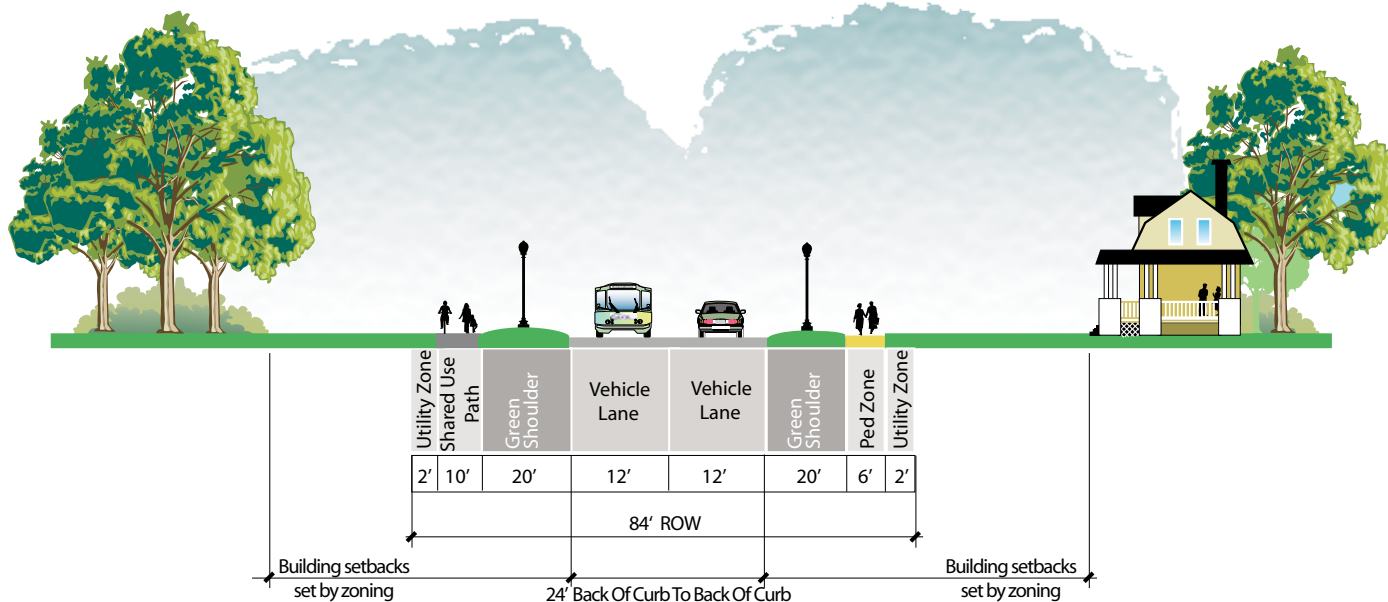
**Cross Section:** One travel lane in each direction with bike zone, planting strip, sidewalk and utility zone. If a turn lane is added, an additional 11' is required. Building setbacks will vary by zoning districts.



### Avenue ~ Two Lane with Parkway Edge

**Width:** 24' from edge of pavement to edge of pavement. ROW is 84'.

**Cross Section:** One travel lane in each direction with Shared Use Path on Lake Wylie side, planting strip, sidewalk and utility zone. If a turn lane is added, an additional 11' is required. Building setbacks will vary by zoning districts.



**NOTE:** These dimensions reflect typical street sections at mid-block locations. They will be used by Charlotte Department of Transportation, in consultation with the Charlotte-Mecklenburg Planning Department, to determine the location of the ultimate curb lines. Variations from the typical street sections, where needed to address physical conditions, enhance operations, or better meet the intent of this area plan, may be identified during future design and analysis phases.



## Infrastructure and Public Facilities

Public facilities and services addressed in the plan include public water and sewer, storm water, police, fire, parks and recreation and schools. As Charlotte-Mecklenburg continues to grow and develop, timely planning for these services is essential to maintain the high quality of life residents have come to expect. Other public facilities, including medical and social services are not addressed in this land use plan.

The *Steele Creek Area Plan's* vision includes the statement that the area will have a "balanced mixture of land uses with enhanced public facilities that include quality schools." It also emphasizes the creation of "an interconnected network of parks, greenways and open space amenities." Public facilities that currently serve much of this plan area include public water and sewer, storm water, police, fire, parks and recreation, a library and schools. Over the last decade, the Steele Creek area has experienced significant growth. As this trend continues, additional public facilities will be needed to serve residents and businesses.

### GOAL:

Provide public facilities to maintain and improve service levels to area residents.



*Infrastructure improvements in the area are needed to keep pace with current and future development.*

## Infrastructure & Public Facilities Policies

The following policies are recommended to enhance the area's existing public facilities and meet future growth demands. The joint use of facilities is encouraged to reduce cost and make the best use of resources when possible.

### Water and Sewer

#### **35. Encourage development to locate where appropriate water and sewer capacity exists or is planned.**

Public water is currently available to all retail and industrial centers and major transportation corridors in the area. However, there are service needs in many of the residential areas of the southwest portion of the plan area. A large transmission main was constructed in 2010 along Steele Creek Road from Shopton Road to South Tryon Street to expand water service in the area. In an effort to address the lack of water and sewer capacity in parts of the plan area, development should be located in areas where the infrastructure is in place or is planned.

Sewer service to the southwest part of the plan area is difficult to provide due to changes in topography and the area's distance from the Steele Creek Pump Station. This pump station, located on Choate Circle, transfers sewage to the McAlpine Wastewater Treatment Plant and will be redesigned in the future to accommodate additional flow. There are a total of eleven pump stations located in the plan area, including three in the Palisades development.

#### **36. Utilize the rezoning process to provide input on the impact of new development on infrastructure.**

When a proposed development requires a rezoning, the rezoning process offers the opportunity to assess infrastructure impacts and to help guide more intense development into areas where the infrastructure is in place to support it.

### Storm Water

#### **37. Minimize stormwater runoff through site design and the use of Best Management Practices.**

Some of the hydrology features within the plan area include the Catawba River, Steele Creek, Neal

Branch and Walker Branch as well as other creeks, streams, ponds and wetlands. The land surface in the plan area has a moderate to steep slope closest to creeks, streams and Lake Wylie.

Storm water runoff is the result of precipitation that is not absorbed by the earth. It often carries pollutants into area creeks and streams. Trees and natural areas generate less storm water runoff and help filter pollutants. Therefore, measures such as preserving the tree canopy, providing more open space, limiting impervious area, and compact development help contribute to the protection of the area's natural resources and reduce storm water runoff.

Storm water facilities help to remove storm water runoff from areas such as streets and sidewalks for public safety reasons and help to protect the area's aquatic resources. Existing topography can be used as part of the drainage system on a site to preserve environmental features while taking advantage of the area's natural resources.

Most development in the plan area is subject to the Post Construction Controls Ordinance (PCCO) which regulates storm water runoff in accordance with State and Federal regulations. Its intent is to control the adverse effects of increased post-construction storm water runoff and non-point source pollution associated with development. Also, Best Management Practices (BMP) serve to protect the environment and improve water quality by reducing flood risks and pollution in streams, rivers and lakes. They may also serve as an attractive and useable part of a development's amenities. A few ways to conceal BMPs include fountains, ponds and gardens.

### **Parks and Recreation**

#### **38. Encourage the location of future parks and open space in highly visible areas such as residential communities, retail centers, schools and along thoroughfares.**

The location of parks in highly visible areas will allow for more activity and better access. Also, open space areas may serve as an amenity and allow for the incorporation of natural features into development.

The plan area is served by T.M. Winget Regional Park and McDowell Nature Center and Preserve. Berewick and Ramblewood parks are located on the periphery of the plan area. In the southern portion of the plan area, Capps Community Park is planned on a heavily wooded 67-acre site. Plans have been approved for a neighborhood park to be co-located at the Palisades Elementary School site. In addition, the Steele Creek Athletic Association has a playing field complex located off Choate Circle that includes baseball, softball, soccer and football fields. Other private facilities include Palisades Golf Courses and Soccer fields.

#### **39. Continue to develop the greenway system and connect greenways to areas of activity, such as parks, nature preserve, residential communities, retail centers, employment areas and schools.**

The greenway system may serve as active or passive open space in the community. It provides the opportunity to connect areas for pedestrians and cyclists to move through the community more easily. The location of water and sewer along greenways allows the potential for joint use projects.

An extensive and well connected greenway network is important to Steele Creek residents. There are several greenways planned for the area. Currently, Walker Branch Greenway runs along the rear of the RiverGate shopping center. Area greenway plans include the eventual development of an interconnected greenway system linking greenways to McDowell Nature Center and Preserve, T.M. Winget Regional Park, schools, shopping and employment. In the future, the Steele Creek Greenway corridor could be connected to the Anne Springs Close Greenway corridor in Fort Mill, South Carolina (see **Map 16, Public Facilities**).

#### **40. Seek opportunities to improve public access to the Catawba River.**

As development occurs along the River, consideration should be given to providing land to allow for future public boat access points. Although, Copperhead Island provides boat access in the plan area, residents desire additional public access points to the Catawba River. The Red Fez, if redeveloped, is an appropriate location and topography.

## Schools

### **41. Strive to extend school capacity as development occurs.**

While developing the vision statement for the plan, Citizen Advisory Group (CAG) members emphasized the importance of having enhanced public facilities that include quality schools. Many of Charlotte-Mecklenburg Schools (CMS) are currently overcrowded and schools in the plan area will continue to face increasing demand as development occurs. Additional schools will be needed if the area grows as projected.

There are four elementary, two middle and one high school in the plan area. For example, River Gate Elementary School, located near the intersection of Hamilton and Smith roads, opened in 2009 and is at 90 percent capacity. *Charlotte-Mecklenburg Long Range School Facilities Master Plan* includes future plans for the construction of an elementary, middle and high school off of S. Tryon St/York Rd (NC 49), in the Palisades area, to serve the southwestern portion of the plan area. The elementary school will be co-located with a neighborhood park adjacent to the McDowell Nature Center and Preserve.

The construction of schools in the plan area could be impacted by a lack of funding and potential closing of schools in other areas. CMS continues to face a number of financial challenges. As a result, in recent months a number of proposals to consolidate and/or close schools have been discussed. The proposed closing of E. E. Waddell High School will impact Olympic High School located in the plan area.

As development occurs, the opportunity exists to reserve land for school sites as part of future development, when appropriate. To make the best use of resources and preserve land in the area, consideration should be given to locating schools adjacent to parks, libraries and other public facilities. New schools should integrate environmentally sensitive and sustainable design standards consistent with other policies in the plan.

### **42. Encourage the development and joint use of public service facilities to share resources and to support area growth.**

As public facilities are developed in the plan area, consideration should be given to combining resources to reduce costs and travel time. The intent is to provide for more effective and efficient use of public resources.

## Police

### **43. Construct new police station to serve the Steele Creek division**

The Charlotte-Mecklenburg Police Steele Creek Division covers this area. Currently, their headquarters are located in the Police and Fire Training Academy on Shopton Road. Future plans include the construction of a new Charlotte-Mecklenburg Police Department Steele Creek Division Police Station on the southwest corner of S. Tryon Street (NC 49) and Westinghouse Boulevard.

## Fire

### **44. Provide fire stations to serve future development and annexed areas**

There are three fire stations located within the plan area. Station 26 is located on S. Tryon Street (NC 49) near Westinghouse Boulevard, Station 37 is located on York Road (NC 49), and Station 38 is located on Shopton Road West. Station 38 is home to Charlotte's first and only fire boat house. Future plans also include a fire station in the area of Youngblood and McKee roads, contingent upon annexation. Charlotte Fire Department plans call for additional fire stations to serve the plan area that will be developed after areas are annexed and demand warrants.

## Libraries

### **45. Develop regional library to serve the area's growing population**

The plan area is currently served by the Steele Creek Branch Library located on Steele Creek Road, adjacent to Southwest Middle School. Land for a new regional library has been acquired on Shopton Road in the northern most portion of the plan area, near the Berewick development.

## Natural Environment

A good land use plan balances preservation of the area's natural resources with the demand for new development. This is possible with careful planning and adherence to policies and regulations. The specific environmental policies contained in this plan are based on the more general principles and policies taken from the *General Development Policies – Environment (GDP)*, adopted in 2007.

The protection of the environment which includes the preservation of the tree canopy and other natural features, such as the Catawba River, were identified as primary concerns for area residents during the planning process. The vision developed for the area makes specific mention of “Protecting the Catawba River, McDowell Nature Center and Preserve, natural features, and historic places.” The vision also advocates “Encouraging community design that recognizes the natural environment; and creating an interconnected network of parks, greenways, and open space amenities”.

Portions of the plan area are located within the Lake Wylie, Steele Creek and Sugar Creek watershed basins. Most of the western boundary of the plan area, approximately 9,143 acres located along Lake Wylie, is located within the Critical Area of the Lake Wylie Watershed Overlay Zoning District and approximately 2,965 acres is located within the Protected Area of the Lake Wylie Watershed Overlay Zoning District.

Area creeks and streams running through the area include Steele Creek, Polk Ditch, Walker Branch and Neal Branch. (Parks and greenways are addressed in the park and recreation section of this document.) Other environmental features include ponds and wetlands located throughout the study area, floodplain, swim buffers, natural heritage areas and natural heritage element occurrences. See **Map 17**, *Environmental Features*.

Natural heritage areas are areas of land or water identified by N.C. Natural Heritage Program biologists as being important for the conservation of the state's biodiversity. These areas often contain examples of natural communities and often include rare and endangered species. Natural heritage element occurrences are locations of rare and endangered species populations and occurrences of exemplary or unique natural ecosystems and special wildlife habitats.

### GOAL:

Encourage environmentally sensitive land development practices

## Natural Environment Policies

The preservation and protection of open space, trees, water bodies, air and other natural assets is extremely important as the area continues to develop. The natural environment policies which follow provide direction to accommodate growth and change while protecting the quality of the area's land, water and air.

### Land Quality

#### **46. Support mixed use and compact development that preserve land, reduce vehicular trips and protect natural resources.**

Mixed use and compact development reduce trip lengths and support alternative travel options. This type of development encourages walking and biking as well as protects air quality, water quality and other natural resources. The land use and design sections provide details about the appropriate location for mixed use development and provide guidance for appropriate design. The land use and design policies help insure that impacts of growth are mitigated.



*Ayrsley Town Center was one of the first mixed use developments in the area.*

**47. Protect and preserve the area’s environmental features.**

A survey of area residents and property owners early in the planning process revealed that the area’s proximity to the Catawba River / Lake Wylie is what respondents liked most, followed by the area’s other natural features. The biggest concern shared in the survey, was the loss of natural habitat. The preservation of large areas of mature trees to retain tree canopy and a network of green spaces is important as development occurs.

**Map 17, *Environmental Features*** illustrates a number of areas that have identified environmental features including the McDowell Nature Center and Preserve. The Preserve is mostly forested with a significant tree canopy and rolling terrain along Lake Wylie. The Preserve has a large variety of rare and endangered plant life. In addition, the Preserve is home to numerous species of birds, mammals, reptiles and amphibians.

**48. Encourage business and property owners to adhere to environmental standards and work with appropriate agencies to clean up sites and minimize soil contamination.**

Although the area has many positive environmental features, there are soil and groundwater contamination sites identified on **Map 17, *Environmental Features***. Most of these sites are located within the Westinghouse Industrial Center. The contamination may be due to underground tanks, chemical leaks and improper disposal of chemicals.

**Water Quality**

**49. Protect the Catawba River, creeks, streams, ponds, wetlands, floodplain and other environmental features in the area.**

Nearly 40 percent of the plan area is located within the watershed protection area and there are 83 miles of stream within the plan area. Protection of the quality of the area’s water resources is very important. The Catawba River / Lake Wylie is considered a major asset by most in the community. Development practices that utilize minimal clearing, grading, paving, impervious areas and soil compaction have less impact on the water quality. Water conservation is a simple tool that can be practiced by everyone and is important in protecting the area’s water supply.

**Air Quality**

**50. Implement the land use, community design and transportation policies to reduce vehicle emissions.**

Clean healthy air is our most vital natural resource. Ground-level ozone is the biggest air pollution problem in Mecklenburg. Mobile sources such as cars are the largest contributor of ozone-forming pollution. Future development should strive to reduce vehicle trips, improve connectivity and provide travel choices/route options. The reduction of vehicles miles traveled (VMT) and the implementation of policies recommended throughout the plan will help improve air quality.



*Water quality is very critical for the health and safety of Lake Wylie area residents and visitors.*

# Conclusion

The Steele Creek area has grown at a rapid pace during the last decade. The impact of regional growth and the opening of three I-485 interchanges within the area have placed additional growth pressures on the Steele Creek community. The area experienced an 84 percent increase in population and transitioned from being a largely undeveloped area to an active area with four Activity Centers.

As the Charlotte region continues to attract new residents and businesses, development pressure in the Steele Creek area will likely continue. The ability to successfully accommodate growth, while maintaining a high quality of life, is not likely without appropriate planning.

The *Steele Creek Area Plan* sets the stage for managing future growth and development consistent with the *Centers, Corridors and Wedges Growth Framework*, the City's vision for future growth and development, and the Steele Creek community's vision for the area. The plan offers the opportunity to help fulfill the vision for the area by protecting the area's environmental features while providing for the integration of land use and transportation planning.

There are many factors that will determine how the area develops over time such as environmental constraints and market conditions. However, the policies in this plan are intended to help guide future growth and development in an organized manner and to contribute to the long term sustainability of the community.

The plan policies provide for future development that is consistent with the character and vision for the area, an efficient street network, public facilities to serve residents and development practices that have minimal impact on the environment.



## Part II

# *Implementation Guide*

# Part II Implementation Guide

## *Introduction*

Achieving the vision articulated in this plan will occur incrementally over time through the combined efforts of local/state government, private property owners, residents, developers and many others. This Implementation Guide is primarily a staff document that outlines specific steps that can be taken by various public and private bodies so that the future envisioned in this plan may be realized. These strategies are listed in the table that follows. The lead responsible agency and tentative time frame is also included. The strategies are numbered sequentially and correspond to the policies discussed in the Concept Plan. This allows staff to track progress of the plan's policies over time.

Some strategies are physical such as installing sidewalks and building new thoroughfare alignments like Carowinds Boulevard Extension. Other strategies involve continued enforcement of adopted City policies and regulations such as the Post Construction Controls Ordinance that deals with the effects of storm water runoff; still others consider policy or ordinance changes to accommodate new policy recommendations, such as a zoning ordinance change to allow for increased retail use in marinas.

These implementation strategies do not imply a specific public or private sector commitment. The Charlotte City Council will not be asked to adopt this implementation Guide. However, many of the strategies in this section will require future action by elected officials and will be presented to them for approval as needed on a case-by-case basis.

Finally, since conditions change over time, staff will periodically update this Implementation Guide to reflect changes and progress.



## Recommended Implementation Strategies

The number of each action corresponds to the policies beginning on page 12 of the Concept Plan.

Policy Number	Action Item	Project Type	Lead Agency	Time Frame
<b>Land Use &amp; Community Design</b>				
1-20	Use land use and community design policies to guide and evaluate development proposals.	Zoning	Planning	as development occurs
10a	Work with Planning GIS staff to modify the Centers, Corridors and Wedges boundary layer reflecting the changes adopted for the RiverGate Mixed Use Activity Center, as indicated on Graphic 1.	Zoning	Planning	Within 1 month of Plan Adoption
11a	Work with Planning GIS staff to modify the Center, Corridors and Wedges boundary layer reflecting the changes adopted for the Westinghouse Industrial Activity Center, as indicated on Graphic 2.	Zoning	Planning	Within 1 month of Plan Adoption
12a	Work with Planning GIS staff to modify the Centers, Corridors and Wedges boundary layer reflecting the changes adopted for the Whitehall / Ayrley Mixed-Use Activity Center, as indicated on Graphic 3.	Zoning	Planning	Within 1 month of Plan Adoption
13a	Work with Planning GIS staff to modify the Center, Corridors and Wedges boundary layer reflecting the changes adopted for the Shopton Road Industrial Activity Center, as indicated on Graphic 4.	Zoning	Planning	Within 1 month of Plan Adoption
<b>Transportation and Streetscape (see table on page 56 for estimated costs of improvements)</b>				
21	Improve the following streets via the City's Farm-to-Market Upgrade program: -Choate Circle -Hamilton Road -Nations Ford Road -Sandy Porter Road -Shopton Road and Shopton Road West -Sledge Road -Smith Road -Youngblood Road -Zoar Road	Transp.	CDOT / Planning	as development occurs and/or as funding becomes available

Policy Number	Action Item	Project Type	Lead Agency	Time Frame
22	<p>Widen Brown-Grier Road (2 to 4 lanes) from Arrowood Road to Steele Creek Road (NC160).</p> <p>Widen Carowinds Blvd. from S. Tryon Street (NC 49) to Sam Neely and Winget Roads.</p> <p>Widen Carowinds Blvd. (2 to 4 lanes) from S. Tryon Street (NC 49) to Choate Circle.</p> <p>Widen S. Tryon Street (NC 49) (4 to 6 lanes) from Arrowood Road to Steele Creek Road (NC 160)</p> <p>Widen Steele Creek Road (NC 160) (2 to 4 lanes) from Shopton Rd. West to State Line (S.C.)</p> <p>Widen Westinghouse Boulevard (2 to 4 lanes) from S. Tryon Street (NC 49) to Shopton Road West</p>	Transp.	CDOT / E&PM	as funding becomes available and/or as development occurs
23	Work with MPO staff to amend Thoroughfare Plan to reflect recommendation to realign Choate Circle to S. Tryon Street (NC 49).	Transp.	CDOT / E&PM / Planning	Short (0-5 yr)
24	<p>Enhance the following intersections to improve traffic flow, area accessibility and safety; and further analyze their feasibility through the capital needs assessment process:</p> <ul style="list-style-type: none"> <li>-Carowinds Bv. at Choate Circle</li> <li>-Steele Creek Rd. at Brown Grier</li> <li>-Steele Creek Road (NC 160) at Erwin Rd.</li> <li>-Steele Creek Rd. (NC 160) at Sam Neely Rd.</li> <li>-Steele Creek Rd. (NC 160) at Sledge Rd.</li> <li>-Steele Creek Rd. (NC 160) at Westinghouse Blvd.</li> <li>-Steele Creek Rd. (NC 160) at I-485</li> <li>-S. Tryon Street (NC 49) at Carowinds Blvd.</li> <li>-S. Tryon Street (NC 49) at I-485</li> <li>-S. Tryon Street (NC 49) at Shopton Rd.</li> <li>-S. Tryon Street (NC 49) at Steele Creek Rd. (NC 160)</li> <li>-S. Tryon Street (NC 49) at Whitehall Park Dr.</li> <li>-S. Tryon Street (NC 49) at Corsica Forest Dr. pending Choate Circle realignment</li> <li>-Westinghouse Blvd. at I-77</li> <li>-York Road (NC 49) at Grand Palisades</li> </ul>	Transp.	CDOT / E&PM / Planning	as funding becomes available and/or as development occurs
25	Work with petitioner in the rezoning process to request that key connector streets shown on Map 5, are provided as development occurs.	Transp.	CDOT / Planning	as development occurs

Policy Number	Action Item	Project Type	Lead Agency	Time Frame
26	Work with petitioner in the rezoning process to facilitate cross-access and parrallel connections along S. Tryon Street (NC 49).	Transp. / Zoning	CDOT / Planning	as development occurs
27	Work with MUMPO to review the major thoroughfare alignments of Carowinds Blvd. Extension and Youngblood Rd., and amend Thoroughfare Plan accordingly.	Trasp.	CDOT / Planning	Short (0-5 yr)
28	Construct new sidewalks along existing thoroughfares, refer to Maps 4 and 13.	Transp.	CDOT	as funding becomes available and/or as development occurs
29	Work with CDOT in identifying areas in need of sidewalks within established residential areas, and identify potential funding sources to construct new sidewalks.	Transp.	CDOT	Short (0-5 yr) and on-going
30	Construct bicycle lanes along all thoroughfares.	Transp.	CDOT	as funding becomes available and/or as development occurs
31	Complete all planned greenways in the Steele Creek area.	Transp.	Park & Rec / Planning	Long (>10 yrs)
32	Work with petitioners in the rezoning process to encourage bikeway connections to primary greenways.	Transp.	CDOT / Park & Rec / Planning	as development occurs
33	Work with petitioners in the rezoning process to develop a parrallel shared-use path or paved shoulders along Shopton Road West.	Transp.	CDOT / E&PM / Planning	as development occurs
34	Review expansion of transit to the plan area as part of CATS' next update to the 5-year Countywide Transit Services Plan.	Transp.	CATS / Planning	Medium (5-10 yr)

Policy Number	Action Item	Project Type	Lead Agency	Time Frame
<b>Infrastructure and Public Facilities</b>				
35-37	Continue to develop and maintain water and sewer systems needed to support the area's growth.	Utilities	CMU	Ongoing
35-37	Use land use and community design policies, as well as information about existing and planned infrastructure to guide and evaluate development proposals.	Utilities	CMU	Ongoing
35-37	Replace Steele Creek pump station.	Utilities	CMU	Medium (5-10 yr)
38-40	Develop Capps Community Park.	Park	P&R	Medium (5-10 yr)
38-40	Develop Palisades Neighborhood Park.	Park	P&R	Short (0-5 yr)
38-40	Develop Steele Creek, Walkers Branch, and Polk Ditch Greenways, as well as dedicate more areas for new greenways where possible.	Park	P&R	Ongoing
38-40	Work through the rezoning and subdivision processes to support the development of public access points to the Catawba River, including boat ramps, picnic areas and public open space along the river.	Park	P&R	as development occurs
41-42	Construct Palisades Elementary School.	Schools	CMS	Long (>10 yrs)
41-42	Construct middle school at Steele Creek Road site to serve southwest portion of the plan area.	Schools	CMS	Long (>10 yrs)
41-42	Construct high school to serve southwest portion of the plan area.	Schools	CMS	Long (>10 yrs)
45	Construct regional library at the Shopton Road site.	Public Facilities	PLCMC	Long (>10 yrs)
38-45	Work with civic infrastructure providers such as libraries, parks and schools through the Joint Use Task Force (JUTF), to build facilities along major or minor thoroughfares in mixed-use areas, and seek new opportunities for joint use projects.	Public Facilities	Planning / Police / Fire / Schools & Library	Ongoing


















Policy Number	Action Item	Project Type	Lead Agency	Time Frame
<b>Environment</b>				
46-50	Use the rezoning process and Subdivision Ordinance to implement land use and environmental policies.	Zoning	Planning	as development occurs
46-50	Continue to apply PCCO (Post Construction Controls Ordinance) and other City regulations and policies that address the protection of environmentally sensitive areas that are impacted by storm water run-off.	Storm-water	E&PM	as development occurs
46-50	Use the land development process to approve the amount of land cleared, graded or compacted to the maximum allowable built upon area, detailed in the watershed overlay zoning districts that apply.	Land Development	E&PM	as development occurs
46-50	Continue to apply the City's Tree Ordinance (and subsequent text amendments) in preserving the tree canopy, by encouraging a 10% tree save requirement for residential sites and a 15% for commercial sites.	Zoning/ Tree Ord.	Planning / E&PM	as development occurs
38-40; 46-50	Request easements and/or dedications during the land development process to expand the Greenways and passive open space.	Zoning/ Tree Ord.	Park & Rec./ Planning / E&PM	as development occurs
48	Limit development in and around contaminated sites to non-residential uses consistent with land use policies.	Zoning	Planning	as development occurs

## Future Transportation Projects

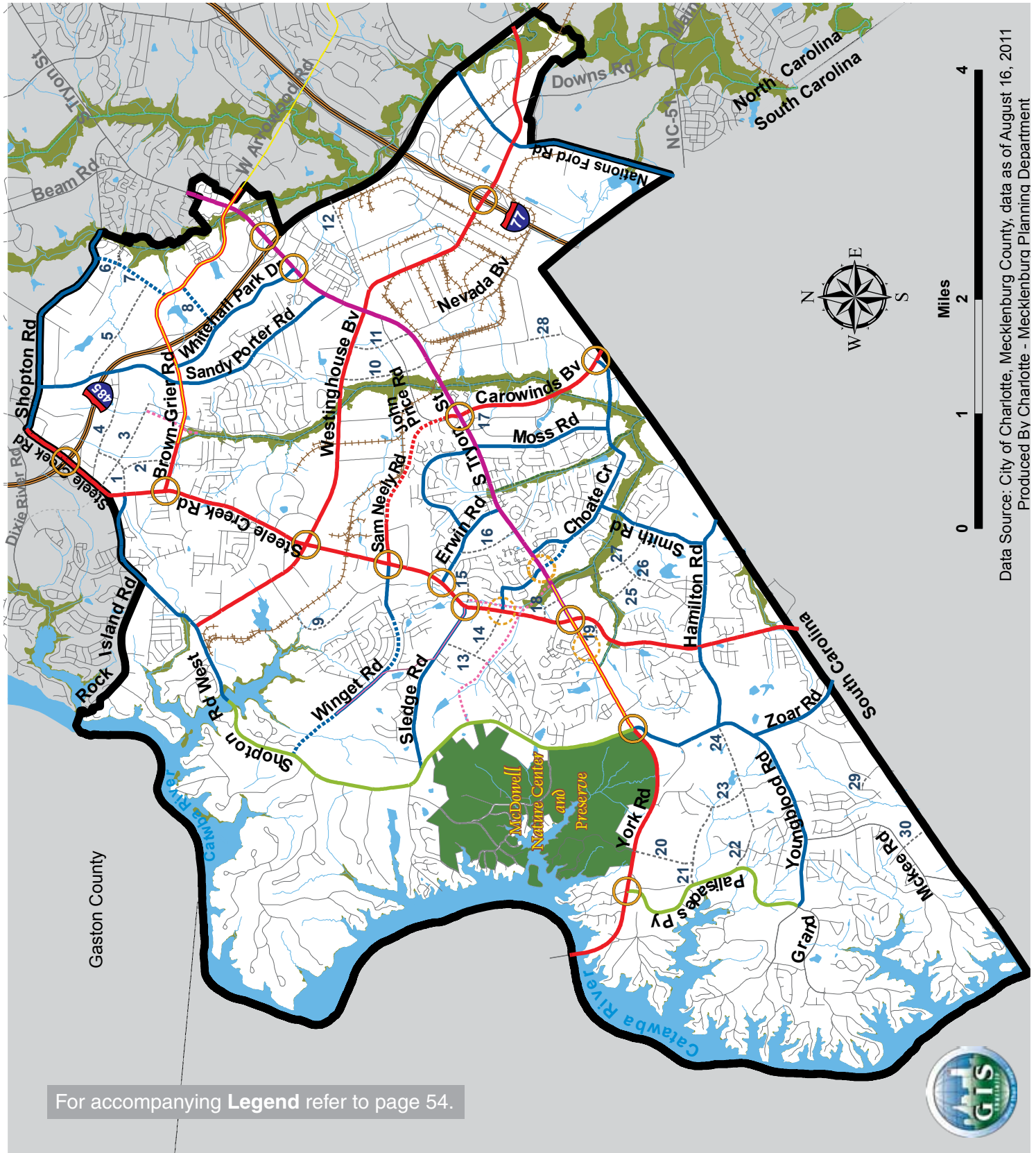
See **Map 5, Future Transportation Projects** on following page.

1. Extension of Shopton Road West across Steele Creek Road (NC 160) to new local street #4
2. New street between Brown-Grier Road at Cedar Hill Road and Shopton Road West Extension
3. Extension of Realigned Dixie River Road across Steele Creek Road (NC 160) to Gallant Lane
4. New street between Rigsby Road and Williams Glenn Road
5. New street between Sandy Porter Road and Arrowood Road inside Interstate 485
6. New street between Beaman Avenue and Blithe Low Place
7. New street between Shopton Road and Arrowood Road inside Interstate 485
8. New street between Arrowood Road and Whitehall Park Drive with bridge over Interstate 485 between Arrowood Road and South Tryon Street (NC 49)
9. Extension of Means Court to Quality Drive
10. Extension of General Drive to Westinghouse Boulevard
11. Extension of Nevada Boulevard to Westinghouse Boulevard
12. New street between Pioneer Avenue and Arrowpoint Boulevard with bridge over Interstate 485 between South Tryon Street (NC 49) and Interstate 77
13. Extension of Waterlyn Drive to Sledge Road
14. New street between Waterlyn Drive Extension and Steele Creek Road (NC 160) at Huntington Meadow Lane
15. Extension of Swann Branch Drive to Steele Creek Road (NC 160) at Sledge Road
16. New Street between Erwin Road and South Tryon Street (NC 49) at Stephendale Drive
17. The *2009 Feasibility Study* recommends a connection between South Ridge Drive and Moss Road. The connection will be considered only if parcels located on the west side of Moss Road are redeveloped and have fulfilled legal requirements associated with the property.
18. Extension of Rivergate Parkway across South Tryon Street (NC 49) to Steele Creek Road (NC 160)
19. New street between Steelecroft Parkway and Walker Branch Drive
20. New street between York Road (NC 49) and Grand Palisades Parkway
21. New street between Hickory View Lane Extension and Grand Palisades Parkway
22. Extension of Capps Road to Palisades Parkway
23. New street between Hickory View Lane and Shallow Pond Road
24. Extension of Hamilton Road to Capps Road
25. Extension of Walker Branch Drive to Superior Street Extension
26. Extension of Superior Street to Rivergate Parkway Extension
27. Extension of Rivergate Parkway to Smith Road
28. Extension of General Drive to Carowinds Boulevard via Catawba Trace
29. New street between Thomas Road and Kentucky Home Lane
30. New street between McKee Road and Tega Cay/Goldhill Road Connector

### Legend for Map 5, Future Transportation Projects

-  Enhanced Intersection
  -  Enhanced Intersection (Pending Connection)
  -  Boulevard: Six Lane
  -  Boulevard: Four Lane
  -  Avenue: Two Lane
  -  Avenue: Two Lane with Parkway Edge
  -  Proposed Avenue: Two Lane
  -  Local Street
  -  Proposed New Street \*
  -  Railroad
- Greenways**
-  Developed
  -  Proposed
  -  Overland Connectors
  -  100 Year Floodplain
  -  Creeks and Streams
  -  Ponds & Wetlands
  -  Plan Area Boundary

\* In most cases, these new connectors will be requested through the land development process to support increased travel demand and to provide additional travel routes to area Activity Centers. *The locations of the proposed connector streets are conceptual. Alternative locations, consistent with the intent of the proposed network, will also be considered. Additional streets may also be identified to facilitate improved network and connectivity.*



For accompanying Legend refer to page 54.

Data Source: City of Charlotte, Mecklenburg County, data as of August 16, 2011  
Produced By Charlotte - Mecklenburg Planning Department



## Steele Creek - Transportation Improvements & Costs

These estimates were developed using the unit costs from the 2035 LRTP document approved by MUMPO in 2010 and are in 2008 dollars. These are planning level estimates only using aerial information and planimetric info to determine the location of bridges and culverts that would need to be widened or replaced. It does include costs for items such as utility relocations, right of way and construction contingencies that are necessary to make a project whole.

New Roads/Road Widening		Existing	Proposed Improvement	Cost (000)	Funding Responsibility?	Under Current Funding when will this project be built?
<b>Project</b>	<b>Limits</b>					
Brown-Grier Road	Steele Creek Rd. to Sandy Porter Rd.	2 lane	Widening to 4 lanes	\$ 9,000	Charlotte	Beyond 2035
Carowinds Blvd.	S. Tryon St. (NC 49) to Choate Circle	2 lane	Widening to 4 lanes	\$ 12,000	Charlotte	Beyond 2035
Carowinds Blvd. Extension	S. Tryon St. (NC 49) to Shopton Rd. West	n/a	New 4-lane road	\$ 19,000	Charlotte	Beyond 2035
New bridge over I-485	Arrowood Rd. to Whitehall Park Dr.	n/a	New 2-lane bridge	\$ 12,600	Charlotte	Beyond 2035
Shopton Road (NC 49)	Arrowood Rd. to Steele Creek Rd.	4 lane	Widening to 6 lanes	\$ 50,000	Charlotte/NC DOT	Beyond 2035
Shopton Road West Extension	S. Tryon St. (NC 49) to Zoar Rd.	n/a	New 2-lane road	\$ 7,300	Charlotte	Beyond 2035
Steele Creek Road	I-485 to York Rd. (NC 49)	2 lane	Widening to 4 lanes	\$ 42,300	NC DOT	Beyond 2035
Steele Creek Road	York Rd. (NC 49) to South Carolina line	2 lane	Widening to 4 lanes	\$ 23,200	NC DOT	Beyond 2035
<b>Total</b>				<b>\$ 175,400</b>		

Farm-to-Market Road Improvements		Existing	Proposed Improvement	Cost (000)	Funding Responsibility?	Under Current Funding when will this project be built?
<b>Project</b>	<b>Limits</b>					
Choate Circle	S. Tryon St. (NC 49) to Carowinds Blvd.	2 lane	FTM Upgrade	\$ 16,600	Charlotte	Beyond 2020
Erwin Road	Steele Creek Rd. to S. Tryon St. (NC 49)	2 lane	FTM Upgrade	\$ 6,400	Charlotte	Beyond 2020
Hamilton Road	Youngblood Rd. to Steele Creek Rd.	2 lane	FTM Upgrade	\$ 5,500	Charlotte	Beyond 2020
Hamilton Road	Steele Creek Rd. to SC line	2 lane	FTM Upgrade	\$ 8,600	Charlotte	Beyond 2020
Sandy Porter Road	Shopton Rd. to Brown-Grier Rd.	2 lane	FTM Upgrade	\$ 9,800	Charlotte	Beyond 2020
Sandy Porter Road	Brown-Grier Rd. to S. Tryon St. (NC 49)	2 lane	FTM Upgrade	\$ 11,600	Charlotte	Beyond 2020
Shopton Road	Steele Creek Rd. to S. Tryon St. (NC 49)	2 lane	FTM Upgrade	\$ 21,300	Charlotte	Beyond 2020
Shopton Road West	York Rd. (NC 49) to Sledge Rd.	2 lane	FTM Upgrade	\$ 15,700	Charlotte	Beyond 2020
Shopton Road West	Sledge Rd. to Winget Rd.	2 lane	FTM Upgrade	\$ 10,000	Charlotte	Beyond 2020
Shopton Road West	Winget Rd. to Westinghouse Blvd.	2 lane	FTM Upgrade	\$ 11,400	Charlotte	Beyond 2020
Shopton Road West	Westinghouse Blvd. to Steele Creek Rd.	2 lane	FTM Upgrade	\$ 11,200	Charlotte	Beyond 2020
Sledge Road	Shopton Rd. to Steele Creek Rd.	2 lane	FTM Upgrade	\$ 11,600	Charlotte	Beyond 2020
Smith Road	Choate Circle to Hamilton Rd.	2 lane	FTM Upgrade	\$ 7,400	Charlotte	Beyond 2020
Youngblood Road	Palisades Pkwy. to Zoar Rd.	2 lane	FTM Upgrade	\$ 12,200	Charlotte	Beyond 2020
Zoar Road	Youngblood Rd. to South Carolina line	2 lane	FTM Upgrade	\$ 6,700	Charlotte	Beyond 2020
<b>Total</b>				<b>\$ 166,000</b>		

Intersection Improvements		Existing	Proposed Improvement	Cost (000)	Funding Responsibility?	Under Current Funding when will this project be built?
<b>Project</b>	<b>Limits</b>					
Bearn Rd./Shopton Rd.				\$ 3,300	Charlotte	Beyond 2015
Sam Neely Rd./Steele Creek Rd.				\$ 6,100	Charlotte	Beyond 2015
Brown-Grier Rd./Steele Creek Rd.				\$ 2,500	Charlotte	Beyond 2015
Steele Creek Rd./Westinghouse Blvd.				\$ 5,000	Charlotte	Beyond 2015
Steele Creek Rd./S. Tryon Street (NC 49)				\$ 5,000	Charlotte	Beyond 2015
Shopton Rd. West/York Rd. (NC 49)				\$ 5,000	Charlotte	Beyond 2015
Carowinds Blvd./S. Tryon St. (NC 49)				\$ 5,000	Charlotte	Beyond 2015
I-485/S. Tryon St. (NC 49)				\$ 5,000	Charlotte	Beyond 2015
I-77/Westinghouse Blvd.				\$ 5,000	Charlotte	Beyond 2015
S. Tryon St. (NC 49)/Whitehall Park Dr.				\$ 5,000	Charlotte	Beyond 2015
Carowinds Blvd./Choate Circle				\$ 5,000	Charlotte	Beyond 2015
<b>Total</b>				<b>\$ 51,900</b>		

<b>Total Road, FTM and Intersection Improvement Cost</b>	<b>\$ 393,300</b>
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## Part III

# *Appendix*

# Part III Appendix

All appendix maps are found at the end of the document.

## Existing Conditions Report

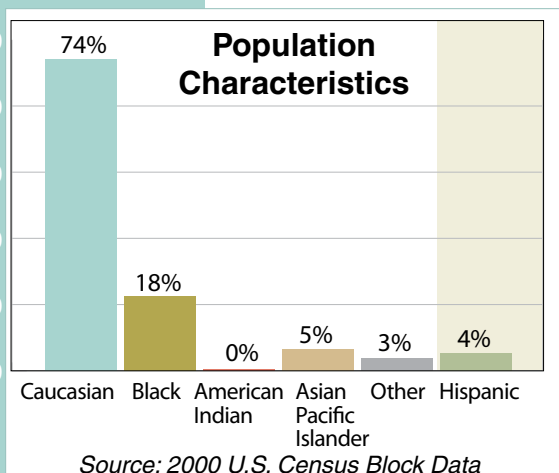
A thorough review and understanding of existing conditions – physical, economic and social – was needed to identify the opportunities and constraints facing the plan area, and to develop the plan vision, goals and policies. The following discussion highlights those existing conditions, trends and forecasts most relevant for the plan area.

### Introduction

The Steele Creek plan area is comprised of approximately 27,000 acres located in the southwestern portion of Mecklenburg County. The area is home to a large amount of industrial development. In recent years, it has experienced significant growth that includes residential, office, retail and mixed use development. However, several large tracts of undeveloped land still remain.

Identifying landmarks in the community include Ayrley Town Center, Whitehall Technology Park, RiverGate, Carowinds Amusement Park, Westinghouse Boulevard Industrial Center, Siemens Power Generation Plant, McDowell Nature Center and Preserve and Olympic High School. Established single family residential neighborhoods in the area include The Crossings, The Palisades, The Sanctuary, Whitehall and Yorkshire. The Berewick Mixed Use Development is located just outside the plan area.

A large portion of the plan area falls in a Wedge, two areas are within Mixed Use Activity Centers and two areas are located within Industrial Centers per the *Centers, Corridors and Wedges Growth Framework*.



## Demographic Profile

### Population

According to US Census data, 19,166 people resided in the plan area in 2000. Based on the *County Metrolina Regional Travel Demand Model* estimates, the population in the plan area almost doubled from 2000 to 2008, reaching 35,330.

- 33 percent were between the ages of 0 and 19
- 35 percent were between the ages of 20 and 39
- 25 percent were between the ages of 40 and 59
- 7 percent were age 60 and older

## Income and Housing Values

The median household income in the plan area was \$61,607, according to 2000 US Census data. This is well above the median household income for Mecklenburg County of \$50,579.

The median home value was \$144,846; slightly above the median home value for the County which was \$141,800.

## Households

The average household size was 2.57, and the total number of households was 7,416. The majority of the homes were owner occupied (83 percent).

Household Characteristics			
<b>Housing Units</b>	<b>Households</b>	<b>HH* Population</b>	
7,860	7,416	19,059	
<b>Owner Household</b>		<b>Renter Household</b>	
6,152	83%	1,264	17%
<b>One Person HH*</b>	<b>Family HH* with Children</b>	<b>Average HH Size</b>	
1,544	2,219	2.57	
<b>Median HH* Value</b>		<b>Median HH* Income</b>	
\$144,846		\$61,607	
County HH* Value		County Median HH* Income	
\$141,800		\$50,579	
Source: 2000 U.S. Census Data		*HH - Household	

## Education and Employment

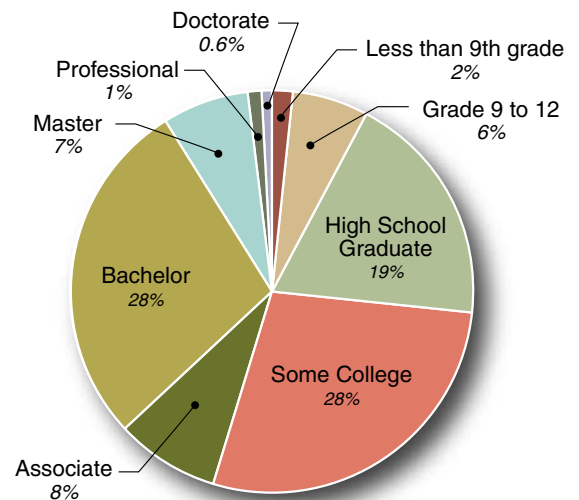
The majority of the working population (age 25+) in this area has some college education.

- 45 percent have an associate / bachelors or higher degree education,
- 28 percent have at least some college education.

Education levels are reflected in the type of jobs held by the residents.

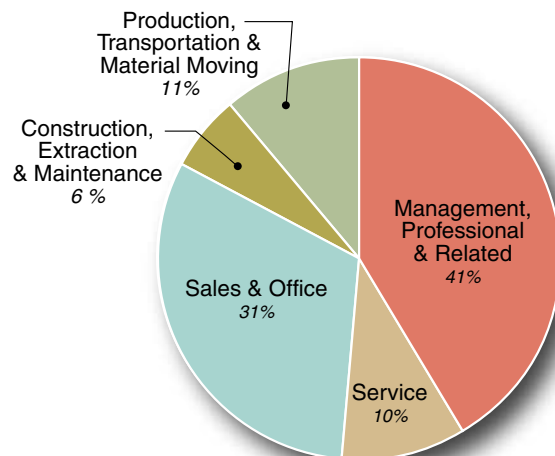
- 41 percent of jobs are in the management professional category,
- 31 percent of jobs were are in sales and office category.

### Educational Level



Source: 2000 U.S. Census Block Group Data

### Employment Industry



Source: 2000 U.S. Census Block Group Data

Major employers in the area are shown below:

Major Employers	
International Paper Company	5700
Arrowpoint Capital Corporation	2000
TJ Maxx Distribution Center	1050
Siemens Power Generation	799
Frito-Lay Inc	630
Celgard LLC	350
Chicago Pneumatic Tool Company	340
ADESA Charlotte	300
Source: 2000 U.S. Census Data	

## Building Permits

Recent building permit activity for the plan area is shown in the tables and on **Map 6, Development History** and **Map 7, Building Permit Activity**. Permits for both single family detached and attached housing units peaked in 2006. The number of permits for attached units increased significantly in 2006. There has been a substantial decline in permitting activity since 2008.

Residential Building Permits			
Year	Single Family Detached	All Attached Units	TOTAL
2000	484	635	1,119
2001	608	284	892
2002	689	140	829
2003	565	308	873
2004	466	99	565
2005	717	189	906
2006	895	1,440	2,335
2007	556	671	1,227
2008	343	707	1,050
2009	246	140	386
Aug 2010	155	91	246
<b>TOTAL</b>	<b>5,724</b>	<b>4,737</b>	<b>10,461</b>

*Source: Mecklenburg County Building Permit Data, August 2010*

Non-Residential Building Permits (Square Footages)	
2000	267,431
2001	696,130
2002	360,304
2003	408,652
2004	1,089,216
2005	1,871,366
2006	1,597,783
2007	1,897,865
2008	680,970
2009	93,495
Aug 2010	403,393
<b>TOTAL</b>	<b>9,366,605</b>

*Source: Mecklenburg County Building Permit Data, August 2010*

## Key Opportunities and Constraints

Listed below are Opportunities and Constraints identified during the public planning process.

### OPPORTUNITIES

### CONSTRAINTS

Land Use	Land Use
<ul style="list-style-type: none"> <li>• Preserve and protect neighborhoods</li> <li>• Convenience of activity centers for shopping, restaurants, entertainment and employment (RiverGate and Whitehall)</li> <li>• Preserve some agricultural areas</li> <li>• Limit expansion of industrial uses</li> </ul>	<ul style="list-style-type: none"> <li>• Industrial impacts on the natural environment and transportation</li> </ul>
Community Design	Community Design
<ul style="list-style-type: none"> <li>• High quality and diverse housing stock</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of rural character</li> </ul>
Transportation	Transportation
<ul style="list-style-type: none"> <li>• Accessibility to Catawba River, greenways and parks</li> <li>• Access to interstates, Center City and South Carolina</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of road improvements</li> <li>• Traffic congestion</li> <li>• Few transportation options</li> </ul>
Public Facilities	Public Facilities
<ul style="list-style-type: none"> <li>• Availability of greenways and parks</li> </ul>	<ul style="list-style-type: none"> <li>• Relocation of police station to more centralized location</li> <li>• Need for more schools</li> <li>• Lack of post offices/libraries</li> </ul>
Natural Environment	Natural Environment
<ul style="list-style-type: none"> <li>• Protection/preservation of open space, trees and watershed</li> <li>• Preservation of historical sites</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of natural features</li> <li>• Catawba River pollution</li> <li>• Poor air quality</li> </ul>

## Existing Land Use

The Steele Creek plan area is comprised of approximately 26,767 acres. As shown in the table below and illustrated on **Map 8, Existing Land Use**, the largest categories of existing land uses are vacant (27 percent), and single family detached (20 percent). Based upon approved rezonings, there are approved plans for 29 percent of the now vacant land (approximately 2096 acres) .

Industrial and warehouse/distribution accounts for 6 percent of development. The Westinghouse Industrial Center is located along both sides of Westinghouse Boulevard generally between I-77 and Shopton Road West. This is the largest industrial core in the Carolinas with over 20 million square feet of industrial development. A small portion of the Shopton Road Industrial Center is located on the western boundary of the plan area.

Major industrial businesses in the area include Siemens; this company recently announced plans to add 600 jobs. Others are International Paper Company, Arrowood Capital Corporation, TJ Maxx Distribution Center, Sprint, Time Warner Cable and Frito-Lay. Major industrial parks include Arrowood Southern Industrial Park, Moody Lakes and Whitehall.

Existing Land Use	Acreage	% of Total
Agriculture	1,582.32	6%
Industrial	1,500.64	6%
Institutional	501.46	2%
Mixed	11.60	0.04%
Multi-Family	550.98	2%
Office	450.26	2%
Open Space	2,230.22	8%
Retail	548.47	2%
Single Family - Attached	6.56	0.02%
Single Family - Detached	5,426.43	20%
Transportation	83.56	0.31%
Utility	47.37	0.18%
Vacant	7,258.22	27%*
Warehouse/Distribution	2,278.43	9%
Water	1,987.21	7%
Right of Way	2,303.41	9%
<b>Total</b>	<b>26,767.13</b>	<b>100%</b>

Source: Charlotte Mecklenburg Planning, September 22, 2010

**Note:** The land use acreage figures are calculated by parcel and do not include rights-of-way. As a result, the total acreage figures will not always match the total acreage figure for the plan area which does include rights-of-way as part of that calculation.

\* Approximately 29% of the vacant land, or 2096 acres, has an approved development plan.

## Existing Land Use Categories

Major land use categories are Vacant (27 percent), Single family residential (20 percent), Industrial and Warehouse/Distribution (17 percent), and Open Space (8 percent).



Agriculture

1,582.32 acres  
6% of total acres



Industrial

1,500.64 acres  
6% of total acres



Institutional

501.46 acres  
2% of total acres



Mixed

11.60 acres  
0.04% of total acres



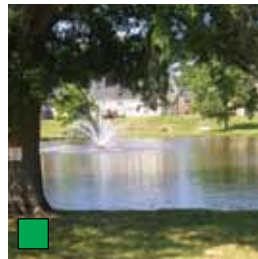
Multi-Family

550.98 acres  
2% of total acres



Office

450.26 acres  
2% of total acres



Open Space

2,230.22 acres  
8% of total acres



Retail

548.47 acres  
2% of total acres



Single Family - Attached

6.56 acres  
0.02% of total acres



Single Family - Detached

5,426.43 acres  
20% of total acres



Transportation

83.56 acres  
0.31% of total acres



Utility

47.37 acres  
0.18% of total acres



Vacant

7,258.22 acres  
27% of total acres



Warehouse/Distribution

2,278.43 acres  
9% of total acres



Water

1,987.21 acres  
7% of total acres



Right-of-Way

2,303.41 acres  
9% of total acres

**TOTAL ACRES 26,767.13**

Source: Charlotte-Mecklenburg Planning Department, 09/21/2010

**Note:** The land use acreage figures are calculated by parcel and do not include rights-of-way. As a result, the total acreage figures will not always match the total acreage figure for the plan area which does include rights-of-way as part of that calculation.

The Steele Creek plan area encompasses a wide variety of housing, commercial and industrial development styles, both old and new. A portion of the plan area is heavily developed, while other areas are more rural. Much of Steele Creek is and will continue to be auto-oriented, although several larger mixed use centers have emerged that are more pedestrian friendly. No cohesive development or design type exists in the plan area; however, there are pockets of development with similar features and materials. The information below summarizes the different land use types within the plan area boundary.

## Residential

With its proximity to Lake Wylie, the Steele Creek area has experienced significant growth in the last ten years. A number of subdivisions have been developed in recent years. Some are large lot subdivisions while others are similar to suburban residential development in the greater Charlotte region.

## Industrial and Office

Industrial and larger office uses in the plan area are primarily located near interchanges along Interstates 485 and 77. Several large industrial parks exist in the plan area, providing numerous employment opportunities. The majority of these facilities emerged in the last twenty years and are generally well built and utilitarian in design with masonry or metal construction.



*Large lot, custom residential homes in The Sanctuary cater to a different demographic than much of the plan area.*



*The largest industrial center in the Carolinas is located in the plan area.*



*Office uses within the plan area provide regional employment opportunities.*

## Retail and Mixed Use

Commercial centers in the plan area vary from older, strip type shopping centers along major roads, to more nodal, mixed use centers concentrated around major intersections. The Whitehall Technology Park, located along Interstate 485 between Brown Grier Road and S.Tryon Street (NC 49), is a recently constructed complex that incorporates a mix of multi-family, office, retail and light industrial land uses. Typical design features include masonry and glass materials with varied heights and massing. The Whitehall Technology Park and retail uses in the S.Tryon Street (NC 49) and Arrowood Road area serves the needs of Steele Creek residents, area employees, and the larger region that surrounds the plan area.

Other large mixed use projects that have recently emerged in the plan area include the Aysrley and RiverGate mixed use centers. Aysrley, located at S.Tryon Street (NC 49) and Interstate 485, provides townhomes, apartments, condominiums, offices and a number of retail and entertainment venues in a mixed use setting. The Aysrley development is centered around a “main street” with several work-live units containing retailers on the ground level and living units above.

The RiverGate development is a more suburban style development located at Steele Creek Road and S.Tryon St/York Rd (NC 49), catering to the needs of the Steele Creek community as well as the communities of Fort Mill and Tega Cay, SC. Large

retailers include one of only a few Super Targets in the region, Home Depot, PetSmart and Best Buy. A number of restaurants and shopping opportunities also exist in RiverGate, with a recent grocery center and apartment complex locating across S.Tryon St/ York Rd (NC 49).

Smaller commercial strip shopping centers also exist within the Steele Creek plan area and typically consist of grocery centers and neighborhood services, with not much interconnectivity. These commercial centers were generally built in the 1970's and 1980's and designed with the automobile in mind. Most centers are constructed of brick or other masonry materials, with large, surface parking lots, minimal landscaping and significant signage along the road. Despite their age, most of these centers are well-maintained and have active tenants that serve local neighborhood needs.

## Institutional and Open Space

A number of institutional uses exist in the plan area, including several religious institutions, schools, library, and Bartlett Tree Farm. Recently a library and middle school were constructed in the area. Open space land uses include McDowell Nature Center and Preserve, T.M. Winget Regional Park and greenways.



*Aysrley Town Center provides mixed use development in the plan area with live-work units and ground level retail.*



*Winget Park Elementary is one of many institutional uses within the plan area.*



## Steele Creek Multi-Tenant Retail Centers



### York Crossing

**Location:** Southwest corner of S. Tryon St (NC 49) and Westinghouse Bv  
**Size:** 46,547 sf  
**Year Built:** 1986  
**Major Tenants:** Dollar General



### Steele Creek Commons

**Location:** Southwest corner of S. Tryon St (NC 49) and Sandy Porter Rd  
**Size:** 56,756 sf  
**Year Built:** 1987  
**Major Tenants:** Food Lion, Dollar Tree



### York Ridge

**Location:** Northeast corner of S. Tryon Street (NC 49) and Moss Road  
**Size:** 74,411 sf  
**Year Built:** 1999  
**Major Tenants:** Peak Fitness, Bank



### Whitehall Commons

**Location:** Northwest corner of S. Tryon St (NC 49) & Arrowood Rd  
**Size:** 432,469 sf  
**Year Built:** 2000  
**Major Tenants:** Wal-Mart, Bi-Lo, Lowe's



### Steelecrafft

**Location:** Northwest corner of S. Tryon St/York Rd (NC 49) and Steele Creek Rd  
**Size:** 79,227 sf  
**Year Built:** 2000  
**Major Tenants:** Harris Teeter



### Steele Creek Crossing

**Location:** Northeast corner of S. Tryon St (NC 49) and Steele Creek Rd  
**Size:** 73,290 sf  
**Year Built:** 2000  
**Major Tenants:** Bi-Lo, Rite-Aid



### Ayrslley Town Center

**Location:** Southeast corner of S. Tryon St (NC 49) and I-485  
**Size:** 304,551 sf  
**Year Built:** 2003  
**Major Tenants:** Movie Theater, YMCA, Restaurants



### RiverGate

**Location:** Southeast corner of S. Tryon St (NC 49) & Steele Creek Rd  
**Size:** 550,000 sf  
**Year Built:** 2006  
**Major Tenants:** Target, Marshall's, Home Depot, Restaurants



### Southpoint Village

**Location:** Northeast corner of S. Tryon St (NC 49) & John Price Rd  
**Size:** 32,000 sf  
**Year Built:** 2006  
**Major Tenants:** Aldi, Advance Auto, Tuesday Morning

## Zoning

As shown in the table below half of the plan area is zoned single family residential. The second largest zoning category in the plan area is industrial. The third largest is MX or mixed use. The purpose of the MX district is to allow for the development of planned communities that may incorporate a full range of housing types and in some instances, compatible nonresidential uses. These uses provide goods, services and employment opportunities primarily to meet the needs of residents in the immediately surrounding area. See **Map 10a, Existing Zoning** and **Map 10b, Current Zoning**. Link to current zoning at [www.charlotteplanning.org](http://www.charlotteplanning.org)

Existing Zoning		
Zoning	Acres	% of Total Area
Residential	13,082.07	55%
Single Family	12,168.66	51%
Multi-Family	913.41	4%
Office	150.65	1%
Retail	519.70	2%
Industrial	6,357.64	27%
Institutional	232.31	1%
Mixed Use	3,641.51	15%
<b>Total Acres</b>	<b>23,983.88</b>	<b>101%</b>

Source: Charlotte-Mecklenburg Planning Department, May 17, 2010

**Note:** The land use acreage figures are calculated by parcel and do not include rights-of-way. As a result, the total acreage figures will not always match the total acreage figure for the plan area which include rights-of-way as part of that calculation.

Some of the larger approved rezonings include The Palisades development, located on the southern side of York Road (NC 49) at the Catawba River. It is a large mixed use development with a mixture of housing types and overall density of three dwelling units per acre. The approved rezoning site plan also allows for neighborhood serving land uses.

The Sanctuary is a large area zoned for mixed use development located off the northerly side of Shop-ton Road West at the Catawba River. The approved site plan allows for single family homes only at an overall density of less than one dwelling unit per acre.

Ayrsley is a mixed use development located at South Tryon Street and I-485. In addition to the movie theater, office and retail development, there is a residential component with townhomes and apartments.

## Watershed Overlay Zoning

Because of its proximity to the Catawba River, a portion of the plan area is subject to the requirements of the Lower Lake Wylie Watershed Overlay Zoning District. These restrictions, supplementing the underlying zoning requirements, protect the public water supply. Because of the greater risk of water quality degradation from pollution, there are higher development standards in the Critical Area.

Development Standards for the Lower Lake Wylie Watershed Overlay			
<b>Critical Area</b> <i>(maximum impervious area)</i>		<b>Protected Area</b> <i>(maximum impervious area)</i>	
<b>Residential</b>	<b>Non-Residential</b>	<b>Residential</b>	<b>Non-Residential</b>
Low density option - 24%	Low density option - 24%	Low density option - 20%	Low density option - 20%
High density option - 70%	High density option - 70%	High density option - 50%	High density option - 50%

Source: City of Charlotte Zoning Ordinance

The table above summarizes the amount of impervious cover allowed in the watershed. The High Density Option allows for a greater development density if engineered controls (Structural BMP's) are used to manage stormwater runoff.

Land adjacent to Lake Wylie and extending approximately one-half mile inland lies in the Lower Lake Wylie Critical Area. The Protected Area extends approximately five miles from Lake Wylie inland. See graphic in table above. A more detailed discussion of the watershed can be found in the Natural Environment section of this chapter.

## Recent Rezoning

In addition to a rise in building permit activity, several rezoning cases have been approved that will significantly increase land use intensity in the years to come. These rezoning cases generally allow for mixed use development or a significant amount of office development. See **Map 11**, *Rezoning History (2000-2010)*. All rezoning cases may be viewed at [www.charlotteplanning.org](http://www.charlotteplanning.org)

### Rezoning Petitions Approved, 2000 – 2010

#	Rezoning Petition (Year-#)	Location	Zoning Change	Development Details
<b>2000</b>				
1	<b>2000-022</b>	Approx 64.8 acres located on the south side of York Rd (NC 49), west of I-485	I-1 & I-2 to CC	Ayrsley - Master planned development with office, hotel retail, entertainment and residential uses
2	<b>2000-022(c)*</b>	Approx .68 acres located on the north side of York Rd, east of Shopton Rd West	R-3 to B-1	Unify zoning of total parcel under B-1 classification
3	<b>2000-057</b>	Approx 26.25 acres located on the south side of York Rd west of Moss Rd	R-3 to R-12MF	Allow up to 12 dwelling units per acre (dua)
4	<b>2000-066</b>	Properties located within one mile of the City limits	Zoning remains the same	Transfer zoning authority from County to City.
5	<b>2000-087</b>	Approx 26.1 acres located on the south side of Shopton Rd east of Sandy Porter Rd and west of Pleasant Way Ln	R-3 to I-1	None
6	<b>2000-121</b>	Approx 1.1 acres on the southwest corner of Shopton Road and Nations Ford, north of Westinghouse Blvd	I-2 to I-1	None
7	<b>2000-142</b>	Approx 7.12 acres located west of York Rd, north of the proposed Arrowood Rd	O-15(CD) to O-1	None
8	<b>2000-143</b>	Approx 4.63 acres on the north side of Arrowood Rd between Sandy Porter Rd and I-485	R-3 and O-2 to O-1(CD) and B-1(CD)	130 room hotel and 25,000 sf retail
9	<b>2000-146</b>	Approx 129.25 acres on the southwest corner of the intersection on I-485 and S. Tryon St (NC 49)	I-1, I-2 & CC to CC, CC SPA & MUDD (CD)	Ayrsley - Allow a mix of uses including 1,260,000 sf of office, 277,500 sf of retail, 65,000 sf for a theatre, 425-room hotel, and 1,605 residential units
10	<b>2000-147</b>	Approx 7.3 acres on the southwest corner of Arrowood Rd and Whitehall Park Dr	R-17MF(CD) to B-1(CD)	Sit-down restaurant and/or day care facility
11	<b>2000-163</b>	Approx 31 acres located east of Winget Rd and Autumn Blaze Dr, north of Neely Rd	I-2 to R-4(CD)	116 single family units at 4 dua
<b>2001</b>				
12	<b>2001-004</b>	Approx 21.7 acres on the south side of S Tryon St (NC 49), between Moss and Erwin rds	R-3 to R-8(CD)	Allow for 172 duplex, triplex, and quadruplex dwellings, with a maximum density of 8 dua
13	<b>2001-016(c)*</b>	Approx. 1,500 acres located on the south side of York Rd, bisected by Youngblood Rd and north of Bankhead Rd	R-3 and R-5 to MX-3 and CC	Palisades - 300 single family homes, 660 multi-family homes, 128 town-homes, 200,000 sf retail, 100,000 sf office

14	<b>2001-060</b>	Approx 11 acres located on the southeast corner of I-485 and Sandy Porter Rd, north of Brown-Grier Rd	R-3 to O-1(CD)	All office uses except hotels and motels
15	<b>2001-066</b>	Approx 20 acres located on the north side of York Rd, east of Steele Creek Rd	R-3 to R-12MF(CD)	Multi-family residential
16	<b>2001-069</b>	Approx. 3.1 acres on located on the west of Steele Creek Rd, north of York Rd	R-3 to Inst	Branch library facility
17	<b>2001-132</b>	Approx 84.95 acres located east of S. Tryon St (NC 49) north and south of Cambridge Beltway Dr	I-1 & CC to MUDD-O	Ayrsley – allow three detached signs
<b>2002</b>				
18	<b>2002-005</b>	Approx 49 acres located on the southeast corner of Shopton Rd and Steele Creek Rd, west of Gable Rd	R-3 and B-1 to I-1(CD)	500,000 sf of office/flex space, a 200-room hotel and 47,000 sf of retail and restaurant space
19	<b>2002-007</b>	Approx 27 acres between Whitehall Park Dr and I-485, south of Brown-Grier Rd	O-2 (CD) & I-1(CD) to O-2(CD)	Allow up to 585,000 sf of any uses permitted in O-2
20	<b>2002-044(c)*</b>	Approx. 1,500 acres located on the south side of York Rd at Youngblood Rd north of Bankhead Rd	R-4 (County) to R-4 (City)	Transfer zoning authority from County to City and establish initial City zoning
21	<b>2002-102</b>	Approx 23.2 acres located south of Westinghouse Bv west of S. Tryon St (NC 49)	R-MH to I-1	None
22	<b>2002-117</b>	Approx 14.5 acres located on the northeast corner of York and Erwin rds	R-3 to R-8MF(CD)	Allow childcare center and townhomes with a maximum density of 8 dua
<b>2003</b>				
23	<b>2003-014</b>	Approx 3.84 acres located on the north side of Township Rd, west of S. Tryon St (NC 49)	R-17MF to O-1(CD)	Six single story office condos for a total of 36,000 sf
24	<b>2003-024</b>	Approx. 1,828 acres located on the east and west sides of Shop-ton Rd W, north of Woody Point Rd and the north and south sides of Island Point and Girl Scout r	R-12PUD, R-5, B-1(CD), B-1SCD (LLW/CA, LLW/PA) to MX-1 (Innovative) LLW/CA, LLW/PA	The Sanctuary - Allow 740 single family homes, 30.8 acres active amenity open space, 271.8 acres common open space
25	<b>2003-026</b>	Approx 4 acres located on the north side of York Rd, east of Moss Rd	R-17MF to O-1(CD)	Allow up to 35,000 sf of office uses
<b>2004</b>				
26	<b>2004-002</b>	Approx 3.1 acres located at intersection of Youngblood Rd and York Rd	B-2(CD) to R-3	None
27	<b>2004-043</b>	Approx 23.6 acres located East of S. Tryon St (NC 49), North of Westinghouse Bv	I-1 to MUDD-(CD) & MUDD-O	Ayrsley - Allow mix of residential, office and limited retail uses.
28	<b>2004-044</b>	Approx 2.27 acres located between Sandy Porter Rd and I-485, southeast of Williams Glen Rd	R-3 to O-1(CD)	Allow office development and a duel pole stealth tower.

29	<b>2004-064</b>	Approx 86 acres located south-east of the intersection between York Rd and Steele Creek Rd	R-3, R-3(CD), R-17MF(CD), CC to CC and CC SPA	Allow 600,000 sf of retail or office uses
30	<b>2004-132</b>	Approx 5.06 acres located on the east side of John Price Rd, north of S. Tryon Rd (NC 49)	CC Site Plan Amendment	Allow an additional 6,500 sf office building and a 12,000 sf retail building
31	<b>2004-147</b>	Approx 11.8 acres located on the south side of S. Tryon St (NC 49) across from Erwin Rd	R-3 & R-8(CD) to R-12MF(CD)	Allow 99 town homes
32	<b>2004-150</b>	Approx 1.96 acres located on the northeast corner of S. Tryon St (NC 49) and Erwin Rd	R-8MF(CD) to INST(CD)	Palisades - Daycare - decrease the number of children allowed from 225 to 190 and increase the building size from 10,000 sf to 12,000 sf
<b>2005</b>				
33	<b>2005-040</b>	Approx 3.62 acres located on the east side of Shopton Rd, south of Pleasant Way Lane	R-3 to O-1(CD)	Allow general office uses in an existing 1,840 square foot historic structure with a future building not to exceed 3,500 sf
34	<b>2005-046</b>	Approx 8.083 acres located on the east side of Nations Ford Rd, south of I-485	I-1 to I-2(CD)	All uses permitted in I-2, except junk yards
35	<b>2005-050</b>	Approx 50 acres located on the south side of Westinghouse Bv, west of Fruehauf Dr	I-2 to I-1	None
36	<b>2005-058</b>	Approx. 2.722 acres located on the north side of York Rd, west of Steele Creek Rd	R-17MF(CD) to O-1(CD)	Up to 30,000 sf of medical and general offices
37	<b>2005-073</b>	Approx 3.13 acres located on the southeast corner of S. Tryon St (NC 49) and Moss Rd	I-1(CD) to O-1(CD)	Allow 39,000 sf of office. Reduce setbacks and provide access from Moss Rd
38	<b>2005-118</b>	Approx 10.5 acres located south-east of the intersection of Nations Ford Rd and Westinghouse Bv	I-1 & I-2 to I-2(CD)	Provide consistent zoning for the entire parcel
39	<b>2005-122</b>	Approx .0912 acres located north of the intersection of Sandy Porter Rd and S. Tryon St (NC 49)	R-17MF to NS	Allow 12,000 sf retail / service uses
40	<b>2005-130</b>	Approx. 16.3 acres located southwest of intersection of York and Steele Creek rds	R-3 to O-2(CD)	Up to 225,000 sf of medical and general offices
41	<b>2005-135</b>	Approx. 101.6 acres located southeast of the intersection of Hamilton and Youngblood rds	R-3 and O-1 to RE-1(CD)	Expansion of a research laboratory and farm relating to cultivation, study and testing of trees and plants
42	<b>2005-149</b>	Approx. 43.3 acres located northwest of intersection of York and Steele Creek rds	R-5(CD), R-17MF(CD) and CC to R-17MF(CD) SPA and CC SPA	Allow 608 multi-family units at 14 du/a
43	<b>2005-153</b>	Approx 115 acres located south of the intersection of I-485 and S. Tryon St (NC 49)	MUDD-O & MUDD(CD) to MUDD-O & MUUD-O SPA	Ayrsley - This request does not propose to increase development rights but add optional provisions to site plan

2006				
44	<b>2006-005</b>	Approx 18.7 acres is located on the east side of Sandy Porter Rd and south of West Arrowood Rd	R-3 and B-1(CD) to O-2(CD), B-1(CD), B-1(CD) SPA,	Shopping center/ office complex with 225,000 sf. A maximum of 70,000 sf will be devoted to retail uses
45	<b>2006-014</b>	Approx 8.254 acres located east of Sandy Porter Rd and/or of West Arrowood Rd	R-3, O-1(CD), B-1(CD) to O-1(CD) SPA, B-1(CD) and B-1(CD) SPA	Shopping center with up to 75,000 sf of retail, 130 room hotel/motel and office uses
46	<b>2006-023</b>	Approx 2.13 acres located east of Steele Creek Rd and north of York Rd.	CC to CC SPA	Amend CC conditional plan to allow an additional outparcel for a 12,900 square foot Goodwill store.
47	<b>2006-044</b>	Approx. 8.23 acres located west of Steele creek Rd and north of York Rd	CC to CC SPA	Site plan amendment to all 30,000 sf of retail and 40,000 sf of office, representing increase of 10,850 sf of office and 15,345 sf of retail
48	<b>2006-061</b>	Approx. 19.16 acres located north of York Rd, west of Greybriar Forest Ln	R-3 to R-8MF(CD)	130 for-sale townhomes at 6.8 dua
49	<b>2006-078</b>	Approx. 304.8 acres west of Steele Creek Rd, between Dixie River Rd and Shopton Rd W	R-3, MX-1, CC, BP to CC, CC SPA, BP SPA, MX-1, O-2(CD)	Parcel A: 910 residential units, 250,000 sf retail, 300,000 sf office; Parcel B: 250 single family lots, church or 94 townhomes at 12 dua; Parcel C: 375,000 sq of business park uses Parcel D: 50,000 sf of office uses or 150-room hotel; Parcel E: 120 townhomes; Parcel F: up to five outparcels
50	<b>2006-080</b>	Approx 4.7 acres located on the east side of Steele Creek Rd south of Huntington Meadow Ln	R-3 to INST(CD)	Fraternal lodge
51	<b>2006-085</b>	Approx 6.3 acres located on the southeast corner of Westinghouse Bv and Goodrich Dr	I-1 and I-2 to I-2(CD)	All I-2 uses, except junk yards with future expansion not to exceed 1.0 F.A.R.
52	<b>2006-142</b>	Approx 19.3 acres located on the south side of Choate Circle west of Moss Rd	INST(CD) to INST(CD) SPA	To add classroom and office space to an existing seminary regional campus
2007				
53	<b>2007-006</b>	Approx 2.83 acres located on the west side of Carowinds Bv south of S. Tryon St (NC 49)	I-1 to NS	Allow 30,000 sf of retail and office uses
54	<b>2007-021</b>	Approx 87.35 acres located on Ayrslley Town Bv east of S. Tryon St (NC 49) and west of I-485	MUDD-O to MUDD-O SPA	Ayrslley - amend site plan to allow options to the MUDD standards.
55	<b>2007-024</b>	Approx 3.72 acres located on the southwest corner of S. Tryon St (NC 49) and Moss Rd	R-3 to NS	Allow up to 34,000 sf of office uses
56	<b>2007-025</b>	Approx 0.71 acres located on the northeast corner of S. Tryon St (NC 49) and West Arrowood Rd	B-1SCD to B-1	None

57	<b>2007-084</b>	Approx 1.9 acres located on the south side of Shopton Rd east of Sandy Porter Rd	R-3 to I-1	None
58	<b>2007-096</b>	Approx 10.4 acres on the south side of Crosshaven Dr east of Snug Harbor Rd (Palisades)	MX-3 (LLWCA) & R-5 (LLWCA) to MX-1 (LLWCA)	Allows private streets to provide access to several existing lots on Lake Wiley
<b>2008</b>				
59	<b>2008-043</b>	Approx. 2.65 acres located on the south side of Westinghouse Bv between I-77 and Granite St	I-2 to I-1	None
60	<b>2008-051</b>	Approx 1.53 acres located on the northwest corner of York Rd (NC 49) and Steele Creek Rd.	CC SPA	Allow up to 10,000 sf retail
61	<b>2008-053</b>	Approx 60 acres located on the south side of West Arrowood Rd between I-485 and Whitehall Executive Center Dr	BP(CD) to MUDD-O	Allow 1,800,000 sf of office uses, 40,000 sf of retail, and 400 multi-family units at 57 du/a
62	<b>2008-076</b>	Approx. 2.78 acres located at the intersection of S. Tryon St (NC 49) and Aysley Town Bv	MUDD-O to MUDD-O SPA	Allow one building mounted LED sign
63	<b>2008-089</b>	Approx 6.97 acres located on the east side of Continental Bv, south of Pioneer Ave	I-2 to I-1	None
64	<b>2008-090</b>	Approx 6.60 acres located on the southeast corner of West Arrowhead Rd and Sandy Porter Rd	O-2(CD) and B-1(CD) to O-2(CD) SPA and B-2(CD)	Moody Lake - 85,000 sf of B-2 uses, which include a hotel with up to 125 rooms, and 35,000 sf of office uses
65	<b>2008-111</b>	Approx. 7.80 acres located on the southwest corner of Brown-Grier Rd and Sandy Porter Rd	R-3 to Inst(CD) and R-8MF(CD)	Up to 19,500 sf child care center and 31 attached sf dwellings at 6.08 du/ac
<b>2009</b>				
66	<b>2009-002</b>	Approx 4.80 acres located on the south side of Erwin Rd between S. Tryon St (NC 49) and Moss Rd	R-3 to I-1(CD)	Public utility use with the addition of a contractor's office
67	<b>2009-016</b>	Approx 3.24 acres on the northwest corner of the intersection of Steelecreek Pkwy and Steele Creek Rd	CC SPA	A 9,000 square foot retail tire store on a separate lot from the existing restaurant on the site
68	<b>2009-019</b>	Approx 16.30 acres located on the south side of York Rd (NC 49) between Steele Creek Rd and Wright's Ferry Rd	O-2(CD) SPA	A helistop (no basing, repair or fueling allowed) on the medical campus to support emergency transportation needs of patients
69	<b>2009-056</b>	Approx 2.89 acres at the corner of S. Tryon St (NC 49) and Steelecreek Pkwy	O-1(CD) & CC to B-1(CD) & O-1(CD) SPA	Allow for office and retail development
<b>2010</b>				
There have been no rezoning petition approvals in 2010.				
* (c) indicates that the petition was under the County's jurisdiction at the time of approval Source: Charlotte-Mecklenburg Planning Department, 2010				

# Community Design

At present, the overall feel of the plan area is rural with activity nodes along the major transportation corridors. However, as new residential developments are constructed and roads are widened and straightened, rural is giving way to suburban. The area has been automobile-oriented. There are sidewalks in residential subdivisions but few along the major roads. The community, at present, lacks any consistent design elements that could knit the area together. The presence of the Catawba River also represents an obvious opportunity to build upon the natural resources present in the community.



The opportunity exists to preserve some of the area's rural character.

# Transportation

## The Street Network

The number of route choices available to pedestrians, bicyclists and motorists describes the adequacy of an area's street network. A dense, well-connected network offers greater route choice and more direct routes to destinations than does a less connected network. In addition a highly connected network provides greater overall system capacity than a less-connected network.

Route choices are measured by the number of lane-miles of streets, number of intersections (nodes), number of blocks (links), and the connectivity index. A lane-mile is one mile of a single roadway lane. The more lane-miles of streets there are, the greater the overall traffic carrying capacity. The connectivity index quantifies how well a roadway network connects destinations and is calculated by dividing the number of roadway links by the number of roadway nodes. A connectivity index of 1.45 or more is desirable for transit station areas and in-town neighborhoods, while an index of 1.35 is recommended for other areas, including the Steele Creek plan area.

Land Use Accessibility		
	Population (% Population) in City of Charlotte	Population (% Population) in Steele Creek Area
<b>Total Population</b>	<b>756,085</b> (100%)	<b>35,000</b> (100%)
<b>Within ¼ mile of Shopping</b>	<b>399,848</b> (53%)	<b>11,918</b> (42%)
<b>Within ¼ mile of Schools</b>	<b>91,942</b> (12%)	<b>2,890</b> (10%)
<b>Within ¼ mile of Park</b>	<b>118,785</b> (16%)	<b>998</b> (3%)
<b>Within ¼ mile of a local transit route</b>	<b>431,200</b> (57%)	<b>11,565</b> (40%)

Source: Charlotte Department of Transportation, 2010

Key measures of the Steele Creek plan area data include:

Miles of streets:	<b>281</b>
Lane-mile of streets:	<b>585</b>
Connectivity Index:	<b>0.88</b>

Currently, the Steele Creek area receives low marks relating to land use accessibility relative to the city average, as shown in the *Land Use Accessibility Table*. If there continues to be a lack of both connectivity and the proximity of neighborhood-serving land uses as the Steele Creek area develops, it will likely result in severe traffic congestion.



## Street Classifications

### Streetscape and Typical Sections

The City of Charlotte has over 200 miles of narrow “farm-to-market roads” that serve as the primary routes for developing areas of the City. These roadways quickly become overburdened by traffic resulting in significant congestion and sometimes unsafe conditions. The *Transportation Action Plan* recommended additional funding to make improvements to farm-to-market roads located within Charlotte city limits.

The Steele Creek area includes 23 miles of farm-to-market roads that are identified in the *Transportation Action Plan* as needing improvements at an estimated cost of \$173 million (2010 dollars). Examples of needed improvements include new curb-and-gutter, new sidewalks, additional lane width, and turning lanes to improve traffic flow.



McKee Road



Shopton Road West



Shopton Road West



Sledge Road



Sledge Road



Sledge Road

### The Thoroughfare Plan

The *Mecklenburg-Union Thoroughfare Plan* is the adopted major roadway plan for Mecklenburg and Union counties and is used to assure that the most appropriate street system is developed to meet existing and future travel needs. See **Map 12, Adopted Future Transportation Network**. Streets are classified and designed according to their intended functions so that land use and traffic conflicts are minimized. The street classifications applicable to the Steele Creek Area Plan are as follows:

**Thoroughfares:** S. Tryon Street (NC 49), York Road (NC 49), Steele Creek Road (NC 160), Westinghouse Boulevard, West Arrowood Road, Brown-Grier Road, Carowinds Boulevard, Sam Neely Road, and Winget Road are major thoroughfares serving the Steele Creek area. Sam Neely and Winget roads are a part of the future Carowinds Boulevard Extension. Major thoroughfares are designed or will be designed to accommodate large volumes of traffic at moderate speeds and provide access to major commercial, employment and residential land uses. Sandy Porter Road, Shopton Road, Shopton Road West, Zoar Road, Nations Ford Road, and Downs Road are minor thoroughfares that collect traffic from the local collector streets and carry it to the major thoroughfares. Minor thoroughfares

are designed to carry moderate traffic volumes at moderate speeds and provide access to residential, commercial and institutional land uses.

**Collectors & Locals:** Whitehall Park Drive, Ayrley Town Boulevard, Silver Crescent Drive, Pioneer Avenue, Continental Boulevard, Nevada Boulevard, Granite Street, John Price Road, Choate Circle, Moss Road, Erwin Road, Hamilton Road, Youngblood Road, Grand Palisades Parkway, Soldier Road, Sledge Road, and Rivergate Parkway are major collectors. Rock Island Road, Island Point Road, Bankhead Road, McKee Road, Thomas Road, Smith Road, Cedar Hill Drive, Red Hickory Lane, Ohara Drive, Gallant Lane, Griers Fork Drive, Stephendale Drive, Freshwell Road, General Drive, Wilmar Boulevard, Commerce Boulevard, Brookfield Street, Texland Boulevard, and Crompton Street are minor collectors. Collectors are designed to carry traffic between the thoroughfares and local streets at moderate volumes and speeds and providing access to adjacent land uses. The remaining roadways are local streets that carry low traffic volumes, have slow operating speeds and provide access to individual properties. Much of the local street network in this area is very disconnected.

## Level Of Service

**Level Of Service** (LOS) measures the quality of service provided by a transportation facility to its users. The City of Charlotte evaluates level of service for pedestrians, bicyclists and motorists and uses the results to help balance their competing needs when planning and designing streets. Levels of service range from A through F, with desirable levels of service based on the street typologies of the Urban Street Design Guidelines.

Pedestrian and bicycle level of service is rated according to the level of comfort and safety offered by the design features at signalized intersections, while motor vehicle level of service is based on motorist delays. Motor vehicle quality of service is also measured by the Volume to Capacity ratio (V/C), which describes an intersection's ability to process traffic within peak time periods. Values greater than .95 suggest an intersection is near its capacity during this time period and that motorists may experience substantial congestion.

## Pedestrian & Bicycle Facilities

**Pedestrian System:** Of the 113 miles of streets within the incorporated portion of the Steele Creek area (or 40 percent of total area streets), only 18 percent have sidewalks on both sides of the street, 13 percent have sidewalk on one side and 42 percent have no sidewalk at all. The pedestrian system is shown on **Map 13**, *Existing Pedestrian Facilities*.

Additionally, there are 32 signalized intersections in the area, none of which have an acceptable LOS for pedestrians. Improvements to intersections with unacceptable LOS for pedestrians could include a number of treatment options, such as reducing the crossing widths, providing sidewalks, adding pedestrian refuge islands, increasing crossing time and installing pedestrian signals.

Existing and any future intersections will need further review to make an accurate assessment of a recommended approach. As a number of the intersections are located within NCDOT roadways, staff will need to work with NCDOT to receive the necessary approvals for pedestrian related facilities. Control of access may be an issue in some locations.

**Bicycle System:** There are currently no designated roadway facilities for bicyclists in the Steele Creek area. However, new roads, road widenings, and farm-to-market road projects will likely include bicycle lanes. Otherwise, bicyclists must share travel lanes with motor vehicles using the area's street system.

There are currently 32 signalized intersections within the area, none of which have an acceptable LOS for cyclists. There are currently no bicycle lanes at any intersections. Bicycle LOS may be improved with restrictions on right turning movements, or by adding a bicycle lane to the left of an exclusive right turn lane, which alleviates the risk of a crash involving right turning motorists. Likewise, protected left turns would reduce the risk of a crash from a left turning motorist. These provisions could improve the intersection bicycle LOS.

The extremely long block lengths and lacking sidewalk system reinforce the need for bicycle connectivity. Interstates 77 and 485 in particular, as well

as creeks and railroads, serve as barriers to bicycle connectivity. Some strategies for improving connectivity include designing and constructing interstate crossings to facilitate bicycle use, avoiding the use of cul-de-sacs and other terminal streets and, providing a bicycle/pedestrian connections where terminal streets cannot be avoided. Another way to increase connectivity is to ensure that residential neighborhoods adjacent to commercial developments provide bicycle/pedestrian access to the commercial center.

## Motor Vehicle Network

The Steele Creek area is currently experiencing moderate to high levels of congestion on major roads in the area. Based on transportation analysis shown on See **Map 14**, *Vehicle Level of Service*, S. Tryon Street (NC 49), Carowinds Boulevard and Steele Creek Road are experiencing significant congestion during peak hours of the day. Additional transportation investments are needed to ensure that streets are constructed to keep pace with the area's growth. See **Map 5**, *Future Transportation Projects*.

**Motorist Level Of Service (LOS)** is measured via recent traffic counts. The City of Charlotte uses the resulting LOS measures to help balance roadway users' competing needs when planning, designing and constructing streets.

## Public Transportation

Charlotte Area Transit (CATS) offers public transportation service in and through the Steele Creek area with a combination of local and express buses. See **Map 15**, *Existing Transit Service*.

**Local Bus Service:** Since the 2007 opening of light-rail service in the South Corridor, CATS restructured area bus service to improve bus connections with light-rail stations. Currently, CATS provides bus service in the Steele Creek Area with three local bus routes. Route 44, "Fort Mill," is a limited service route connecting Wells Fargo offices in Fort Mill, South Carolina, with the Arrowood LYNX station via Nations Ford Road. Route 55, "Westinghouse," runs along Westinghouse Boulevard between the Sharon Road West station and the Steele Creek area. Route 56, "Arrowood," runs between the Arrowood LYNX station and Rivergate Shopping Center via CPCC-Harper Campus, Whitehall Commons Shopping Center, and S. Tryon Street (NC 49), with limited runs to Westinghouse industrial employers. Ridership for Route 56 was 397,722 in 2009, and 413,854 in 2010 ridership. This represents a 4.06 percent increase in ridership between 2009 and 2010.

**Express Bus Service:** Currently, CATS provides express bus service in the Steele Creek Area with one relatively new express bus route that CATS created following the opening of light-rail service in 2007. Route 41x, the Steele Creek Express, runs weekday mornings from Rivergate into Uptown via S. Tryon Street (NC 49) and Interstate 77, and runs the reverse route weekday evenings. In 2009, ridership was 53,206 and in 2010 ridership was 53,402. This represents a .4 percent increase in ridership between 2009 and 2010.

## Infrastructure and Public Facilities

Public facilities, as shown on **Map 16, Public Facilities**, for the Steele Creek plan area are provided by both the City of Charlotte and Mecklenburg County. Some City services, such as Fire, serve only those areas within the Charlotte City limits. However, all City service providers plan for eventual service to all areas within Charlotte's Extraterritorial Jurisdiction (ETJ), which is the area that is expected to be annexed in the future. Approximately half, or 13,994.9 acres, of the total 26,767.1 acres in the Steele Creek plan area, are currently within the Charlotte City limits.

### Parks and Greenways

McDowell Nature Center and Preserve is located in the Lower Lake Wylie Watershed along the Catawba River. McDowell Nature Center serves as the gateway to the McDowell Nature Preserve. The Preserve is over 1,100 acres and is a source for educational programs and information on The Preserve's natural communities. It is the oldest preserve in Mecklenburg County and 90 percent is undeveloped. It is mostly forested, rolling terrain along the banks of Lake Wylie. Facilities include McDowell Campground, shelters and nearly seven miles of trails. It includes a significant portion of the preserved tree cover that exists in the plan area. This Park also has a nature center on location.

T.M. Winget Regional Park is 100+ acres and is located in the northern portion of the plan area. It provides ball fields and basketball courts.



*Copperhead Island provides the only public boat access to Lake Wylie in Mecklenburg County.*

The Steele Creek, Walker Branch, and Polk Ditch streams all have planned greenways adjacent to them. Also, a small section of the undeveloped portion of Coffey Creek Greenway enters the plan area in the east. An overland connector is planned along West Arrowood Road connecting it to the starting point of the Steele Creek Greenway. Walker Branch Greenway splits in three places eventually connecting with the northwest portion of McDowell Nature Center and Preserve. Existing and future overland connectors will be used to connect Walker Branch and Hoover Creek greenways with the southern portion of McDowell Nature Center and Preserve and T.M. Winget Regional Park in the north. See **Map 16, Public Facilities**.

### Schools

The northern portion of the plan area is served by Winget Park Elementary, Steele Creek Elementary, Kennedy Middle and Olympic High Schools. The south is served by Lake Wylie Elementary, River Gate Elementary School and Southwest Middle School. Although outside the plan area, West Mecklenburg High School serves the most easterly portion of the plan area across I-77. All of these schools are currently overcrowded and the CMS Facilities Master Plan identifies an increasing need for all school levels in this area.



*Station 38 on Shopton Road West serves the growing residential and industrial development in the Westinghouse Blvd area.*

## Fire

Fire service for the plan area is provided by the Steele Creek Volunteer Fire Department (VFD) in the unincorporated area to the west and the Charlotte Fire Department (CFD) within the City limits. Steele Creek VFD stations 1 and 2 are located on Shopton and York Rd (NC 49), respectively. CFD Station 26 at Westinghouse Boulevard serves the east; Station 37 off of S. Tryon Street (NC 49) serves the south; and Station 38 along Shopton Road West serves the north and has lake access. A fire station is planned in the area of Youngblood and McKee roads, if this area is annexed.

## Water and Sewer

Public water is available along most thoroughfares within the plan area with service extending to many residential developments and almost all existing commercial and industrial businesses. To improve system capacity and allow extension of water service further into this area, a large transmission main was constructed in 2010 from the Franklin Water Treatment Plant, southwest past the airport, and along Steele Creek Road to NC 49.

Sanitary sewer service is available to the majority of the plan area. The Steele Creek basin and adjacent basins shown in the plan area are served by the Steele Creek pump station. There are major pump stations in the study area that pumps sewer from lower elevations to the Steele Creek pump station. The sewer is treated at the McAlpine Waste Water Treatment plant.

## Libraries

The Steele Creek community is currently served by the Steele Creek Branch Library on Steele Creek Road. Branch libraries are typically meant to serve a limited population, but recent growth in the Steele Creek area has created more demand for these services. Land for a new Regional library has been acquired on Shopton Road in the northern portion of the plan area. When built, these two libraries should meet the service demands through 2025.

## Natural Environment

### Land Cover

Existing tree cover is primarily found on vacant parcels within the plan area; along the Catawba River and its tributaries; and within the underdeveloped southern portion of the plan area between the Catawba River and Shopton Road. A significant amount of tree canopy lies within the McDowell Park Nature Preserve. Preservation of the existing tree canopy helps to improve the area's water quality by reducing surface runoff. See **Map 18**, *Land Cover*.

### Topography

There are significant grade changes and steep slopes along the Catawba River. Floodplain exists along the Catawba River shoreline and along the streams of Steele Creek, Walker Branch, Polk Ditch and other smaller tributaries. The Steele Creek, Walker Branch, and Polk Ditch streams also have dedicated SWIM Buffers and planned greenways. Wetlands are scattered throughout the study area and along major streams and tributaries.

### Water Quality

The Steele Creek plan area lies within the Lower Lake Wylie and Steele Creek watersheds and a portion of Sugar Creek. The Lower Lake Wylie Watershed is protected (2,965 acres) with its most westerly portion classified as critical (9,143 acres). The Lower Lake Wylie and Sugar Creek watersheds do not meet standards outlined in the *Federal Clean Water Act* (1977) and are classified as impaired. However, the area meets Environmental Protection Agency (EPA) standards. Major stream, creek and river pollutants are phosphorus and sediment caused mostly by urban runoff. Groundwater contamination is limited to localized areas. The area has a history of hard water which is naturally occurring because of high mineral content.

### Air Quality

*National Air Quality Standards (NAAQS)* have been established by the EPA. The Mecklenburg County Air Quality (MCAQ) conducts monitoring for numerous air pollutants that threaten public health and welfare. Ozone and fine particulate matter (PM2.5) pollution are the current primary concerns for Mecklenburg County.

## Historic Resources

The Steele Creek area is an historically significant area with many historical features. The following Local Historic Landmarks are within the Steele Creek plan area:

### Steele Creek Area Plan Designated Historic Landmarks

*Source: Historic Landmarks Commission*



#### **Dinkins Property Cemetery**

1798

*Architectural Style: NA*

*Location: Nations Ford Road*

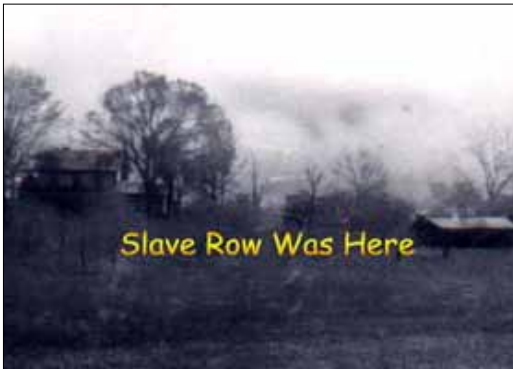


#### **Neel House & Additional Property**

1810

*Architectural Style: Federal*

*Location: Shopton Road*



#### **Neely Slave Cemetery**

c. 1830

*Architectural Style: NA*

*Location: South Ridge Drive*



#### **McClintock Rosenwald School**

1922

*Architectural Style: Vernacular*

*Location: Erwin Road*





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