



CREATE WILMINGTON COMPREHENSIVE PLAN

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Growth Strategies Report

ADOPTED 3/1/2016

W^{CITY OF}
WILMINGTON
NORTH CAROLINA



City Council

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City Shape and Motto

"Persevere" is Wilmington's motto, established and written onto the official seal in 1866. The blue shape found on the back cover of this document reflects the general boundary of the city; it is used frequently throughout Comprehensive Plan Box Set.

How to Use the Comprehensive Plan Box Set

Five Components of the Box Set

1

Growth Factors Report

Maps, graphs, and charts that support the policies and growth strategies. Provided are maps of existing conditions and various factors related to Wilmington's growth.

Electronic readers click here to view or download this document.

2

Foundations Report

A summary of public input collected throughout the process and results from each tool, including the Neighborhood Planning Areas, Connect Wilmington, and Alternative Future Visions.

Electronic readers click here to view or download this document.

3

Policies

Comprehensive policies address the themes/issues; policies are based on public input, best practices, the growth factors report, interlocal agency coordination and scenario planning results.

Electronic readers click here to view or download this document.

4

Growth Strategies Maps

These maps illustrate desired areas for future growth, infill, and redevelopment based on public input and planning analysis. They are designed to work in conjunction with the policies.

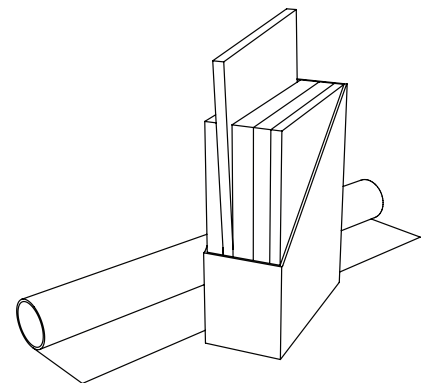
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5

Growth Strategies Report

A forward looking document that describes the aspirational growth patterns of the city through specific growth strategies. This document works in concert with the Growth Strategies Maps and Policies.

Electronic readers click here to view or download this document.



The Box Set includes 5 documents and a set of 5 map posters.

Find Your Way Around

Cross references are provided throughout the entire box set. Cross references identify related information within another box set component, within the same box set component, or valuable information outside of the box set. Identified cross references are not exhaustive as other relationships may also exist.

Three Types of Cross References



Box Set Cross Reference

This symbol is used to point you to a different box set component, as described above.



Document Cross Reference

This symbol is used to point you to a different part of the document you are currently reading.



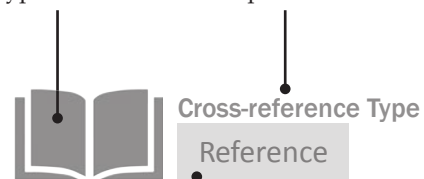
External Resource

This symbol is used to point you to an external resource, such as a plan, report, or study not contained in the box set.

How it Works

The color of the symbol indicates the type of reference.

The name of the reference is provided here.



This is the location within the document or box set or the name of the external resource.

Wilmington Comprehensive Plan Themes

The *Create Wilmington Comprehensive Plan* is developed around seven key themes for shaping Wilmington's future:



Creating a Place for Everyone

Wilmingtonians want a diverse and inclusive community, full of family-friendly, vibrant, and creative environments. Citizens want a welcoming community that includes arts and culture, activities for youth, families, and seniors, and high-quality housing that is available to everyone.

Topics Covered:

- Affordable housing
- Arts and cultural resources
- Youth activities
- Seniors
- Family amenities
- Accessibility
- Parks and recreation
- Crime and safety
- Cultural diversity
- Job creation
- Education



Getting Around

Diverse modes of transportation are needed for an inclusive, connected community. Regional partnerships can link greenways and other amenities. Options for pedestrian and bicycle transportation, along with other modes of transportation, should be explored as valid alternatives to automobile transportation, as well as other options for local and regional mass transit.

Topics Covered:

- Interconnectivity
- Sidewalks
- Greenways
- Alternative transportation modes
- Mass transit
- Traffic
- Regional cooperation
- Driver behavior
- Connecting land use and transportation



Regional Collaboration

Wilmington does not and cannot exist in a bubble. Collaboration with other local governments, including New Hanover County and surrounding towns and counties, is critical to Wilmington's and the region's success. Cooperative relationships with the University of North Carolina at Wilmington and Cape Fear Community College, as well as the public school system, state ports, and utility providers will help us all flourish.

Topics Covered:

- Leadership/excellence in government
- Town and gown relationships
- Balancing needs and resources
- Common goals and collaborative policies



Changing Places, Revitalized Spaces

Development of vast open land is no longer an option in Wilmington; our future will include a significant level of infill and redevelopment. Envisioning suitable infill and redevelopment and optimizing existing development will be critical to our community’s well-being, not only downtown, but within neighborhoods across the city. Balancing the need for open space and a well-designed built environment will be key to future development.

Topics Covered:

- Infill
- Redevelopment
- Densification
- Neighborhoods
- Historic preservation
- Sustainability
- Placemaking



Unique Places, Captivating Spaces

The built environment encompasses places and spaces created or modified by people, including buildings, parks, land use patterns, and transportation systems. Since the built environment has profound consequences for individual and community well-being, all elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate, enriching the lives of visitors and residents alike.

Topics Covered:

- Aesthetics
- Site design
- Architecture and building design
- Code and technical standards
- Greenspace
- Infill
- Redevelopment
- Connecting land use and transportation
- Placemaking



Nurturing our Community

Environmental sustainability is at the core of where we want to go in the future. Our natural resources are a major factor in attracting residents and visitors to the area; balancing retention of their accessibility and protection of these resources will be a challenge. How we manage our interaction with the natural habitat, from parks, water, and open spaces, to locally-grown agriculture, to protecting water quality to solid waste disposal will be critical to Wilmington’s future success.

Topics Covered:

- Natural resources
- Tourism
- Balancing built and natural environments
- Greenspace/open space
- Parks and recreation
- Access to local food
- Water resources
- Climate change



Opportunity and Prosperity

Fostering opportunities for economic growth and development that enhance the concepts of each of the other themes is critical to our future prosperity. Creating jobs, building a strong workforce, facilitating commerce, and promoting business vitality are necessary to the success of a healthy, well-balanced community.

Topics Covered:

- Economic development
- Jobs
- Technology
- Health care
- Placemaking
- Code and technical standards
- Leadership and excellence in government
- Regional cooperation
- Common goals
- Leveraging resources
- Public-private collaboration

CREATE WILMINGTON COMPREHENSIVE PLAN

Growth Strategies Report

The *Create Wilmington Comprehensive Plan Growth Strategies Report* is a system of interrelated strategies used to describe the aspirational growth patterns of the city. The maps within the report function as layers placed atop of one another in various combinations over the city, thus affecting future development in unique ways. Five individual maps each describe different features and combine to form a single composite growth map. These are intended to provide a framework for future growth rather than a parcel-specific “future land use” map. These maps and their relevant details are described in Chapter 1 of this document. Key strategies are highlighted in informational sidebar boxes.

Many of these strategies were identified in the *2004 Future Land Use Plan* or other previous plans and remain unaddressed, while others present newly recognized opportunities.

A series of *Bold Visions* are presented throughout this document. These are big ideas that emerged from the Comprehensive Plan community input process and are worthy of consideration for future growth. Many of these are “game-changers” that have the ability to drastically catalyze economic development, placemaking, and quality of life. Others may seem like simple achievements or obvious solutions, but may have various complications that challenge their implementation.



List of Contributors

Page 52

A complete list of contributors to this project, including the Comprehensive Plan Steering Committee and city staff is available at the end of this document.

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System of Maps



The maps presented in this document are composed of numerous, interrelated layers. This is best understood as a map system, where various components are combined onto a single map (the Composite Growth Strategies Map) and separated into layers (five maps).

The Composite Growth Strategies Map has generalized components, meaning that not all categories or types of that component are shown. Readers should review all maps for a full understanding of the growth strategies.



Box Set Cross-Reference

Growth Strategies Map Posters

These maps are available as a series of large posters. This document provides a more detailed explanation than the posters.



Box Set Cross-Reference

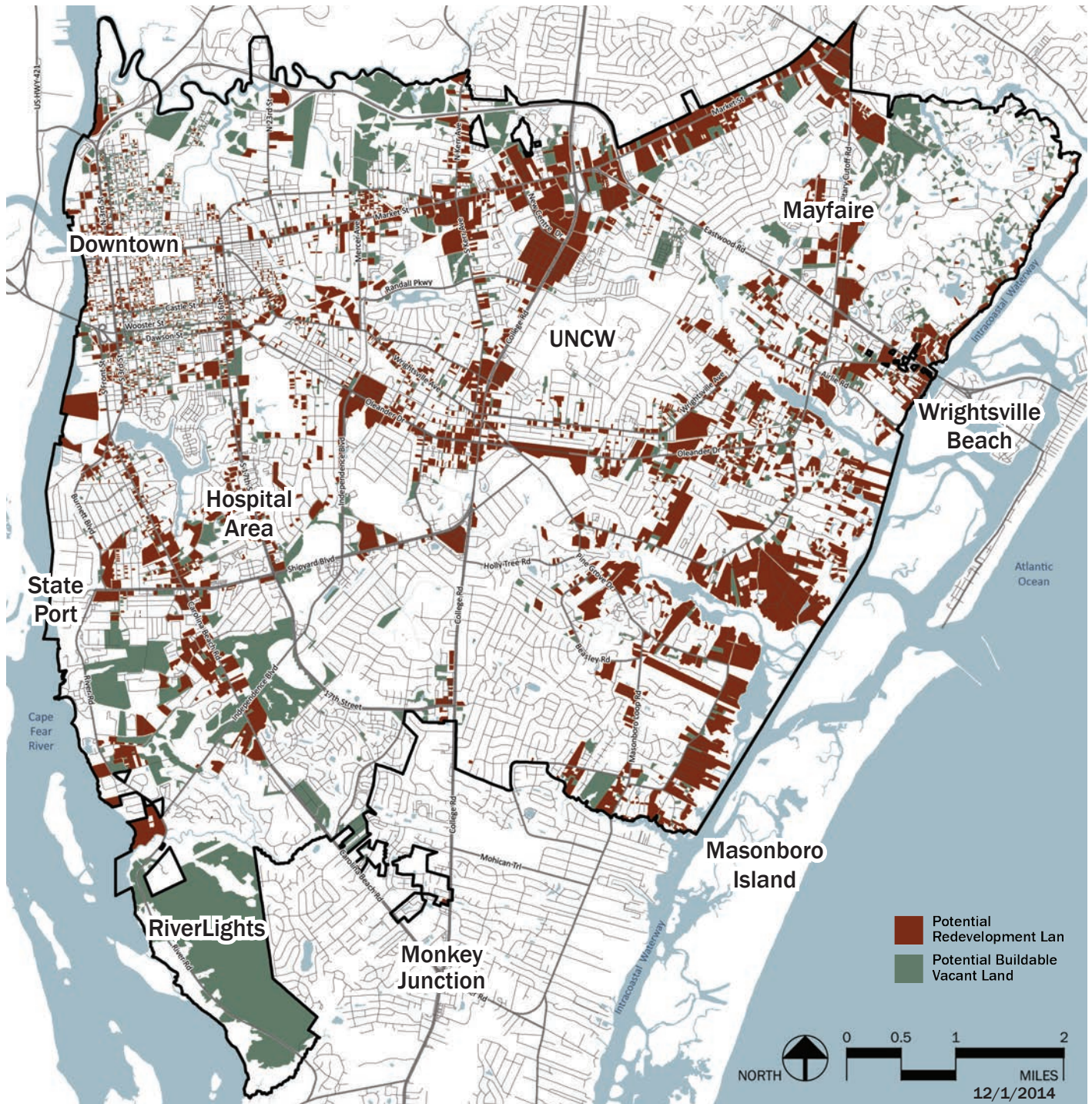
Policies

Here we Grow!

Growth through population increase, and the real estate and infrastructure development to accommodate that increase, will look different from one part of the city to another. Wilmington has become nationally-recognized as a good place to live. Proper planning and urban design strategies aim to make Wilmington even better by respecting what works and changing what is not working.

Source (All Images): City of Wilmington

Potentially Developable Land & Redevelopment Sites



This map depicts potential redevelopment sites and likely buildable vacant land within the city. There are approximately 5,800 acres of potentially redevelopable land and 3,700 acres of potentially buildable vacant land in the city. A large percentage of parcels that are suitable for redevelopment and infill development are less than two acres in size. These smaller sites are typically found within already urbanized areas.

-  [Box Set Cross Reference](#)
[Foundations Report](#)
-  [Box Set Cross Reference](#)
[Growth Factors Report](#)

These reports provide a series of maps and other foundational data that provide the basis for the Growth Strategies Maps.

Principles for Urban Growth

These principles for urban development build upon the Comprehensive Plan themes. They provide more detailed direction in terms of the city's urban form and functionality. The urban growth concept diagram articulates this overall form and function in a basic way.

Grow Inward and Upward (Not Outward)

Wilmington should use its remaining vacant land to develop vibrant mixed-use places and preserve open space. Growing outward at low densities is no longer an option. That approach has led to poorly-coordinated developments that are automobile-dependent.

Human-scale Places

New buildings and sites should be designed to accommodate human comfort (outside of the automobile). Expanses of asphalt, excessive driveways, large blank walls, and out-of-scale infill development are to be avoided. Designing for human-scale will create safer neighborhoods.

Foster Innovation, Education, and Industrial Operations

Well-designed places can attract creative industries, make it easier to exchange ideas and information, and provide high-quality sites for industrial and economic development. Careful attention to site location and design is needed.

Protect Neighborhoods from Incompatible Development

Growth should be focused in urban centers, many of which lie at the edge of lower-density neighborhoods. Good infill design will be important in these locations. Smooth transitions from very urban areas to low-density areas are critical.

Well-connected Street Network

Disconnected street systems have contributed to traffic congestion. Wilmington's street network should be logical, efficient, and well-connected to properly disperse traffic and allow for non-automobile transportation between residential areas and commercial destinations.

Focus Growth in Poorly-developed Commercial Areas

The bulk of urban growth should not take place within low-density residential areas. Wilmington should focus on repairing the urban fabric in areas already built-out with uncoordinated, underperforming commercial development patterns.

Complete Streets and Neighborhoods

Streets and public spaces should be designed to accommodate all modes of transportation. They should be used to "stitch" neighborhoods together rather than fragment them, especially for pedestrians. Mixed-use places should be favored over single-use developments.



Urban Growth Concept Diagram

- Regional Roadway System
- Greater Downtown (Primary Center)
- Major Mixed-use Centers
- Major Employment & Innovation Centers
- Significant Greenspace
- Water
- City Boundary

More Parks and Greenways

The city's network of trails, greenways, multi-use paths, and other facilities should connect neighborhoods to parks and waterways. The city needs a variety of open spaces and ways to access them without using an automobile.



Growth Strategies Report

Introduction

- 1 Composite Growth Strategies Map
- 2 Overview of Map Elements

Growth Strategies Maps

- A Mixed-use Centers
- B Areas of Opportunity
- C Corridors & Complete Streets
- D Transit that Works
- E Green Connections & Open Spaces

Redevelopment Opportunity

Wilmington is plagued by underperforming, unattractive commercial landscapes that are accessible only to the automobile. These have the potential to be redeveloped as meaningful, vibrant urban places (image opposite).

Source: City of Wilmington



Policies

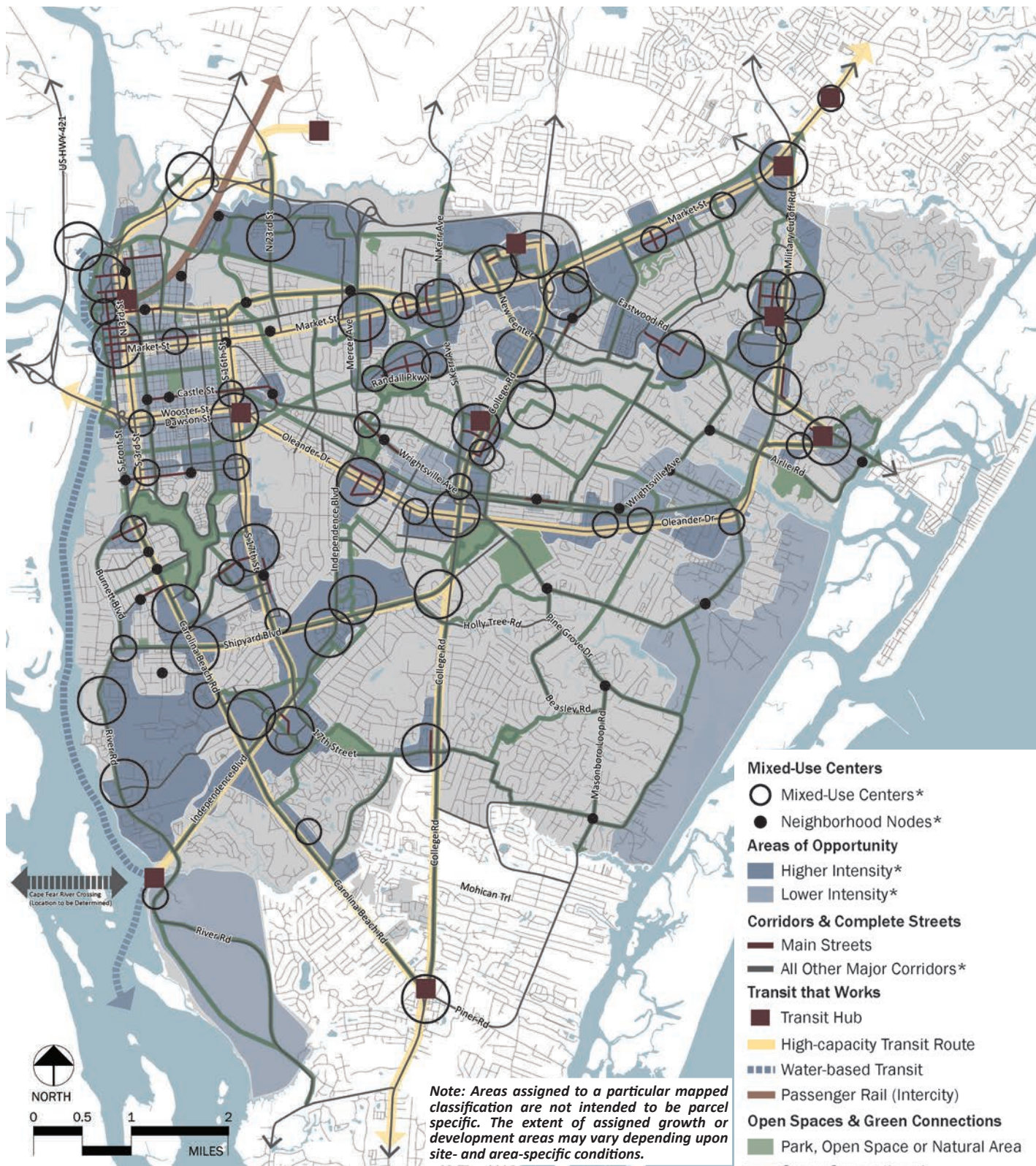
p. 26

“Dull, inert cities, it is true, do contain the seeds of their own destruction and little else. But lively, diverse, intense cities contain the seeds of their own regeneration, with energy enough to carry over for problems and needs outside themselves.”

— Jane Jacobs

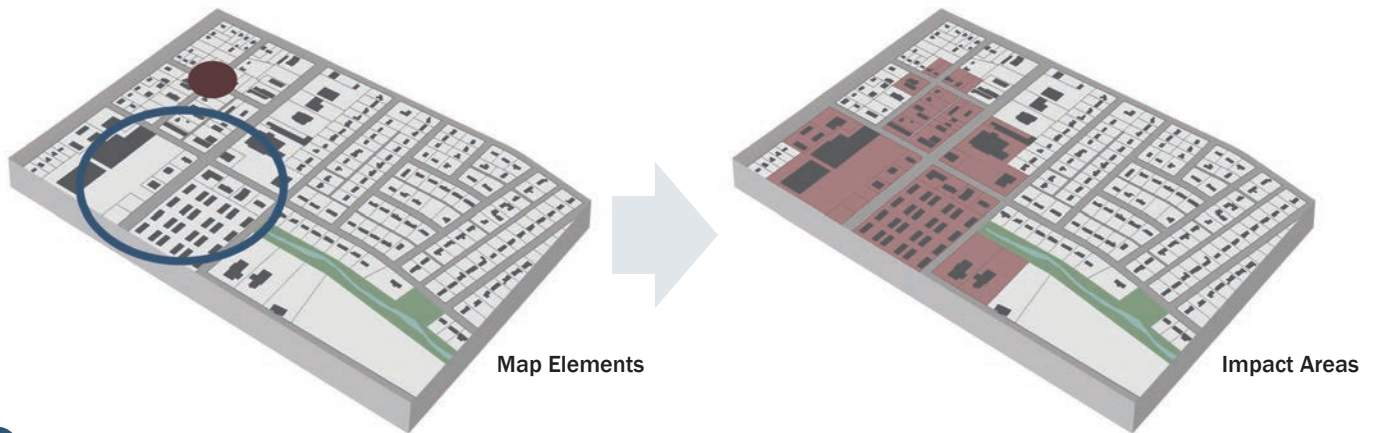


1 Composite Growth Strategies Map



The *Composite Growth Strategies Map*, which is a combination of various layers, provides a geographic framework for how the city should grow and change. The map layers are organized into five groups: Mixed-use Centers, Areas of Opportunity, Corridors & Complete Streets, Transit that Works, and Open Spaces & Green Connections.

2 Overview of Map Elements



A

Mixed-use Centers

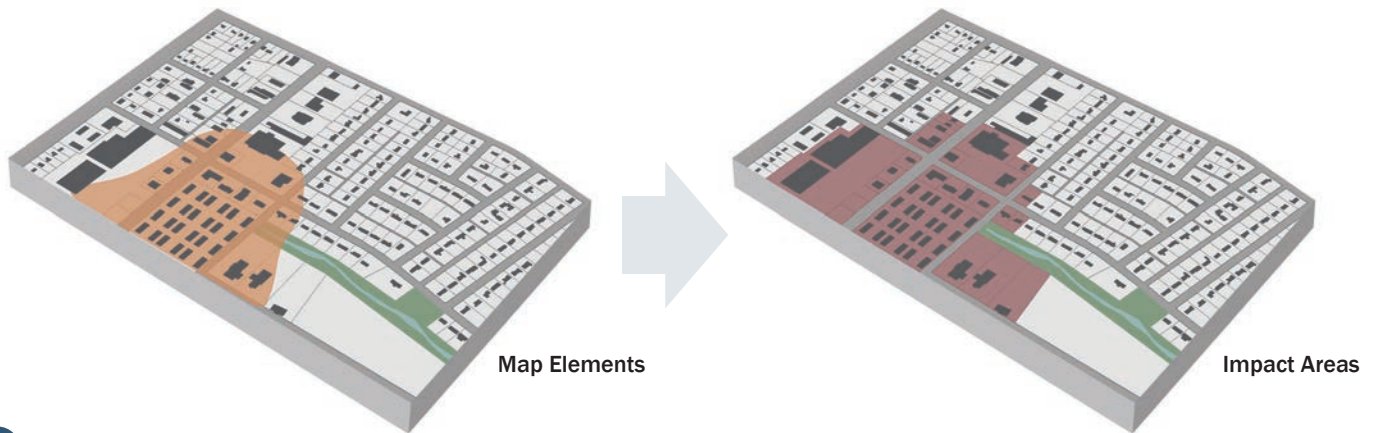
Investment and revitalization should be concentrated in distinct nodal areas in order to accommodate walkability, vitality, placemaking, higher-density development patterns, and transit. This approach should be prioritized over a development pattern that dilutes the activity that new investment can bring to an area by spreading it out over too large of a geographic area and limiting transportation options. The identified Mixed-use Centers include those already existing, those that are emerging, planned mixed-use developments, or newly designated areas. A particular type of center, called a “Neighborhood Node,” is intended to foster neighborhood-scale focal points of development activity.

There are several types of Mixed-use Centers, ranging in density, size, and regional impact. These are reflective of the underlying community development patterns in which they are located.

Range of Development Intensity

This chart shows four out of five elements used to create the Growth Strategies Maps according to their intensity of development, in terms of the building density, urban form characteristics, levels of activity, and walkability.

Low-intensity Development		High-intensity Development	
Mixed-use Centers <ul style="list-style-type: none"> Neighborhood Node 	Mixed-use Centers <ul style="list-style-type: none"> Regional Retail Center Employment /Academic Center 	Mixed-use Center <ul style="list-style-type: none"> Mixed-use Places 	Mixed-use Center <ul style="list-style-type: none"> Urban Mixed-use Center Urban Neighborhood Node
Areas of Opportunity <ul style="list-style-type: none"> Intracoastal Tidewater Neighborhood-scale Intensification River Lights 	Area of Opportunity <ul style="list-style-type: none"> Greenfield Sites as Multi-use Places 	Area of Opportunity <ul style="list-style-type: none"> Live-Work-Innovation Suburban Commercial Retrofit High-density Transitions 	Corridor / Complete Street <ul style="list-style-type: none"> Main Street
Corridors & Complete Streets <ul style="list-style-type: none"> Community Parkways & Loop Roads Residential Streets & Other Local Corridors 	Corridors & Complete Streets <ul style="list-style-type: none"> Major Corridors & Regional Parkways 	Corridors & Complete Streets <ul style="list-style-type: none"> Community Connector Special Character Street 	Transit that Works <ul style="list-style-type: none"> Areas along high-capacity transit routes Urban Mixed-use Center with a Transit Hub
		Transit that Works <ul style="list-style-type: none"> Standard Bus Transit System 	Area of Opportunity <ul style="list-style-type: none"> Post-Industrial & Inner-City Revitalization

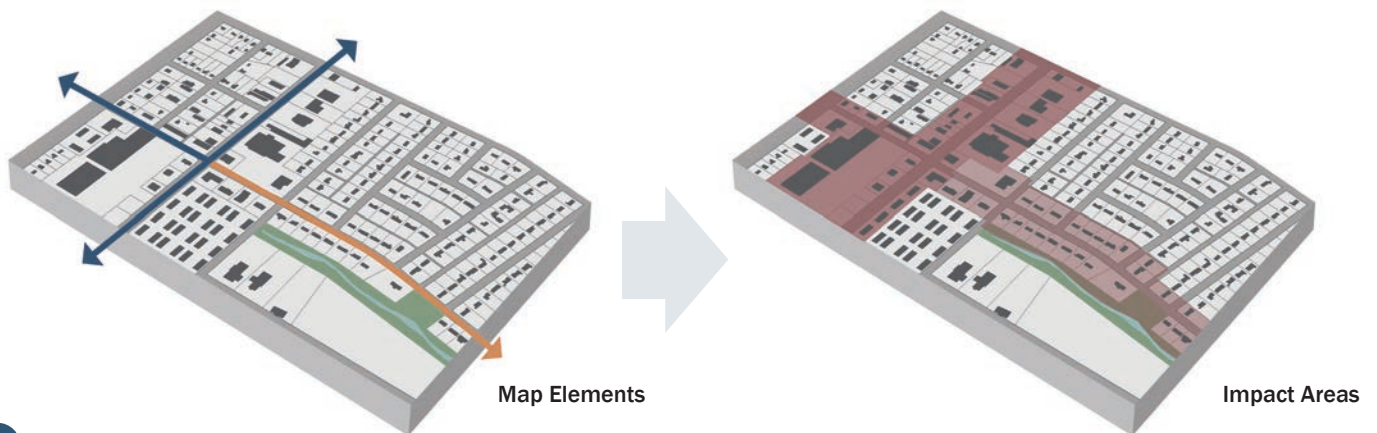


B

Areas of Opportunity

While all parts of the city can expect to experience some level of change, some areas will experience more intense change through new development, redevelopment, and infrastructure improvements. *The Areas of Opportunity Map* represents those parts of the city that have the greatest potential to accommodate future growth, infill, and new development. Efforts should be made to ensure a cohesive development pattern in these areas.

There are several types of Areas of Opportunity, and they vary in terms of land use hierarchy, intensity of development, and anticipated change. Each area has an overarching growth strategy. Development within an Areas of Opportunity should be reflective of the underlying community development patterns.

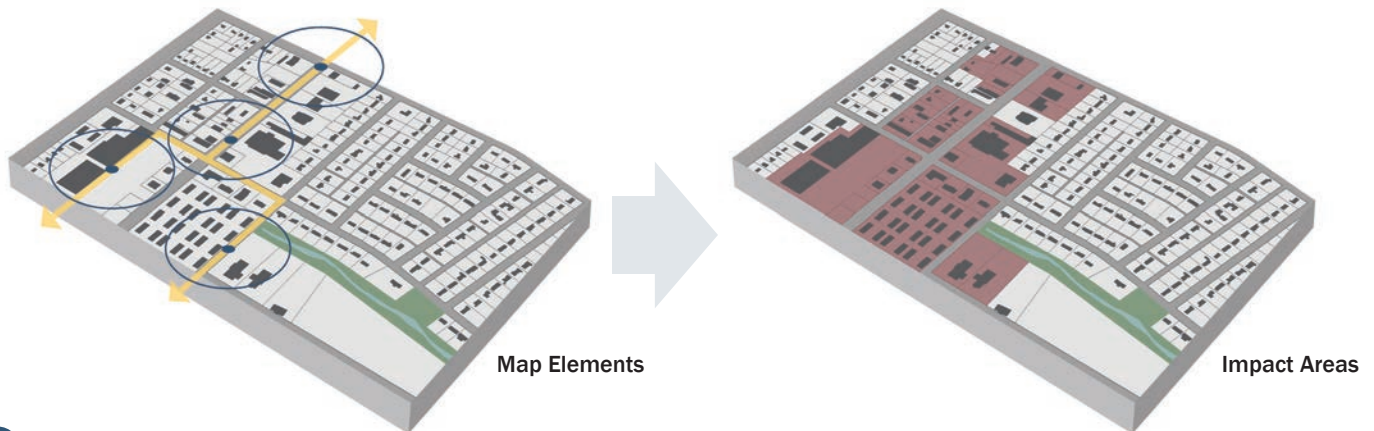


C

Corridors & Complete Streets

The city must have a robust hierarchy of streets and paths in order to achieve its desired growth patterns. *The Corridors and Complete Streets Map* identifies which roadways should be prioritized for automobiles and freight travel, and where. The needs of all modes of travel, even bike and pedestrian travel, should be balanced and prioritized. This maps also shows that streets should be designed to reflect a certain character, for example being attractive gateways and edges to neighborhoods, employing historic features, or prioritizing automobile movements across, though, and within the region.

There are several types of Corridors and Complete Streets. These vary based on preferred building conditions, street design, pedestrian priority, overall character, regional significance, and other factors.

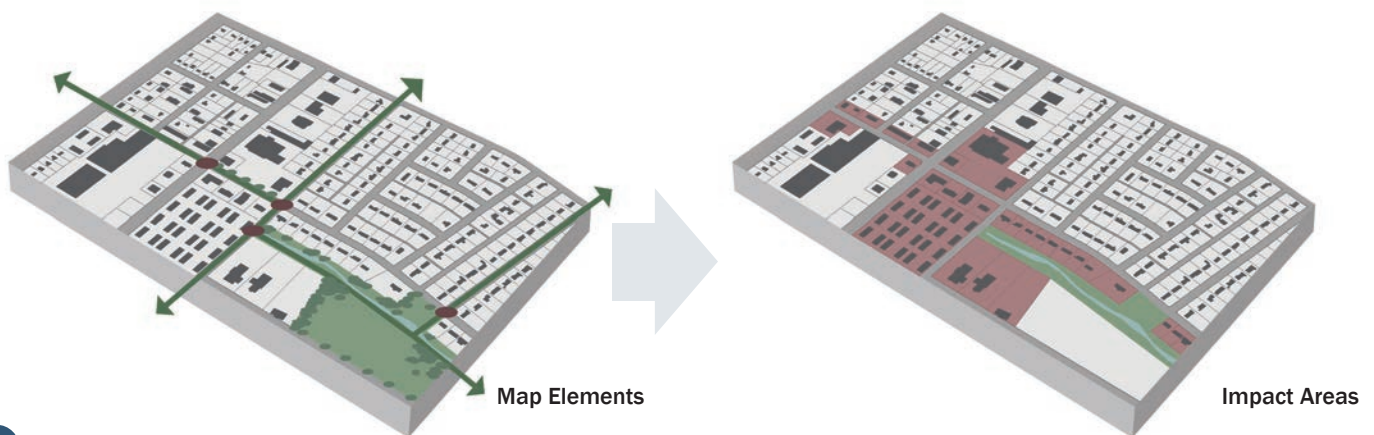


D

Transit that Works

This map is designed to prioritize specific corridors for transportation system upgrades, including, but not limited to: faster transit travel times, more comfortable transit riding and waiting conditions, and a strong relationship to high- and moderate-density land uses that facilitate walking, and bicycling. The strategies associated with this map encourage more transit stations in areas that integrate other land uses and serve as focal points to their surroundings.

The map employs a “transit-oriented” and “transit-ready” development framework for urban growth, where transportation is coordinated with Mixed-use Centers and Corridors and Complete Streets maps so that each may reinforce the others.



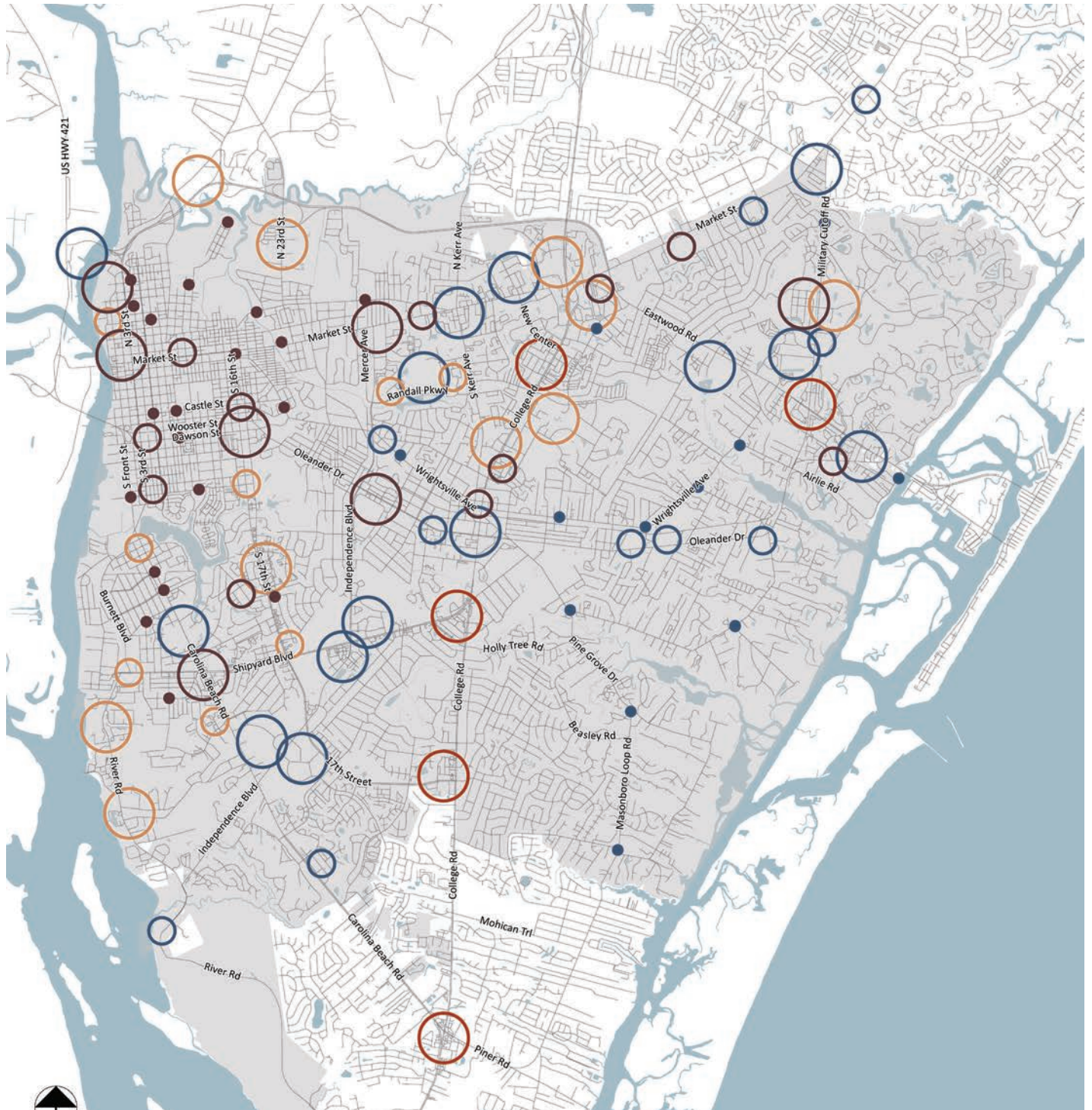
E

Green Connections & Open Spaces

Pedestrian and bicycle mobility is at the forefront of creating a livable city. Wilmingtonians have expressed great interest in being able to walk and bike comfortably and safely, including incorporating these modes into daily needs and social activities. This may include going to the park, exercising, shopping, going out for the evening, and commuting to work. A robust network of green connections and open spaces is proposed throughout the city.

Green connections are classified by existing and proposed facilities in the New Hanover County Greenway Plan. Beyond these facilities, additional conceptual connections are also suggested in the plan. There are generally three types of solutions suggested to achieve a well-connected system.

A - Mixed-use Centers



Note: Areas assigned to a particular mapped classification are not intended to be parcel specific. The extent of assigned growth or development areas may vary depending upon site- and area-specific conditions.

- Urban Mixed-Use Centers
- Mixed-Use Places
- Urban Neighborhood Nodes
- Neighborhood Nodes
- Regional Retail Center
- Employment /Academic Center
- City Boundary

Scale of Intensity by Mixed-use Center Type



The development of mixed-use centers is the most important growth strategy for the future of Wilmington. Investment and revitalization should be concentrated in distinct nodal areas in order to accommodate walkability, urban vitality, placemaking, higher-density development patterns, and transit. This approach should be prioritized over a development pattern that dilutes the activity that new investment can bring to an area.

Mixed-use centers can be those already existing, those that are already emerging, planned mixed-use developments, or newly designated areas. Downtown is no longer the city's sole major destination for human interaction and commerce. A variety of centers and other collections of commercial businesses have emerged across the city.

Components of a Mixed-use Center

This conceptual diagram shows the basic elements of a center. Centers are areas of activity usually found at or near the intersection of major roadway corridors. They vary in size and density, as shown in the following pages.

-  Focal Point(s) / Main Intersection
-  City Street Network*
-  Major Corridor(s)
-  High Pedestrian Activity Street(s)
-  Mixed-use Core Area
-  Density Transition Area
-  Central Open Space / Open Space Buffer
-  Buildings
-  Parking Areas

*City street network will vary and will most likely not be a perfect grid.

The framework for Mixed-Use Centers Map captures those focal points found where interactions and commerce are already taking place, as well as areas building momentum that need to be reaffirmed. These locations should be active, higher-density places that include an array of housing types and employment, transportation, and recreation options.

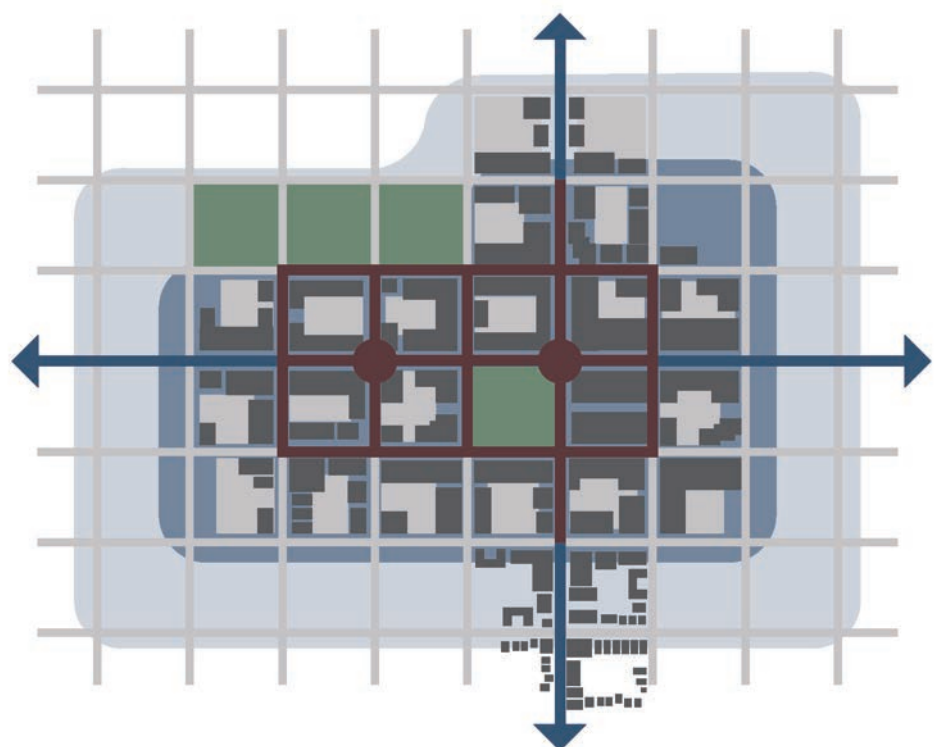
A variety of Mixed-use Center types are defined that reflect existing conditions, inherent opportunities, and aspirations for growth (such as providing a destination for a surrounding neighborhood, or converting a suburban strip into an urban district). These vary in development intensity, form, function, and character.



Cameron Village, Raleigh

An example of a mixed-use town center. These are called *Mixed-use Places* in the *Create Wilmington Comprehensive Plan*.

Source: City of Wilmington



A.2 - Types of Mixed-use Centers



Urban Mixed-use Center Principles

- Develop with high and moderate densities and lot coverage.
- Create and reinforce highly active, pedestrian-focused streetscapes.
- Reinforce or introduce traditional urban development patterns characterized by a highly connected system of small blocks, alleys, numerous pedestrian connections, and a mix of building types.
- Arrange buildings to create a comfortable public space and relate to one another as part of a larger placemaking scheme.
- Include a rich mix of uses; limit single-use developments with large building footprints.
- Place buildings directly onto public streets and provide active ground-floor uses.
- Include well-connected pedestrian network with abundant amenities.
- Use structured and on-street parking to accommodate higher densities; limit surface parking lots and exposed parking deck facades, especially along pedestrian streets.
- Create strong multi-modal connections to adjacent neighborhoods.
- Encourage the adaptive reuse of buildings with urban qualities, such as civic frontage, height greater than one story, and interesting character.



Existing Examples *Urban Mixed-use Centers*

- Downtown Core (Wilmington)
- Main Street / Downtown (Greenville, SC)
- Gateway District (Charlotte)
- King Street (Charleston, SC)
- Downtown (Raleigh)

1. A well-designed building and streetscape (Greenville, SC).
2. Structured parking is a key tool for creating sufficient density (Greenville, SC).
3. In urban mixed-use centers, the sidewalk becomes the focal point of activity. Cafe seating enhances the pedestrian space (Austin, TX).

Source (All Images):
City of Wilmington

Some Wilmington Locations *Urban Mixed-use Centers*

- Downtown Core / Historic District
- Market Street and Covil Avenue
- Dawson, Wooster, Oleander & 17th Street
- Carolina Beach Road and Shipyard Boulevard
- Mayfaire Town Center

A.2 - Types of Mixed-use Centers



Mixed-use Place Principles

- Develop with moderate densities and lot coverages.
- Include walkable components and some vertical mixed-use buildings.
- Design active pedestrian streetscapes and strong connections to adjacent neighborhoods.
- Include shopping centers with mixed-use and main street characteristics.
- Use structured and on-street parking to accommodate densities; limit surface parking lots and exposed parking deck facades, especially along pedestrian streets.
- Provide a well-connected grid street system.
- Use alleys to limit the number of driveways along the block face.



1. Biltmore Park outside of Asheville, NC is much like Mayfaire in Wilmington, and included more park space and more multistory buildings.
Source: www.ashvillenc.com
2. The Market Street Corridor Study calls for vibrant mixed-use development in place of low-value commercial strips.
Source: Kimley Horn and Associates
3. Town centers and other Mixed-use Places should provide green space for events and relief from the urban environment. (Montgomery County, MD)
Source: City of Wilmington
4. Shopping areas should include main street characteristics, such as cafe seating within public, pedestrian areas. (Montgomery County, MD).
Source: City of Wilmington



Additional Information

Market Street
Corridor Study

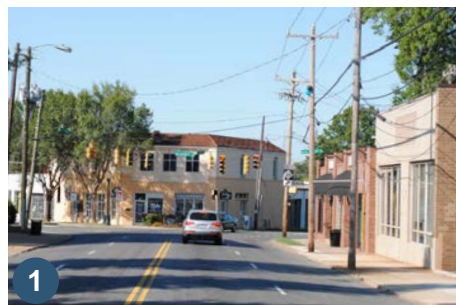
Existing Examples *Mixed-use Place*

- Mayfaire Community Center (Wilmington)
- Barclay Commons (Wilmington)
- North Hills Mall (Raleigh)
- Southern Village (Chapel Hill)
- Biltmore Park (Asheville)

Some Proposed Wilmington Locations *Mixed-use Place*

- New Centre Drive, Kerr Avenue, Gordon Road, and other locations along Market Street.
- Autumn Hall
- Various areas along Independence Boulevard
- Lumina Station and surrounding commercial sites
- Carolina Beach Road near Legion Stadium

A.2 - Types of Mixed-use Centers



Urban Neighborhood Node Principles

- Include a concentrated mix of uses clustered around a central location, especially where collections of urban building types already exist.
- Locate buildings along the street to provide for active, engaging public spaces.
- Activate the ground floor of buildings with retail, restaurant, and other active uses.
- Provide for a robust pedestrian network that includes connections to surrounding neighborhoods.
- Emphasize the adaptive reuse of buildings and vertical mixed-use buildings.
- Reinforce and repair the existing block structure found in the Greater Downtown similar areas of the city to emphasize walkability.
- Limit parking to emphasize walking and transit connections; on-street parking should be used while large surface parking lots are discouraged.

Bold Vision: Little Pond at Princess Place



The area located at the intersection of Princess Place Drive and Burnt Mill Creek is currently composed of vacant storefronts, surface parking lots, and a busy roadway.



The two-block area could be revitalized as an Urban Neighborhood Node using infill development, streetscape enhancements, and the adaptive reuse of existing buildings.

1. Mixed-use, one-and two-story buildings situated close to the street are appropriately scaled to be the center of an urban neighborhood.
2. An existing building at the intersection of S. 17th and Dock streets.
3. A repurposed gas station serving currently as a restaurant and acting as central neighborhood node on Person Street in Raleigh.

Source (All Images): City of Wilmington

Existing Examples *Urban Neighborhood Node*

- Five Points (Raleigh)
- Brooklyn Arts District (Wilmington)
- Selwyn Corners (Charlotte)
- Person Street (Raleigh)
- Seaboard Station (Raleigh)
- Boylan Heights (Raleigh)

Some Wilmington Locations *Urban Neighborhood Node*

- Little Pond at Princess Place (shown above)
- Carolina Beach Road at Tennessee Avenue
- South 17th Street at Glen Meade Road
- Market Street at 21st Street at Port City Java

A.2 - Types of Mixed-use Centers



Neighborhood Node Principles

- Size small-scale centers of activity appropriately to the neighborhood.
- Offer some retail and office uses in a central neighborhood location.
- Situate buildings close to the street, with parking placed behind.
- Scale buildings at heights of one - three stories; buildings should be compatible with surrounding character areas.
- Include multiple bike and pedestrian connections to surrounding residential areas.
- Screen surface parking lots, and design lots to enhance rather than inhibit pedestrian mobility.

1. A single businesses in a neighborhood can become a place of community interaction.
2. A place to rest and people watch in public encourages neighborly introductions.
3. A place to pick up living necessities such as a pharmacy or small grocery allows for chance interaction within the community.

Source (All Images): City of Wilmington

Key Strategy: Neighborhood Nodes



The Courtyard at Masonboro, along with a city of Wilmington fire station and surrounding townhomes, is an example of a Neighborhood Node. This provides some restaurants, retail, and other uses at the intersection of corridors and low-density neighborhoods. Sidewalks connect to surrounding areas. Unlike the Urban Neighborhood Nodes, buildings are typically 2 or 2 and a half stories and spaced far enough apart to create usable green space. Pitched roofs and architectural details are encouraged.

Existing Examples *Neighborhood Node*

- Courtyard at Masonboro (Wilmington)
- Progress Point (Wilmington)
- Christie Place (Scarsdale, NY)
- Preston Corners (Cary)

Some Wilmington Locations *Neighborhood Node*

- Courtyard at Masonboro (shown above)
- Intersection of Masonboro Loop Road and Navaho Trail
- Various locations along Wrightsville Avenue
- Pine Grove Drive and Greenville Loop Road
- Intersection of Airlie Road and Stokley Drive

A.2 - Types of Mixed-use Centers



Regional Retail Center Principles

- Accommodate large-format retail stores and other commercial suburban development prototypes.
- Facilitate an efficient flow of automobile and delivery traffic.
- Accommodate the pedestrian whenever possible.
- Improve retail visibility through a cohesive development pattern and access between and among various sites.
- Include strategic connections to surrounding neighborhoods.



1. Regional Retail Centers typically include national retailers, some of which are restaurants with outdoor seating areas.
2. Regional Retail Centers can be designed (or re-designed) to resemble two-story buildings and have driveways that function like main streets rather than parking lot driveways.
3. Many national retailers are now using urban amenities like streetscape and public plazas to enhance the shopping experience.
4. Regional Retail Centers are intended to have lower densities and more surface parking lots than Mixed-use Places. They should be able to easily accommodate “big box” stores but still be well designed.

Source (All Images): City of Wilmington

Existing Examples *Regional Retail Center*

- The Streets at Southpoint (Durham)
- The Forum (Wilmington)
- Southpark Mall (Charlotte)

Some Wilmington Locations *Regional Retail Center*

- Intersection of College Road and S. 17th Street
- Eastwood and Military Cutoff Roads
- Shipyard Boulevard and College road

A.2 - Types of Mixed-use Centers



Employment /Academic Center Principles

- Emphasize areas of economic activity associated with academic and/or employment areas (offices manufacturing hubs, and small businesses).
- Provide a commercial and civic focal point for the provision of daily services and the exchange of ideas, especially for the benefit of entrepreneurial growth, client and talent attraction, and employee health.
- Introduce housing and commercial uses where appropriate.



1. Public open spaces can anchor multiple buildings, such as this one at Centennial Campus at North Carolina State University.
2. Students at Cape Fear Community College could walk to class if more residential options were available immediately within and around the campus.
3. UNCW is a major institution that should continue to expand its campus in an urban manner.
4. New Hanover Regional Medical Center is a significant employer, yet workers

and patients cannot safely access their facilities by walking. A Mixed-use Center at this location is possible with some infrastructure upgrades and infill development.

Source (All Images): City of Wilmington

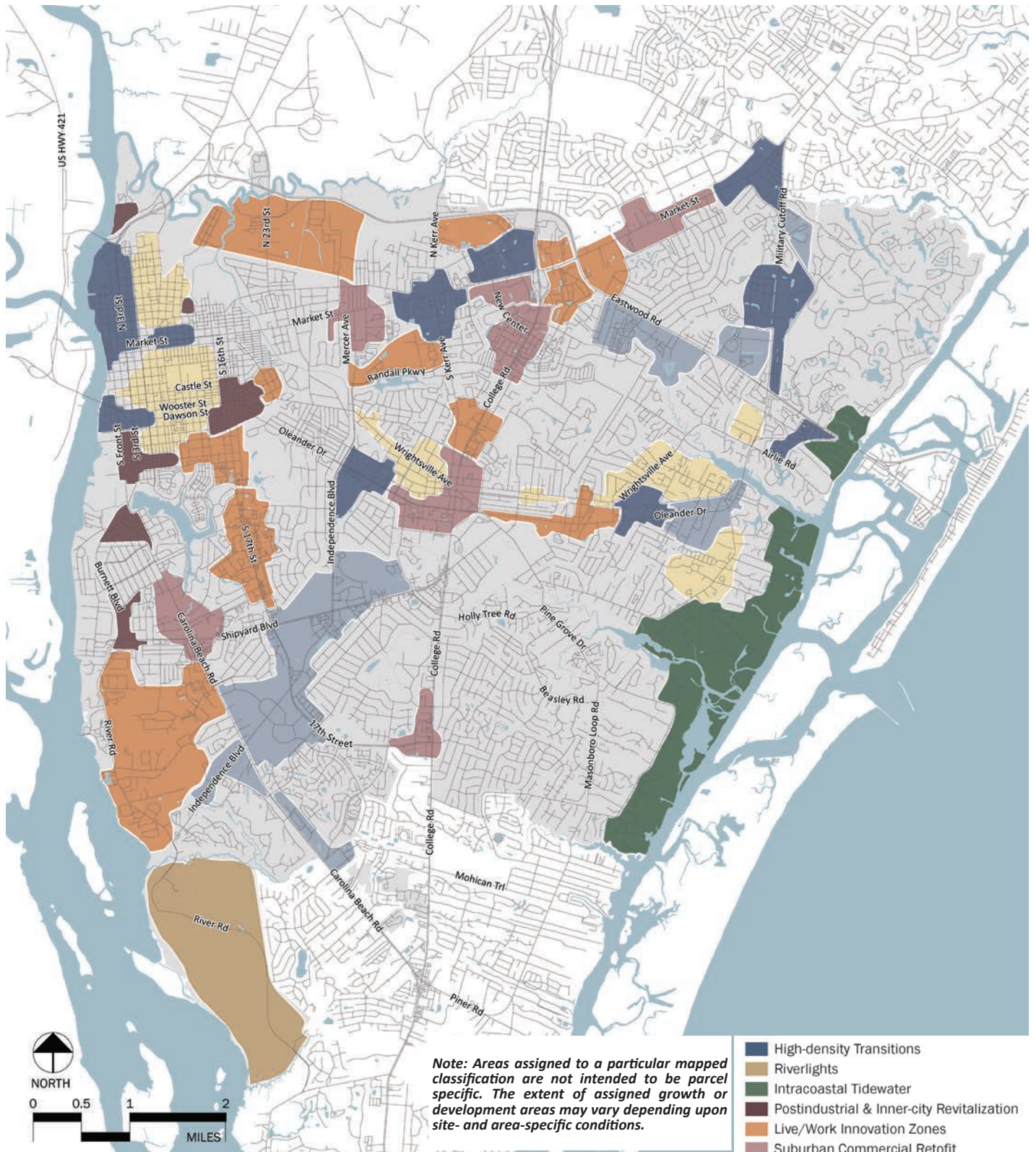
Existing Examples *Employment /Academic Center*

- Research Triangle Park (Raleigh)
- UVA BioTechnology Research Park (Richmond, VA)
- Centennial Campus, North Carolina State University (Raleigh)
- Medical District (Greenville)
- North Carolina Research Campus (Kannapolis)

Some Wilmington Locations *Employment /Academic Center*

- Airport Industrial & Screen Gems Studios
- Gateway area to the State Port
- Cape Fear Community College
- Future intersection of Hearst Drive and Kerr Avenue
- New Hanover Regional Medical Center

B - Areas of Opportunity



Box Set Cross-Reference

Growth Factors Report

This map is primarily based on information contained in the Growth Factors Report, such as the Potentially Developable Land & Redevelopment Sites analysis (shown on page 8 of this document).

B.2 - Types of Areas of Opportunity

A great number of potentially re-developable and vacant parcels for infill development exist outside of designated Mixed-Use Centers. The Areas of Opportunity map represents parts of the city having the greatest potential to see change and accommodate future growth. Wilmington is approaching build-out using sprawl development patterns; targeted infill development and redevelopment will become a critical means by which the city grows inward and upward rather than out in the future.

Areas of Opportunity convey both the suitability for urban growth and the chance to coordinate such growth so that development patterns are context-sensitive, work well together, and bring investment, vibrancy and quality of life the areas in need. In other words, Areas of Opportunity are places where meaningful, well-planned change should occur. Each of the Areas of Opportunity are unique and therefore, unique infill and redevelopment concepts are associated with each area. Many reflect the community patterns and special placemaking opportunities in which they are found.

1. Higher densities can still preserve coastal neighborhood character (I'on Village, Charleston, SC).
Source: City of Wilmington
2. Aerial image showing some of the existing development patterns in the area.
Source: Google, 2015
3. Traditional neighborhood development creates walkable communities (I'on Village, Charleston, SC).
Source: City of Wilmington



Intracoastal Tidewater Principles

- Focus on preserving character and single-family compatibility, including preservation of the National Register Historic District.
- Create pedestrian, bicycle, and small motor vehicle connections from various road segments and driveways.
- Increase public and semi-public water access.
- Consider accessory dwelling units and alternative building types.
- Consider coastal design guidelines for new development.
- Limit the number of driveways along parkways and loop road corridor types; encourage shared access and a network of connected streets and pathways.

Key Strategy: New Urbanism (Traditional Neighborhood Development)

New Urbanism is a design and development philosophy that promotes dense, walkable neighborhoods containing a range of housing and job types. New Urbanism supports regional planning for open space, context-appropriate architecture, and planning, and the balanced development of jobs and housing.

New Urbanist design and development strategies could be utilized throughout the Intracoastal Tidewater in appropriate areas of growth opportunity. These areas, which are typically known to reflect traditional neighborhood design (TND), could make use of New Urbanist design practices, utilizing smart growth development, streetscape enhancements, shared parking arrangements and other best design practices.



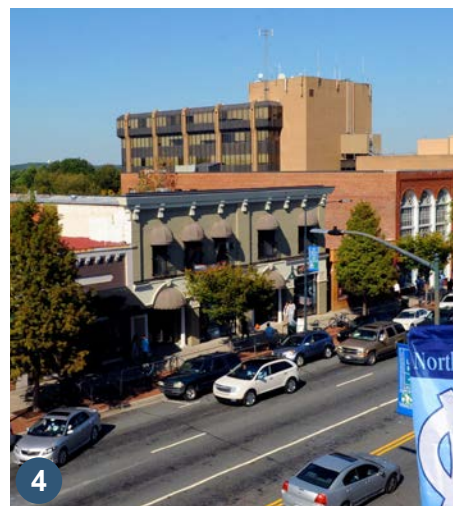
B.2 - Types of Areas of Opportunity



Source: Maureen Amerune \ CC BY 2.0 \ creativecommons.org

Live/Work Innovation Zones Principles

- Foster employment uses compatible with existing context.
- Capitalize on existing investments, facilities, and industries to develop “spin-off” and sector clusters (biomedical research, for example).
- Incorporate residential uses as part of a mixed-use development area.
- Encourage office and academic development.
- Increase connectivity and multi-modal transportation choices.
- Create or retrofit streets to be complete, having on-street parking, sidewalks, and other complete street elements.
- Make strategic connections to adjacent residential areas that do not increase automobile traffic in such areas.
- Enhance social services and Crime Prevention through Environmental Design techniques to combat crime and poverty.
- Reconsider industrial zoning that calls for excessive separation of uses.



Source (All Other Images): City of Wilmington

1. Screen Gems Studios fosters economic development with industry-driven employment throughout the region (Wilmington).
2. The American Tobacco Campus (Durham)
3. Centennial Campus at North Carolina State University combines academic research, business start-up incubators, established technology firms, and residential uses to create an innovation zone (Raleigh).
4. Franklin Street, at the University of North Carolina at Chapel Hill is home to numerous researchers institutes, businesses, and civic uses (Chapel Hill).
5. Citrix is a technology firm located in the downtown Warehouse District in close proximity to retailers and housing choices for employees (Raleigh).

Existing Examples *Live/Work Innovation Zones*

- American Tobacco Campus (Durham)
- North Davidson Arts District (Charlotte)
- Centennial Campus at North Carolina State University (Raleigh)
- HQ Raleigh (Raleigh)

Proposed Wilmington Locations *Live/Work Innovation Zones*

- S. 17th Street and Medical Center Drive
- N. 23rd Street and One Tree Hill Way
- Market Street and Eastwood Road
- College Road and Fountain Drive

B.2 - Types of Areas of Opportunity



Neighborhood-Scale Infill Development Principles

- Focus on small-lot infill development, especially single-family residential.
- Place particular emphasis on surrounding neighborhood fabric.
- Encourage neighborhood-scale commercial development along corridors to serve the neighborhood.
- Enhance neighborhood gateways through streetscape improvements, public art, signage and buildings that front towards the street.
- Prioritize the redevelopment of out-of-place sites, such as a small-scale industrial area with out-buildings in a residential area.



1. Infill, multi-family housing is designed to appear as single family homes along with existing homes on historic Glenwood Avenue (Raleigh).
2. Accessory dwelling units can add dwelling units with minimal impact (I'on Village, Charleston, SC).
3. A new home in Winter Park (Wilmington).
4. New development designed to fit into a historic district (Raleigh).
5. New housing developed to fit into the existing neighborhood (Wilmington).

Source (All Images): City of Wilmington



RiverLights Principles

- Implement adopted master plans.
- Encourage mixed-use centers and new and traditional development patterns.
- Ensure that new development meets the intent of adopted plans.
- Encourage public water access areas and incorporate natural features into the public space network.

1. Marina Village will be the Mixed-use Center for the entire first phase of the master planned area.
2. The conceptual master plan shows clustered residential development with some variety of building types, newly constructed streets and open spaces.
3. River Lights will be a low-density single-family neighborhood.

Source (All Images): Newland Communities

B.2 - Types of Areas of Opportunity



Greenfield Sites as Multi-use Places Principles

- Implement adopted master plans; create new master plans as needed.
- Encourage town centers and other suburban mixed-use development types.
- Make connections to adjacent areas and incorporate them into new development.
- Provide abundant open space and buffers along low-density neighborhoods, but integrate with existing multifamily and commercial areas.
- Maximize structured parking and concealed parking and minimize the use of large surface parking lots.
- Develop multi-use areas and provide multi-modal connections between various uses.
- Encourage a variety of building types; employ new and traditional urban design principles in site and building design.
- Ensure a walkable block structure and a clear hierarchy of complete streets.
- Provide Main Streets with pedestrian-friendly storefronts and street furniture.



1. Meadowmont Village provides open space while connecting residential and commercial uses (Chapel Hill).



2. Oberlin Court uses vertical mixed use and conceals parking in the back of the development (Raleigh).
3. Birkdale Village uses a variety of building types and urban design principles (Huntersville).
4. North Hills provides residents with shopping and restaurants near entertainment areas (Raleigh).
5. Mayfaire Towne Center design ensures a walkable block structure (Wilmington)
6. Kentland Square includes a main street design with pedestrian-friendly storefronts and sidewalk-cafe seating (Marlyand).

Source (All Images): City of Wilmington

Existing Examples

Greenfield Sites as Multi-Use Places

- Barclay Commons (Wilmington)
- Lumina Station (Wilmington)
- Birkdale Village (Huntersville)
- Southern Village (Chapel Hill)

Some Wilmington Locations

Greenfield Sites as Multi-Use Places

- Gallery Park and other properties near the Cameron Art Museum
- Oleander Drive near Greenville Loop Road.
- Autumn Hall
- Independence Boulevard corridor (South of Shipyard Boulevard)

B.2 - Types of Areas of Opportunity

Suburban Commercial Retrofit Principles

- Encourage infill development in surface parking lots.
- Overcome barriers to pedestrian movement such as excessive distances at street crossings, lack of sidewalks and crosswalks, and disconnected walking networks.
- Add residential uses and make connections to nearby existing residential areas.
- Develop design standards for commercial development.
- Use access management techniques, such as connected parking lots, to reduce the number of driveways along corridors.
- Retrofit underperforming and outdated suburban buildings and sites.
- Prioritize a more urban building prototype for large format and chain commercial developments.
- Establish an urban block structure in appropriate locations; convert parking lot driveways to full-service streets.



1. Two-story fast food restaurant with an urban frontage and drive-thru window placed behind the building (Beaufort, SC).
2. Suburban frontage of an adaptive reuse building filled with outdoor seating instead of parking (Greenville, SC).
3. Big-box store retailers are stacked and use structured parking (Charlotte, NC).

Source (All Images): City of Wilmington



Additional Information

Market Street Corridor Study (& Proposed Form-based Zoning Code)

Key Strategy: “Sprawl Repair”

Patterns of suburban sprawl have led to declining investment, barriers to pedestrian mobility, declining public health and wellbeing, and unfavorable landscapes. Preparing these patterns is a core strategy associated with Suburban Commercial Retrofit. Sprawl patterns can be changed through coordinated urban design and community planning efforts. This usually involves the use of creative strategies such as driveway access management, infill development, streetscape enhancements, shared parking arrangements and others.



Image Source: Reprinted with permission from *Sprawl Repair Manual* (Galina Tachieva, July 7, 2015)

B.2 - Types of Areas of Opportunity



Post-Industrial and Inner-City Revitalization Principles

- Increase densities with full-block, yet pedestrian scale, mixed-use development.
- Encourage adaptive reuse of buildings.
- Strategically relocate business operations to more suitably zoned areas through phased industrial transitions.
- Promote entrepreneurship and small business development.
- Retrofit public housing projects as mixed-use and mixed-income developments.
- Enhance social services and Crime Prevention through Environmental Design techniques to help combat crime and poverty.
- Use alleys and pedestrian walkways to enhance connectivity and access.
- Foster the identity of small urban neighborhoods and sub-districts.
- Repair street connectivity and block structure that has been lost over time.



1. New infill development alongside a renovated textile warehouse in the South End neighborhood (Charlotte).
2. Renovated tobacco factories now house biomedical research and other technology industries while improving the surrounding urban area (Winston-Salem).
3. A new building with modern materials and details constructed around an existing, historic structure (Austin, TX).
4. New apartments bring residents to a revitalizing arts district in the downtown Brooklyn Arts District (Wilmington).
5. New apartments bring residents to a revitalizing arts district in the downtown Brooklyn Arts District (Wilmington).
6. The Citrix building is an example of adaptive reuse of a warehouse in a previously industrial downtown area. , Before and after photos shown below (Raleigh).

Source (All Images): City of Wilmington

Key Strategy: Adaptive Reuse

Many buildings can be renovated for contemporary uses. Due to their character and uniqueness, these buildings and the areas in which they are typically found are desired by creative startups and technology firms. They are also good for light manufacturing, art galleries, loft apartments, and other uses compatible with transitioning neighborhoods.



Before



After

B.2 - Types of Areas of Opportunity



High-Density Transitions Principles

- Increase densities with infill development, mid-rise buildings, parking decks, and other urban solutions.
- Create major destinations that have a regional, statewide, or even national attraction.
- Provide a walkable street grid with safe crossings by preserving and repairing the existing network and repairing lost connections as appropriate.
- Encourage active ground-floor uses such as stores and restaurants uses; alleviate challenges to vertical mixed use development.
- Encourage large-format tenants to utilize urban-scale building footprints.
- Use alleys and secondary circulation networks; ensure highly walkable and active streetscapes.
- Place parking to the rear of buildings and ensure primary building access from the public sidewalk network.
- Create design guidelines for key areas as needed.



1. Mixed-use development with a small grocery store on the ground floor and public parking behind (East Austin, TX).
2. Townhomes are good building types for increasing density and maintaining residential character (Charlotte)
3. Elevating the front entrances of this row of townhomes above the street level allows parking to be placed behind and under the building, with some front on the street (Charlotte).
4. The alley behind this townhome block

5. Appropriately designed and scaled building footprints allow for a better transition between lower and higher density areas (Portland, OR).
6. Ground floor uses activate the street level in this residential building (Portland, OR).

Source (All Images): City of Wilmington

Existing Examples High-Density Transitions

- Brooklyn Arts District (Wilmington)
- South End (Charlotte)
- Glenwood Avenue South (Raleigh)

Some Wilmington Locations High-Density Transitions

- Mayfaire Towne Center
- Soda Pop District
- Proposed Galleria Redevelopment Site

The city's streets are the most visible public spaces and are vital for moving people and goods from place to place. The city must have a robust hierarchy of streets and paths to efficiently service. The Corridors and Complete Streets system is one of three network-based elements in the Growth Strategy Maps. It acknowledges that many roadways will be prioritized for automobiles and freight travel, while others will be used to balance the needs of all modes or even put pedestrians first. The map system also shows streets can be designed to reflect a certain character, for example being attractive gateways and edges to neighborhoods, employing historic features, or being left to prioritize automobile functionality.

Complete Streets & Urban Streets

It should be noted that North Carolina Department of Transportation adopted a *Complete Streets* policy in 2007 to reflect multi-modal design needs. However, the unique attributes of city- and privately-maintained streets in Wilmington require further local design guidance. Standards and manuals that do not completely reflect the needs of high- and moderate-density cities where walking and bicycling are appropriate modes of transportation should seek further guidance and expertise that directly relate to the unique needs of the place.

Wilmington should consider additional design guidance and contemporary best practices for urban conditions, such as those illustrated by the North American City Transportation Organization (NACTO) in their Urban Streets Design Guide and Bikeway Design Guide.

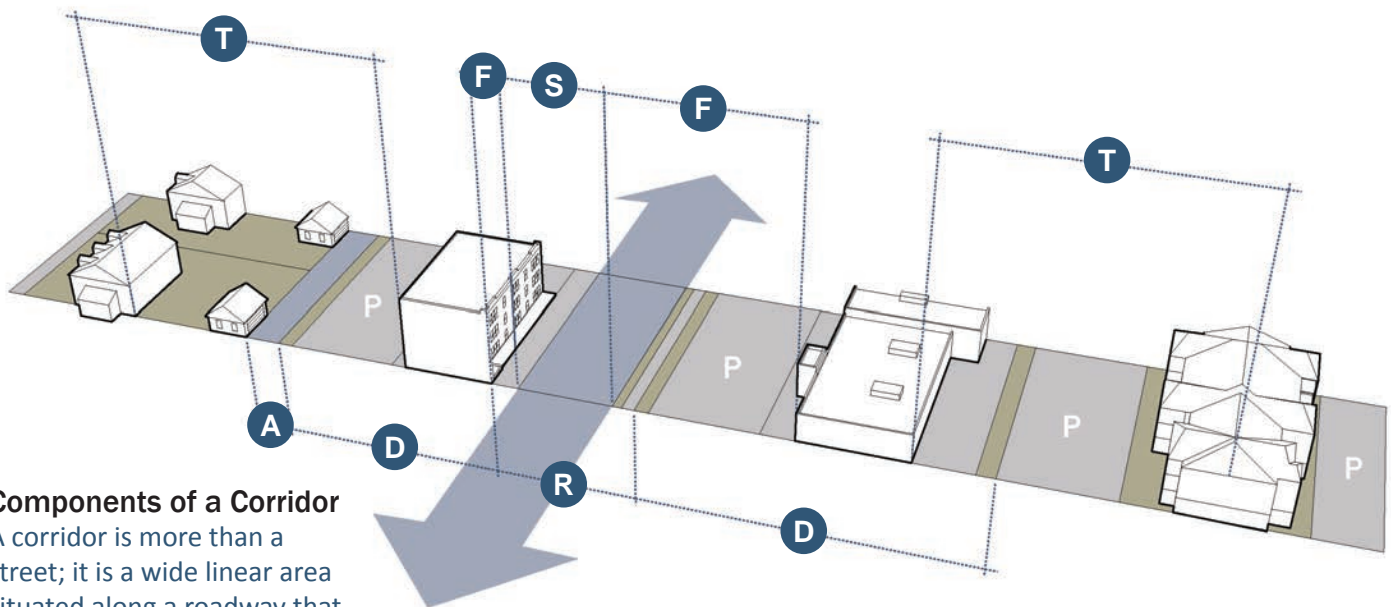


Additional Information

NC Department of Transportation Complete Streets

NACTO Urban Street Design Guide

NACTO Urban Bikeway Design Guide



Components of a Corridor

A corridor is more than a street; it is a wide linear area situated along a roadway that includes several components.

S Travelway / Roadway / Street

R Public Right-of-Way

F Site Frontage Area

D Site Development Area

T Transition Area

A Alley (+ Other Buffer/Transition Elements)

Travelway

Sidewalk

Parking Area

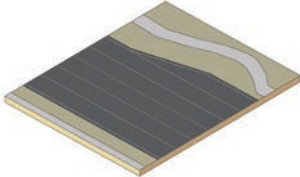


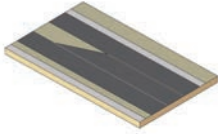


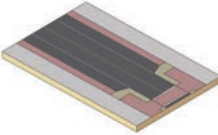


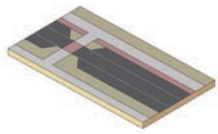


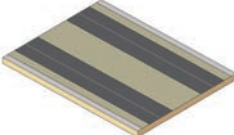


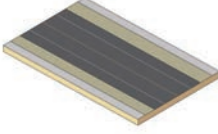


Streetyard / Yard

Types of Corridors and Appropriate Frontages

This table is a guide to correlate corridor types with appropriate frontage types. Frontage is the land area in between the street and the building. How the building relates to the street in this area is a critical aspect to good city design. This helps produce cohesive, complete streetscapes that are both functional and aesthetically pleasing. This provides flexibility in policy implementation that reflects the unique contexts of Wilmington's transportation corridors.



Additional Information on Frontages Policies (p. 158-159)

		Frontage Types	
		Urban	
Corridor Types		Civic	Side
Major Corridors & Regional Parkways  Example: S. College Road			
Community Connectors  Example: Holly Tree Road			
Main Streets  Example: Castle Street			
Special Character Streets  Example: Hooker Road			
Community Parkways & Loop Roads  Example: Masonboro Loop Road			
Residential Streets & Other Local Corridors  Example: Pine Valley Drive			



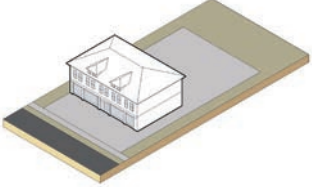
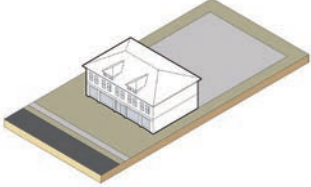
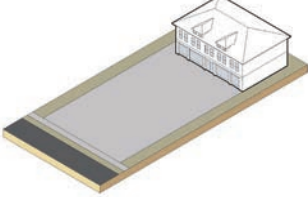
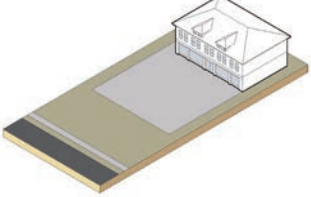
























Recommended



Acceptable



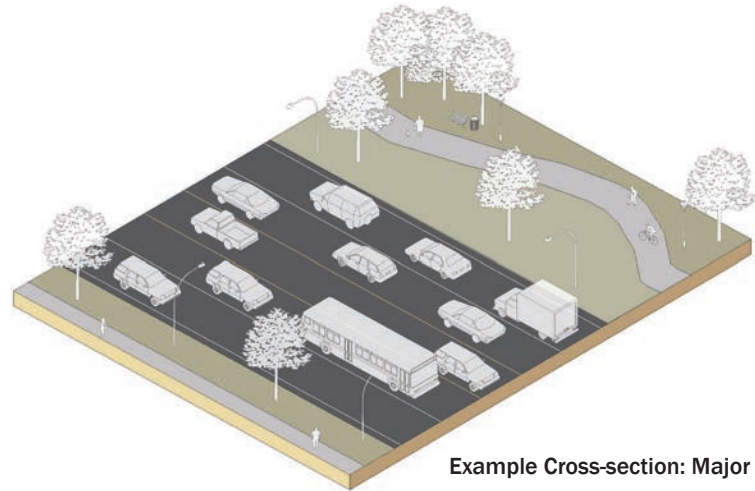
Not Appropriate

Frontage Types			
Mixed/Semi-urban		Suburban	
Semi-urban	Semi-urban Parkway	Parking Field	Parkway
			
			
			
			
			
			
			

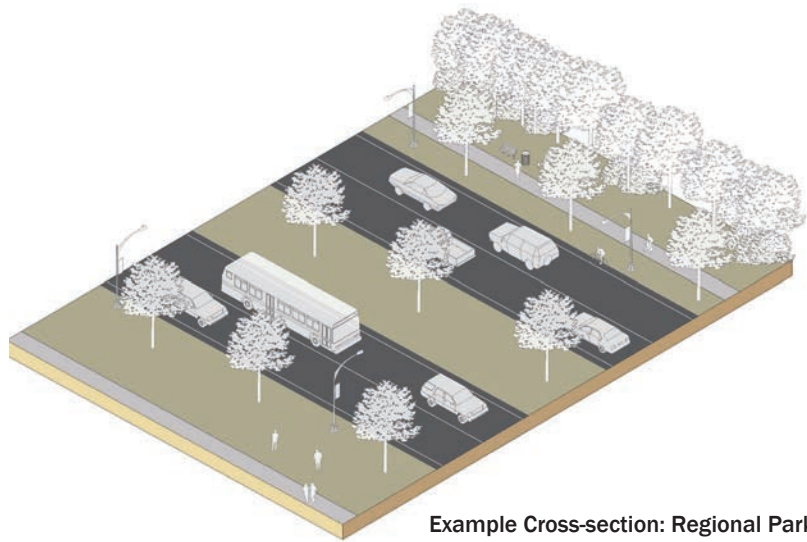
C.2 - Types of Corridors

Major Corridors & Regional Parkways Principles

- Design these multi-modal thoroughfares with some walkable qualities, including grade-separated bike lanes, sidewalks, and appropriate crosswalks.
- Prioritize motor vehicle mobility.
- Place buildings along these corridors back from the roadway to accommodate signage and some parking in front of the building, landscaped street yards, and parking lot landscaping.
- Add landscaped medians, where possible.
- Buffer sidewalks, bike lanes, and multi-use paths from the motor vehicle lanes.



Example Cross-section: Major Corridor



Example Cross-section: Regional Parkway

Some Wilmington Locations Major Corridors

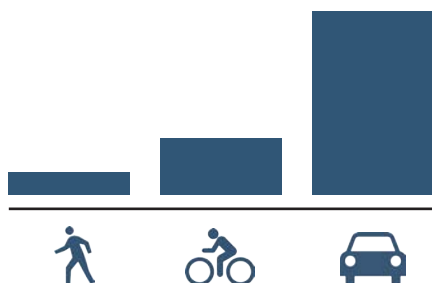
- Eastern Market Street
- Martin Luther King, Jr. Parkway
- College Road
- Shipyard Boulevard
- Military Cutoff Road
- Independence Boulevard
- Eastwood Road



1. Market Street is an example of a Major Corridor, as it prioritizes motor vehicle mobility.
2. Martin Luther King, Jr. Parkway is an example of a Regional Parkway, as its primary purpose is to connect downtown Wilmington to Interstate 40 and other high traffic destinations, bypassing Greater Downtown.

Source (All Images): Google 2015

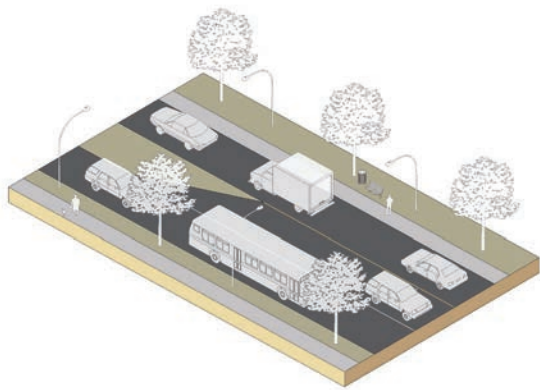
Desired
Transportation
Mode Balance



C.2 - Types of Corridors

Community Connectors Principles

- Create transitions from regional-scale roadways to neighborhood and business areas. These streets are sometimes called “collector streets,” though they may also be classified as arterials.
- Line these corridors with a mix of building and site types at varying densities and setbacks.
- Utilize trees and landscaping, and include adequate bike lanes and sidewalks.
- Design buildings and site with a variety of frontage types, including more urban conditions that foster safe pedestrian activity.
- Use these transitional corridors to protect existing residential character.



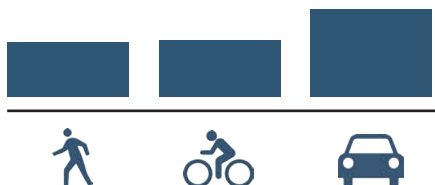
Example Cross-section: Community Connector



East Boulevard had two of its lanes removed to make traffic flow better and improve pedestrians safety (Charlotte, NC).

Source: Google 2015

Desired
Transportation
Mode Balance



Key Strategy: Commercial Corridor Retrofit



Many of Wilmington’s streets are in need of redesign and renovation in order to be more pedestrian friendly and spur desirable development patterns along their edges. Crosswalks, street trees, on-street parking, and other “complete street” elements are needed to enhance these corridors.

Source (All Images): City of Wilmington

Existing Examples Community Connectors

- Wrightsville Avenue (portions) (Wilmington)
- Holly Tree Road (Wilmington)
- East Boulevard (Charlotte)
- Mission Street (San Francisco, CA)
- Hillsborough Street (Raleigh)

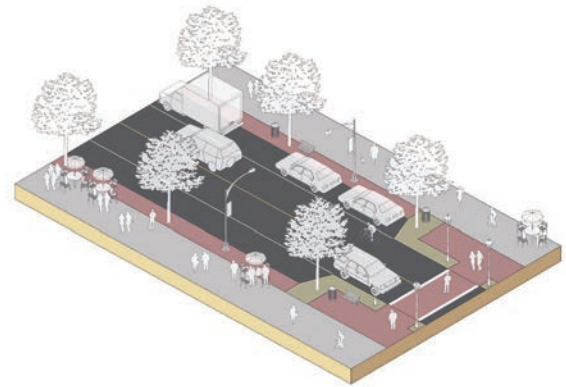
Some Wilmington Locations Community Connectors

- Market Street (portion)
- Dawson Street and Wooster Street
- N. 10th Street
- Princess Place Drive
- St. Nicholas Drive

C.2 - Types of Corridors

Main Streets Principles

- Prioritize the pedestrian along these small-scale streets with shops, on-street parking, and buildings fronting continuously onto the sidewalk.
- Enhance these corridors with medians and streetscape improvements.
- Incorporate existing storefronts and infill development at high densities, while making smooth transitions into adjacent neighborhoods.
- Place parking to the rear or side of buildings, and not in the front of buildings. Surface parking lots on street corners should not be permitted.
- Limit the visibility of surface parking lots and parking deck facades are along these streets.
- Foster a public realm that significantly favors pedestrians over automobiles.
- Encourage storefronts, lobbies, individual building entries, and other active ground-floor conditions that work together along the street to create a continuous corridor.



Example Cross-section: Urban Main Street

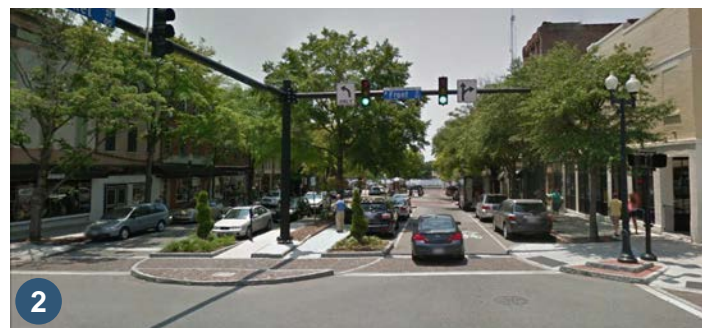
Existing Examples Main Streets

- Front Street (Wilmington)
- Main Street (Mayfaire Town Center, Wilmington)
- Castle Street (Wilmington)
- Main Street (Greenville, SC)
- Lexington Avenue (Asheville)
- Glenwood Avenue (Raleigh)
- Franklin Street (Carrboro / Chapel Hill)



Some Wilmington Locations Main Streets

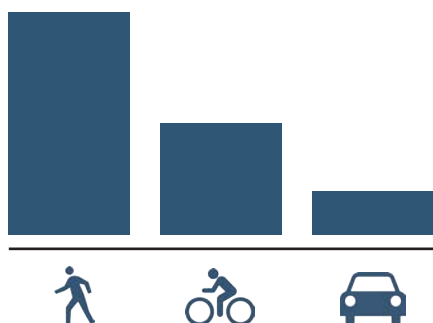
- Castle Street
- Medical Center Drive
- Darlington Avenue



1. Front Street offers a “main street” feel with shops, on-street parking, and buildings fronting continuously onto the sidewalk (Wilmington).
2. Market Street downtown includes landscaped medians that offer refuge to pedestrians while waiting at crossing signals. (Wilmington).

Source (All Images): Google 2015

Desired
Transportation
Mode Balance



C.2 - Types of Corridors

Special Character Streets Principles

- Promote development and redevelopment, reduce pedestrian-automobile conflicts, and preserve historic streetscape elements currently located in these roadways.
- Minimize the visibility of surface parking lots and parking deck facades, especially along primary pedestrian streets.
- Prioritize pedestrian and bicycle mobility and placemaking efforts while continuing to accommodate moderate to large volumes of motor vehicle traffic.

Existing Examples *Special Character Streets*

- Wrightsville Avenue in Carolina Heights Neighborhood (Wilmington)
- South Water Street and various brick streets in the Greater Downtown (Wilmington)

Some Wilmington Locations *Special Character Streets*

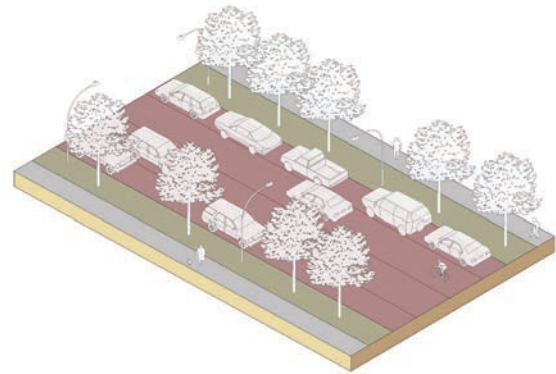
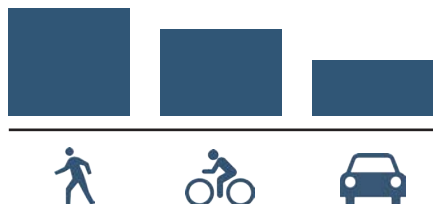
- Various brick streets in the Greater Downtown
- 5th Avenue
- Market Street east of Colonial Drive
- Long Leaf Hills Drive
- Old Front Street through North Waterfront Park
- Allen's Lane
- Carolina Beach Road north of Legion Stadium



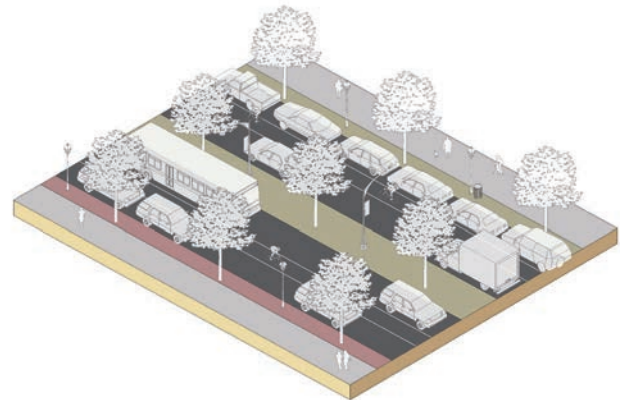
Streets can be designed in many different ways, including those which place the automobile at the same level as the pedestrian (Greenville, SC).

Source: City of Wilmington

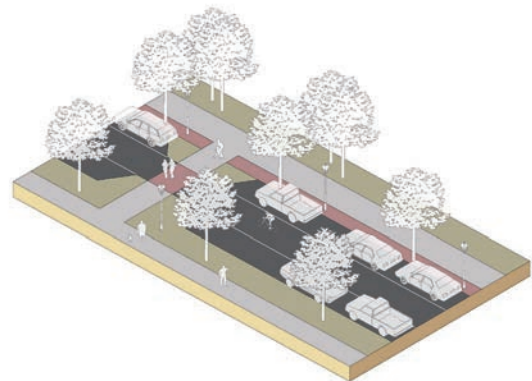
Desired Transportation Mode Balance



Example Cross-section: Brick Street



Example Cross-section: Urban Bike Boulevard



Example Cross-section: One-Way with Pedestrian Enhancements

C.2 - Types of Corridors

Community Parkway and Loop Roads Principles

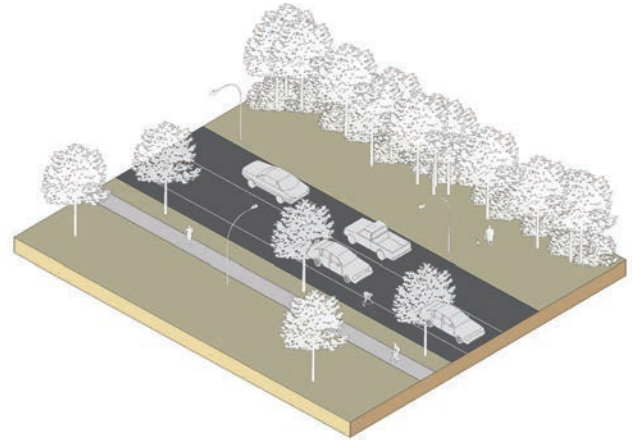
- Maintain parkway corridors as scenic multi-modal roadways with trees and landscaping.
- Include landscaped medians, bike and pedestrian facilities, and access management elements, such as limited driveways.
- Maintain scenic character by limiting sprawling commercial development.
- Maximize green landscaped frontages.

Existing Examples *Community Connectors*

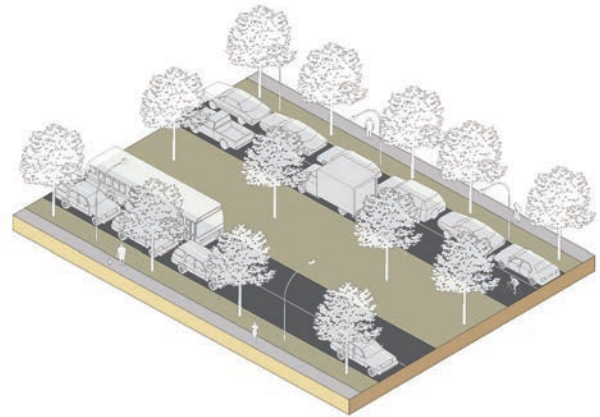
- Wrightsville Avenue (Eastern) (Wilmington)
- Holly Tree Road (Wilmington)
- Greenville Loop Road (Wilmington)
- Masonboro Loop Road (Wilmington)

Some Wilmington Locations *Community Connectors*

- Market Street (Portions in Greater Downtown)
- Dawson Street and Wooster Street
- N. 10th Street
- Princess Place Drive



Example Cross-section: Loop Road



Example Cross-section: Community Parkway



1. Greenville Loop Road maintains a more neighborhood feel by maximizing green landscape frontages (Wilmington).
2. Holly Tree Road design includes pedestrian facilities and shared bikeway as well as access management elements, such as limited driveways (Wilmington).

Source (All Images): Google 2015

Desired
Transportation
Mode Balance



C.2 - Types of Corridors

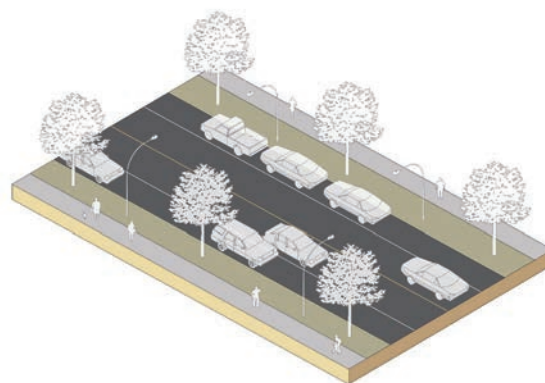
Residential Streets & Other Local Corridors Principles

- Consider the character of the community, network connectivity, and pedestrian mobility and keep at the forefront of design consideration when dealing with city streets.
- Implement traffic calming measures for neighborhood areas using a variety of techniques such as landscape features, traffic circles, and others.



New Holland Drive is a residential street with neighborhood street network connectivity (Wilmington).

Source: Google 2015



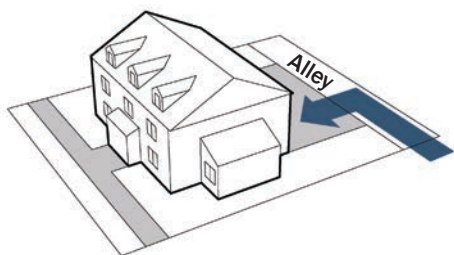
Example Cross-section: Residential Street

Desired
Transportation
Mode Balance



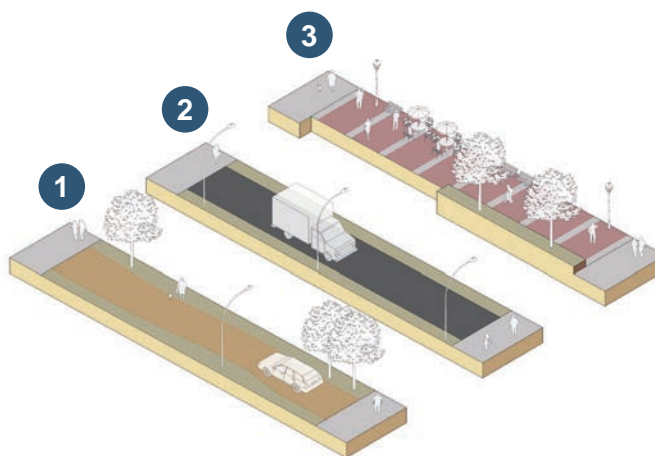
Key Strategy: System of Alleys

Alleys are tremendous city-building assets. They allow buildings to be serviced, or “loaded”, from the back of buildings, which reduces the number of driveways and waste facilities along the streets in front. This creates a more comfortable and aesthetically-pleasing streetscape for all users.



Alleys can also function as pedestrian walkways between buildings, especially if lighting and active building frontages are used to keep them safe.

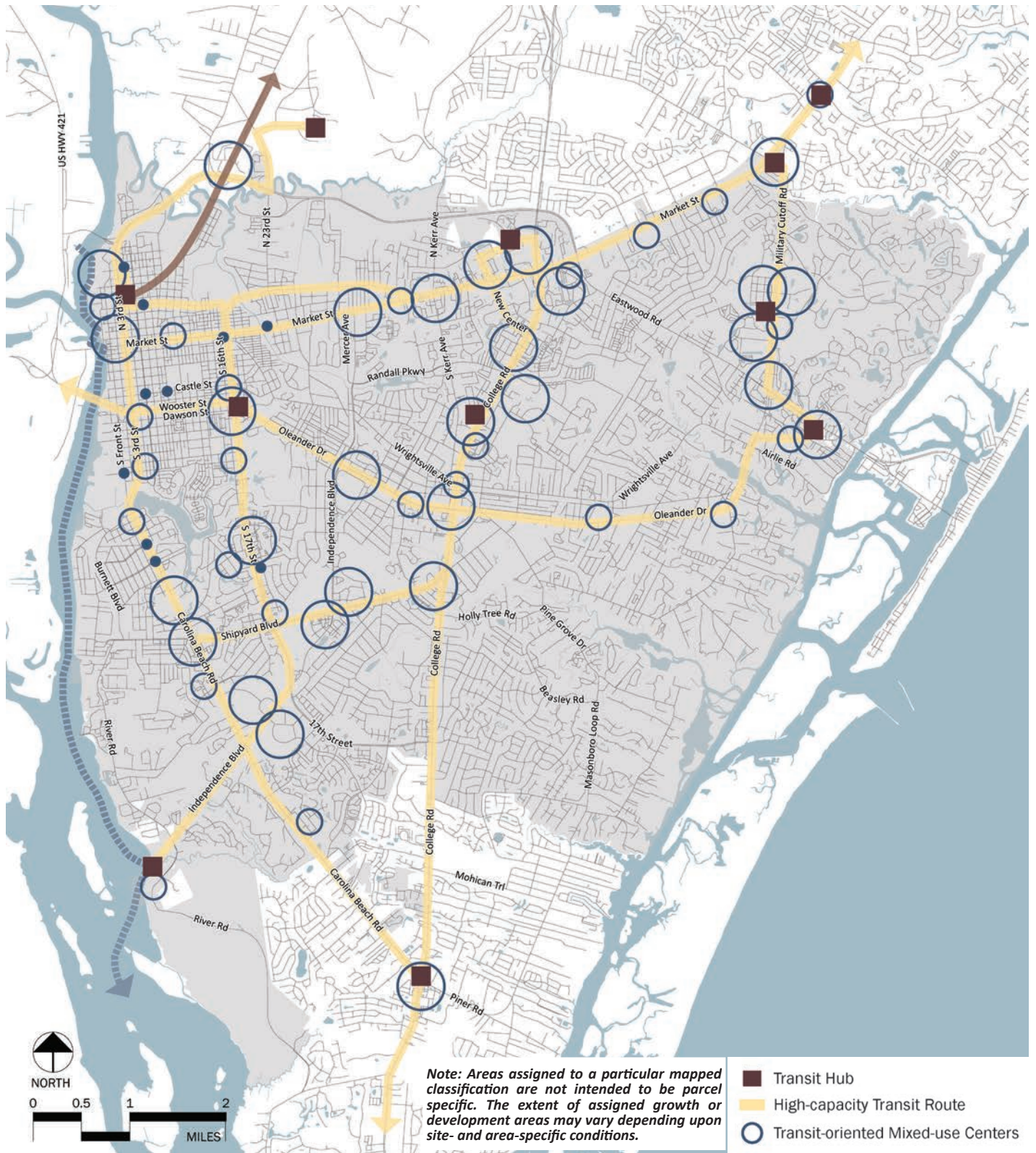
Wilmington’s system of alleys should be restored, preserved, and maintained wherever possible. New development should use alleys where possible.



Example Cross-section: Three Types of Alleys

1. Neighborhood / Commercial Alley (Unimproved)
2. Neighborhood / Commercial Alley (Improved)
3. Urban Pedestrian-only Alley

D - Transit that Works



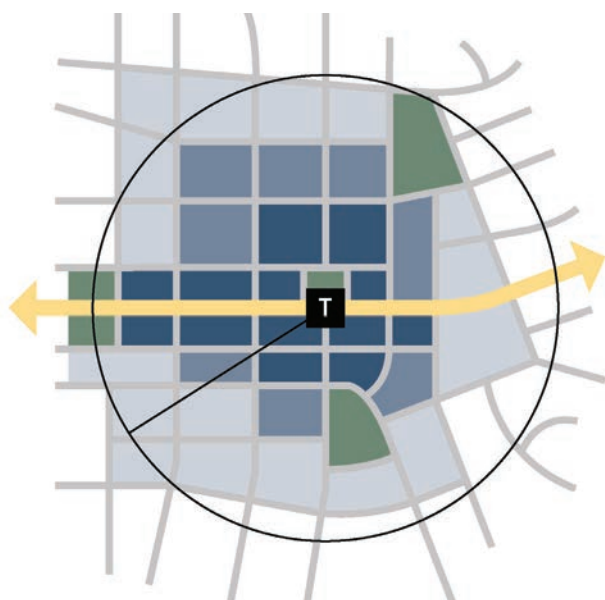
Additional Information

WMPO Long-range Transportation Plan

- Transit Hub
- High-capacity Transit Route
- Transit-oriented Mixed-use Centers
- Water-based Transit
- Passenger Rail (Intercity)
- City Boundary

While many cities across the United States are making investments in efficient, comfortable transportation systems that link walkable land use patterns together, Wilmington’s public transportation system remains undesirable for “choice” riders, and unable to compete with the private automobile, despite claims of traffic congestion. Individuals with greater means have less incentive to use Wilmington’s public transit system, while there are many lower-income and disabled individuals who must and do rely on public transit.

The *Transit that Works* map is designed to prioritize specific corridors for transportation system upgrades, including, but not limited to: faster travel times, comfortable riding and waiting conditions, and a strong relationship to high- and moderate-density land uses that allow for walking and bicycling. Transit that Works focuses on convenience and connects Mixed-use Centers, Green Connections & Open Spaces and Areas of Opportunity. The system employs a transit-oriented and transit-ready development framework for urban growth.



Transit-oriented Development (TOD)

Transit-oriented development refers to the concentration of residential, commercial, and office uses around a transit stop or station that both relies on and encourages transit use. Within TODs, higher-density development is located closest to the transit stop, or center, with progressively lower-densities development spreading outward.

Transit System:

- Transit Station / Stop
- High-capacity Transit Route
- 1/4-mile Radius (Comfortable Walking Distance)

Integrated Development:

- High-density Mixed-use Area
- Moderate-density Mixed-use Area
- Moderate-, to Low-density Transition Area
- Open Space

Source: City of Wilmington

Bold Vision: Use a Modern Streetcar System to Connect Mixed-use Centers



Wilmington was once connected by a system of streetcars (also called trolleys) that ran along tracks in the roadway. Many residents along the former Beach Car Line connecting downtown to Wrightsville Beach have expressed support of the return of this mode of transportation. The core of downtown would especially benefit from such a system (as it once did), boosting urban development and connecting various districts. This has been successfully demonstrated in many other American cities.



1. Historic photo of the former Beach Car Line from downtown Wilmington to Wrightsville Beach.
Source: Lower Cape Fear Historical Society
2. Buildings have developed at maximum densities along a modern streetcar system (Portland, OR).
Source: City of Wilmington

D.2 - Types of Transit



Transit routes should service areas with adequate volume of ridership, such as between high-traffic tourism or employment areas (Charleston, SC).

Source: City of Wilmington



Using water ways, like the Cape Fear River, as a transportation could help reduce vehicular traffic in the region, especially between tourist destinations.

Source: Wilmington Water Tours, Inc.

Transit-oriented Mixed-use Centers Principles

- Develop mixed-use centers located along high-capacity transit routes; note that most of the Mixed-use Centers designated on the Growth Strategies Maps are located along a proposed high-capacity transit line.
- Supplement the transit systems within and between Mixed-use Centers, such as a trolley in the Downtown Core or a shuttle system around the university area.



Transit stations should be well-integrated into the neighborhood fabric and include safe and clean places for patrons sit, stand and interact with others, if they wish to do so (Winston-Salem, NC).

Source: City of Wilmington

Transit Hub Principles

- Maximize the intensity and density of surrounding development include significant public spaces associated with the development of transit stations, and make integrated, intentionally-designed connections to these facilities.
- Encourage the location of transit stations in proximity to development and passenger destinations.
- Identify and plan future transit connections to potential “park & ride” locations.



Box Set Cross Reference

Growth Factors Report

This report provides foundational data that is the basis for the Growth Strategies Maps.

Water-based Transit Principles

- Use the Cape Fear River as a transportation corridor to connect Wilmington with southern New Hanover County and Brunswick County.
- Develop an efficient ferry system that does not conflict with port operations.
- Use a water taxi system to connect the east and west banks of the Cape Fear River downtown.

Key Strategy: Stops as Places

Transit stops should be well-connected to their surroundings by a comfortable sidewalk system. Stop locations should be enhanced with shelters, waste and recycling bins, signage, and seating. Transit stops must be viewed a key public spaces and designed to meet the needs of people waiting for transit. Without basic facilities and intentionally-designed stop areas, transit ridership will continue to be low.



Source (All Images): City of Portland

D.2 - Types of Transit



The demand for greater transit service as population grows could require more efficient bus service to include dedicated bus lanes for bus rapid transit service (New York City, NY).

Source: New York City Department of Transportation



WAVE Transit operates throughout the greater Wilmington area with stops at popular employment and shopping destinations (Wilmington).

Source: WAVE Transit

High-capacity Transit Route Principles

- Improve transit service along these priority transit corridors, along with higher-density development in order to establish and contribute to the required demand to operate the service.
- Include transit service options, such as improved bus service to a modern streetcar line.
- Support higher-density residential development along priority transit corridors.

Conventional Transit System Principles

- Maximize development density and intensity around bus routes, include significant public spaces with proposed transit stations, and make high-quality connections to these facilities.
- Encourage the location of transit stations in proximity to development and passenger destinations.



Additional Information

Cape Fear Transportation 2040 Plan

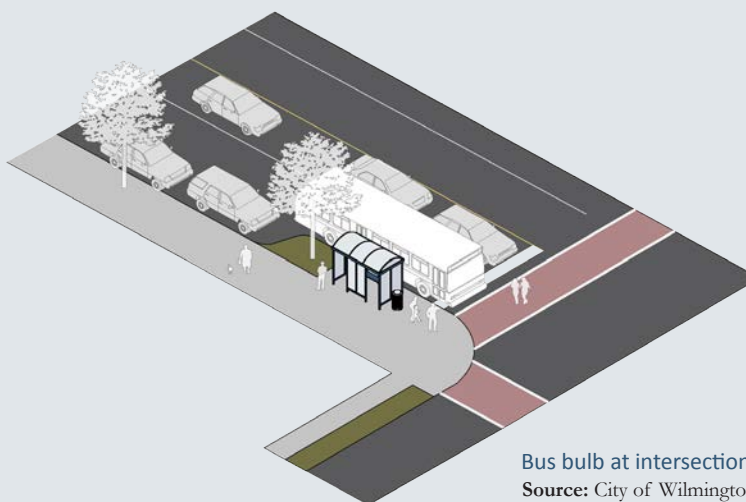
Key Strategy: Elements of Bus Rapid Transit (BRT)

BRT is an innovative, high capacity, lower-cost public transit solution that can significantly improve urban mobility. This permanent, integrated system uses buses or specialized vehicles on roadways or dedicated lanes to quickly and efficiently transport passengers to their destinations, while offering the flexibility to meet transit demand. BRT systems can easily be customized to community needs and incorporate state-of-the-art, low-cost technologies that result in more passengers and less congestion.

Source: National Bus Rapid Transit Institute

Since Wilmington is a much smaller city than those that have successfully implemented BRT systems, Wilmington will need to be strategic and selective when determining which solutions are best. Wilmington's roadways may not yet allow for an entire lane to be dedicated to buses, but there are other aspects of BRT that can be implemented along designated routes to create a more comfortable and efficient transit system.

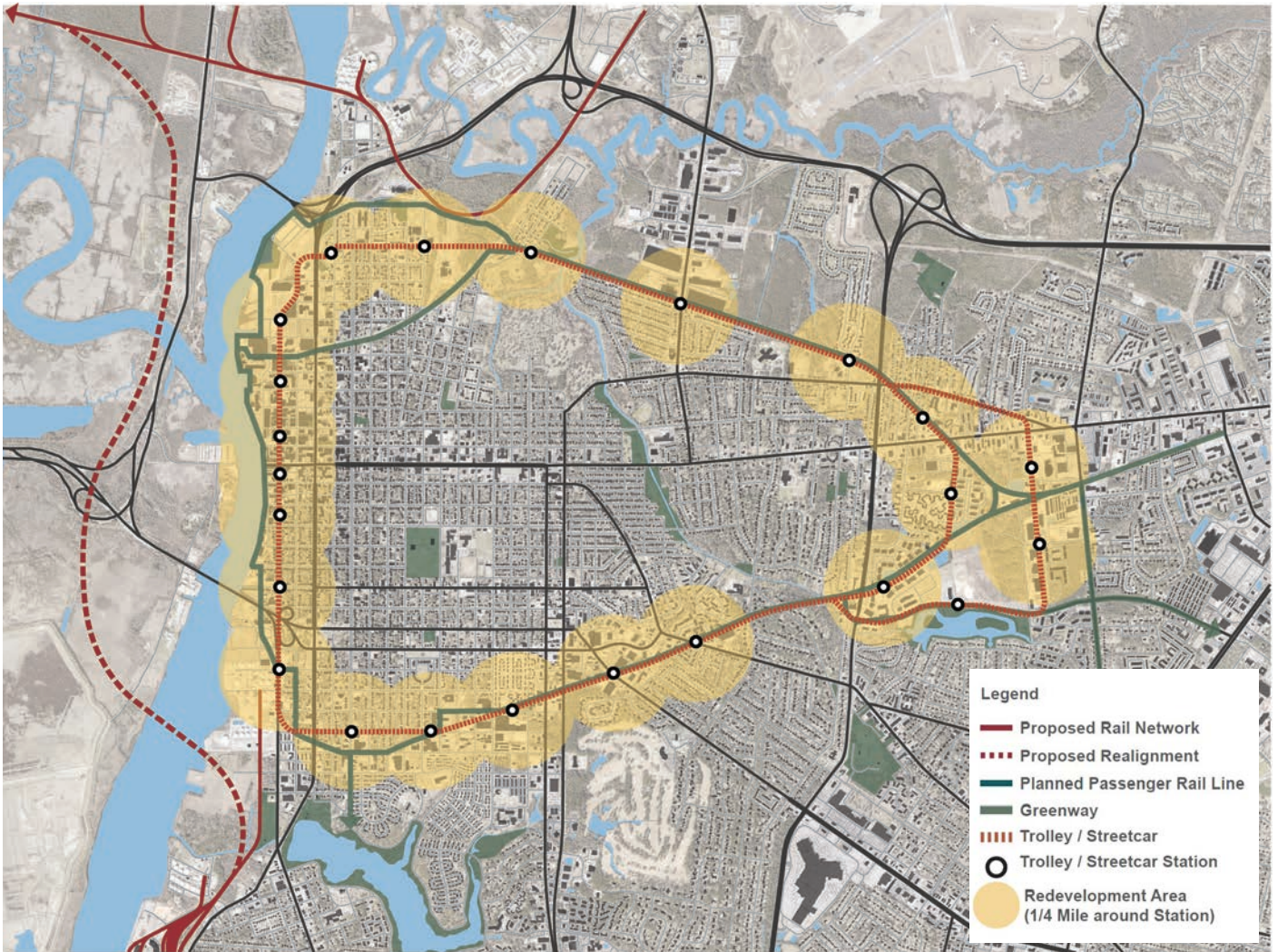
- 1 Covered stations and platform-level boarding for safe, efficient waiting and boarding.
- 2 Strategic network that connects major destinations.
- 3 Bus bulbs (curb extensions that bring people closer to the bus and allow buses to stay in the roadway).



Bus bulb at intersection.
Source: City of Wilmington

- 4 Efficient, clean, comfortable vehicles.
- 5 Pre-boarding fare collection, using pay stations in advance of bus arrival for shorter stop times.
- 6 Intelligent transportation systems, such vehicle prioritization at intersections.

Bold Vision: Rail Relocation and Transit/Greenway Loop



Source: City of Wilmington

There exists a significant opportunity to relocate the heavy rail corridor from the city of Wilmington to a safer, more direct route into the State Port. The new route would make the port more competitive, increase efficiencies for the rail carrier, and enhance economic development opportunities statewide. In concert with the relocation, the existing rail corridor, with all of its related

safety and noise issues, could be converted into a much quieter and useful city trolley line, not unlike the Wilmington of 100 years ago. Such a conversion would improve the quality of life for many neighborhoods, increase property values, and reduce growing traffic congestion on area streets. It would stimulate investment downtown and in the many vacant and underperforming properties

along the proposed trolley corridor, particularly on the south side of the city. Upon conversion, the existing rail corridor could also serve a dual purpose as a trail/greenway linking up with other city trails. Numerous other benefits may be achieved, ranging from the elimination of over 30 dangerous cross street conflicts, to significant tourism expansion, to affordable housing.



Additional Information

The Economic and Community Development Impacts of Rail Relocation in Wilmington, NC



Policies

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Case Study: Atlanta BeltLine

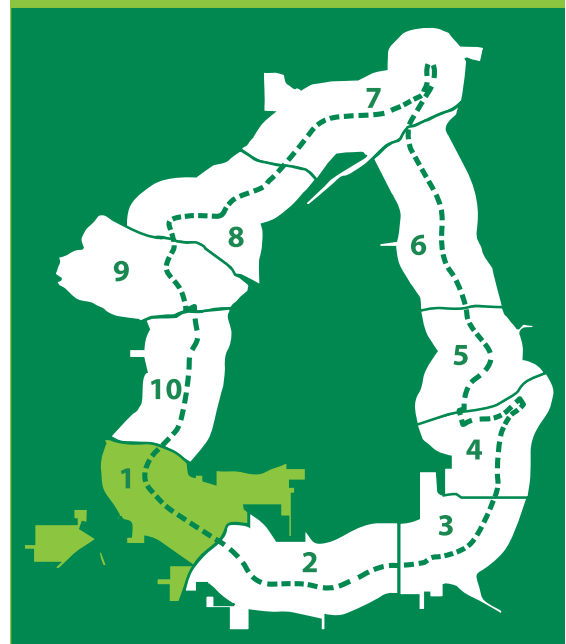
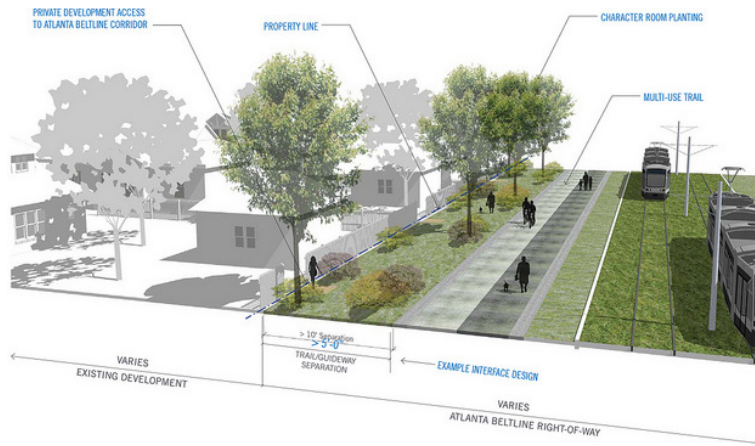
The Atlanta BeltLine utilizes an existing 22-mile historic rail corridor that encircles the city of Atlanta. Pedestrian-friendly rail transit and 33 miles of multi-use trails will follow this corridor loop and spur off from it. The completion of the project will bring together 45 in town neighborhoods and also link them to the entire metropolitan Atlanta region through a collection of transit facilities.

The BeltLine has been divided into 10 distinct segments, each of which has been master planned for transit-oriented development. The rail and trail concept takes on many different configurations and seeks to integrate new development with the linear open space system. The bold vision has revitalized many parts of the inner-city and catalyzed urban development in areas never before thought possible.



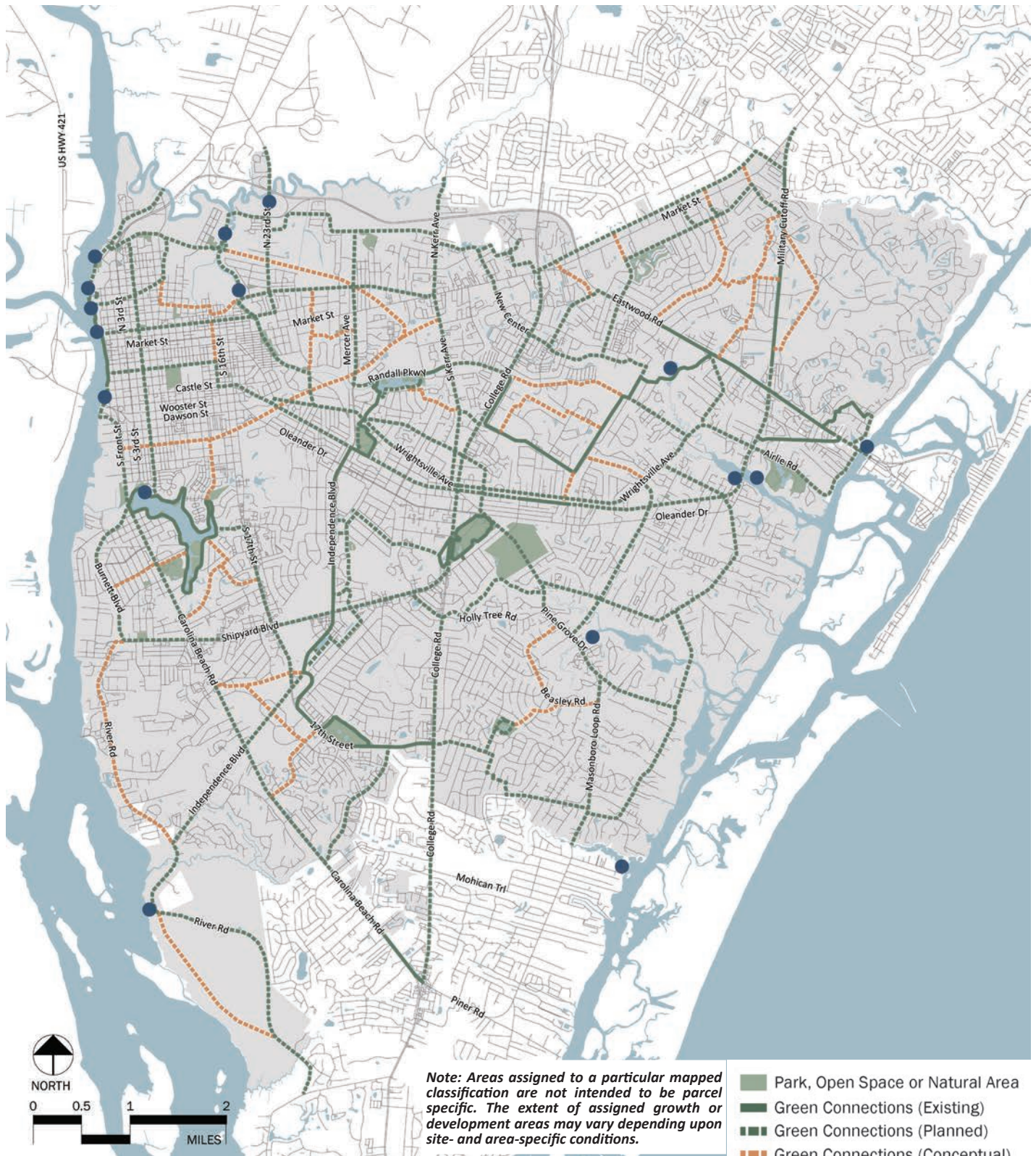
Additional Information

Atlanta BeltLine (www.beltline.org)



Source (All Images): City of Atlanta, www.beltline.org

E - Green Connections & Open Spaces



- Park, Open Space or Natural Area
- Green Connections (Existing)
- Green Connections (Planned)
- Green Connections (Conceptual)
- Water Access Points
- City Boundary

Additional Information
[Comprehensive Greenway Plan](#)

Pedestrian and bicycle mobility and comfort is at the forefront of creating a livable city. These modes of transportation are no longer considered recreation-only activities, but are legitimate ways to move from place to place. Following national trends demanding more walkable neighborhoods, Wilmingtonians have expressed great interest in being able to walk and bike comfortably and safely, especially incorporating these modes into daily needs and social activities. This may include going to the park, exercising, shopping, going out for the evening and/or commuting to and from work and school.

There is a wide variety of park and open space types, ranging from small public plazas and “pocket parks” to regional-scale green spaces. Many areas for recreation are not actually public parks at all; they may be vacant lots, open space reserved from development, waterways, or even streets. It is essential that a variety of spaces are accessible to all residents.

Key Strategy: Integrate Parks and Greenways with Mixed-use Centers and Neighborhoods



One of the biggest mistakes made within new development is not making good connections to the city trail and greenway system. Many developments “turn their backs” to the linear park system. Greenways and developments should be integrated with one another, for example, allowing families on a bike ride to visit their neighbors or to do their shopping without an automobile. Retailers along the Little Sugar Creek Greenway in Charlotte (shown above) receive a multitude of customers from this green connection.

Source: City of Wilmington



Many cities have large green spaces in the heart of their urban centers, or downtowns. This allows for those who choose to live in such mixed-use districts to have relief from the urban environment and access to nature, creating a focal gathering point for residents and visitors alike.

Source: City of Wilmington

E.2 - Types of Green Connections



Multi-use Paths & Bike Lanes Principles

- Include a physical separation between motor vehicle traffic and multi-use paths; improve use pedestrian street crossings.
- Design these facilities for bicycle riding over long distances in a comfortable setting.
- Locate bike lanes adjacent to motor vehicle or parking lanes on the roadway. Use buffers to separate cyclist from traveling cars. Bike lanes should be accompanied by sidewalks.
- Use bicycle-automobile shared-lane arrows, also known as sharrows, in low automobile traffic areas to indicate bicycle traffic may also sharrow the lane with vehicular traffic.



Greenways, Trails, Alleys & Riverwalks Principles

- Where appropriate, dedicated these facilities for bicycle and pedestrian travel.
- Locate these facilities away from busy automobile traffic.
- Create strategic connections between areas.
- Include alternative pathway types, such as boardwalks, park trails, pedestrian alleys, and others.
- Include these facilities as linear parks for recreation and low-intensity transportation.



Main Streets & Pedestrian Priority Streetscapes Principles

- Focus on walkable areas of the urban environment that are used for both transportation and recreation.
- Provide amenities such as frequent crosswalks and signals, traffic calming street design, alternative paving materials, on-street parking, street trees, enhanced streetscape elements, buildings that face the sidewalk, and limited driveways along the street.
- Connect walkable destinations and mixed-use centers.
- Provide adequate bike parking.

Bold Vision: Greenway along Abandoned Railway (Downtown)



Source (All Images): City of Wilmington

The city of Wilmington will lease the abandoned rail corridor running through downtown's Northside and Brooklyn Arts District neighborhoods. The path will be used for a pedestrian and bicycle pathway connecting residential areas to Cape Fear Community College and the Cape Fear River. The corridor may also be used to accommodate passenger train service to Raleigh and other cities in the future.

E.3 - Types of Open Spaces



Protected Natural Areas Principles

- Maintain large areas undisturbed by human settlement.
- Include meaningful open spaces.
- May include walking/biking trails and waterway access points
- Maintain national reputation for scenic and natural characteristics found in the Lower Cape Fear Region.



Community Parks & Facilities Principles

- Prioritize formal parks with active and passive components, including athletic facilities, walking trails, and a variety of areas for various uses.
- Include schoolyards and other large outdoor recreation areas.
- Provide parking lots for access, and prioritize cycling and walking connections.
- Locate facilities within and near neighborhoods.



Plazas & Pocket Parks Principles

- Dedicate smaller portions of land for recreation and open space.
- Include small playgrounds, seating areas, courtyards, and plazas, as appropriate.
- Utilize green areas (covered with grass and trees), hardscape (paving materials), or a mix of both.
- Prioritize these open spaces in dense areas.
- Ensure visibility from the street and surrounding buildings to ensure safety and reduce crime.

Bold Vision: More Signature Parks & Open Spaces



Source (All Other Images): City of Wilmington



Source: Laurence Simon \ CC BY 2.0 \ creativecommons.org

The city of Wilmington has acquired 6.3 acres of land in northern downtown for a new waterfront park. This urban green space will be a regional destination and anchor a vibrant mixed-use center. The park is scheduled to be complete by 2020 and will be much like Discovery Green in Houston, TX (shown above).

CREATE WILMINGTON COMPREHENSIVE PLAN

Contributors

Comprehensive Plan Steering Committee

The steering committee was supported by staff from the City of Wilmington Planning, Development, and Transportation department, with assistance from every department within the city.

The Wilmington City Council appointed a 15-member citizen steering committee to assist in the public input process, provide guidance and leadership, and to represent the voice of the citizens in the overall process.

The members of the steering committee are:

- Robert Rosenberg, Chair
- Elizabeth Hines
- Randy Reeves
- Howard Capps, Vice-chair
- J. Clark Hipp
- Jennifer Rigby
- Carlos Braxton
- Paul Lawler
- Frank Smith
- Kemp Burdette
- Bonnie Nelson
- Kevin Smith
- Deb Hays
- Linda Pearce
- Tom Pollard

City Council

Mayor Bill Saffo
Mayor Pro-Tem Margaret Haynes
Neil Anderson
Paul Lawler
Kevin O'Grady
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Charlie Rivenbark
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