



CREATE WILMINGTON COMPREHENSIVE PLAN Policies

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Growth Strategies Report

ADOPTED 3/1/2016

CITY OF
WILMINGTON
NORTH CAROLINA



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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.

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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.

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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.

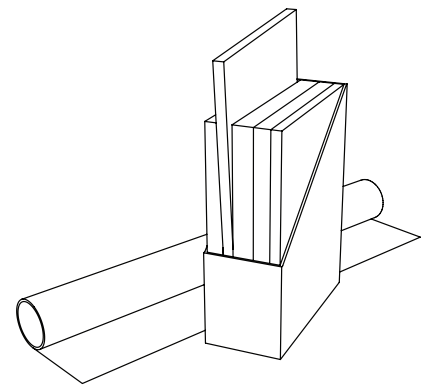
Electronic readers click [here](#) to view or download this document.

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.



Cross-reference Type
Reference

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 Wilmington and Cape Fear Community College, as well as the public school system, state ports, and utility providers will help everyone flourish.

Topics Covered:

- Leadership and 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; the future will include a significant level of infill and redevelopment. Envisioning suitable infill and redevelopment and optimizing existing development will be critical to the 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 the built environment should enhance the character of the 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 Wilmington's future. Natural resources are a major factor in attracting residents and visitors to the area; balancing accessibility and protection of these resources will be a challenge. How interactions with the natural habitat, from parks, water, and open spaces, to locally-grown agriculture, to protecting water quality to solid waste disposal are managed 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 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

Policies

The *Create Wilmington Comprehensive Plan* sets the general direction for future growth and redevelopment across the city for the next 25 years. The plan serves as a policy guide for decisions regarding land use, development, and capital improvements. The plan will be used by city officials when making decisions about how the city will grow. The cumulative impact of these decisions will not be realized today, but by future generations.

The plan does not change the current zoning of any property or the current zoning regulations; however, development proposals, rezoning request, and code amendments will all be assessed to determine their consistency with the plan Policies and Growth Strategies Maps. The plan will help identify and recommend improvements to the city's physical resources such as streets, parks, sidewalks, and public facilities and provide specific guidance for design standards. The plan also provides the foundation for the modernization of the city's land development regulations.

The plan should be flexible and respond to changing conditions. Ideally the entire plan should be reviewed and updated every five to ten years to ensure that current trends, changing demographics, and ongoing development are all taken in to account and the plan adjusted as needed. The ongoing adjustment of the plan's implementation, or action items, should ensure the plan remains effective and adaptable to constantly changing conditions.

The purpose of the policies chapter is to demonstrate the city's preferred policies, practices, and priorities surrounding physical development, quality of life, and livability of the city. These policies are intended to encourage the following:

- Increasing the city's livability through improved quality of life features
- Promoting the responsible growth of the city's population through redevelopment, infill, and appropriate new development and annexation
- Acting as a partner with those who strive for the same goals of building a healthy, vibrant, world-class city
- Encouraging capital investments in the city
- Minimizing the regions sprawl, traffic congestion, and environmental impacts
- Creating and retaining jobs
- Broadening and diversifying the city's tax base

The City Council has adopted these policies as part of the greater Comprehensive Plan box set with the recognition that certain provisions may be applicable to only certain parts of town, certain aspects of city building, or certain quality of life elements. The intent of these policies is to guide and complement the work of all city departments and actions of the City Council as well as to serve as a guide to the city's development partners, including private sector developers, economic development agencies, utility providers, schools, and other agencies.



List of Contributors

Page 198

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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1

Development and City Building

- 1.1 Current and Future Land Uses
- 1.2 City-wide Growth
- 1.3 Land Use and Transportation
- 1.4 Compatibility
- 1.5 Mixed-use Development
- 1.6 Commercial Districts, Corridors, and Nodes
- 1.7 Neighborhood Conservation, Infill, and Redevelopment
- 1.8 Institutional Land Uses
- 1.9 Retail Land Uses
- 1.10 Industrial Development
- 1.11 Infill and Redevelopment

Wilmington College - circa 1960

Aerial image (opposite) of the new Wilmington College campus shortly after its dedication on November 19, 1961. Wilmington College officially became the University of North Carolina Wilmington in 1968-69.

Source: UNCW Digital Archives



"The smallest patch of green to arrest the monotony of asphalt and concrete is as important to the value of real estate as streets, sewers, and convenient shopping."

— James Felt

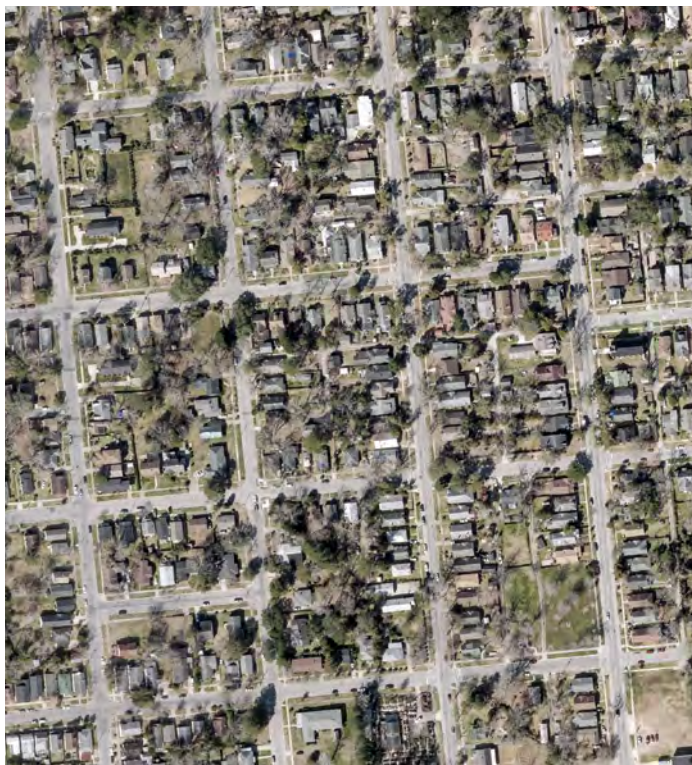
Introduction

1 Development and the built environment shape
2 Wilmington's form and function and provide a
3 framework for making infrastructure-related decisions,
4 including transportation, utilities, community
5 facilities, parks and open space, and environmental
6 protection. This chapter of the comprehensive plan
7 is the foundation upon which all other chapters are
8 built; it contains maps and policies to guide growth,
9 development, and redevelopment into a more compact,
10 efficient, and urban pattern over the next 25 years. Also
11 included in this chapter are a summary of current land
use and zoning regulations, future growth projections,
analysis of Wilmington's existing capacity to support
development and redevelopment, and other elements.
Additional land use analysis is provided in the Growth
Factors Report.

Wilmington's pre-1945 development pattern exhibits
a tight street grid, limited separation of uses, small
lot development, and significantly less emphasis on
automobiles. Wilmington's post-1945 development
pattern is dominated by low-density residential uses
segregated from commercial and office uses, and a
major focus on the automobile. These development

patterns are so distinct that the 1945 Corporate Limits
designation is often used to differentiate between
development regulations.

The post-1945 development pattern covers a majority
of the city. Like other cities across the country,
development following World War II was significantly
different from older development patterns. A growing
economy, ready availability of personal vehicles,
federal policies friendly towards single-family home
ownership, an expanding state and federal highway
system, and an abundance of vacant land, encouraged
development and investment away from downtown
and the close-in suburbs. Between 1940 and 2010, the
city's population increased three times in size; the city's
land area increased by six times in the same timeframe.
The University of North Carolina Wilmington opened
in 1947 (as Wilmington College) and broke ground at
its present location in 1961, helping to grow the area
around the campus. Interstate 40 was extended to
Wilmington in 1990, connecting the city to a national
network, bringing more growth and development to
the area.



Pre-1945 Development Pattern

Source: City of Wilmington



Post-1945 Development Pattern

Source: City of Wilmington



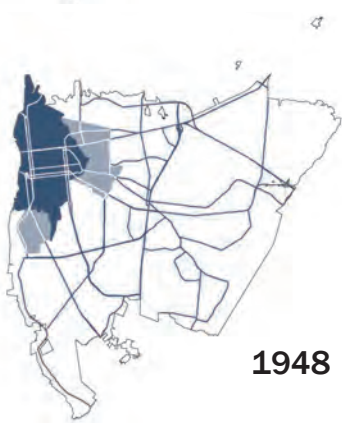
1848



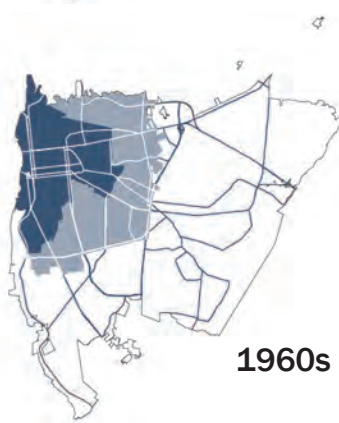
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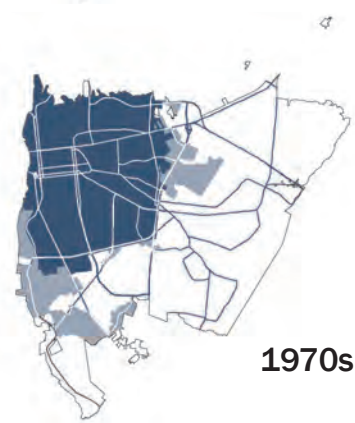
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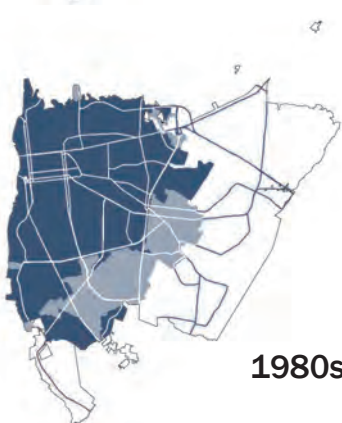
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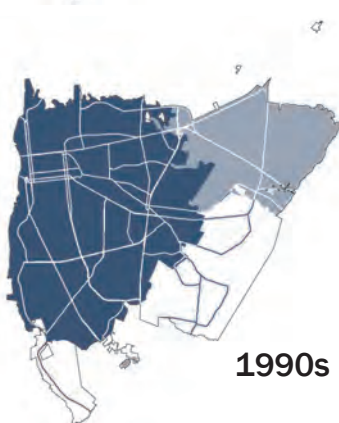
1960s



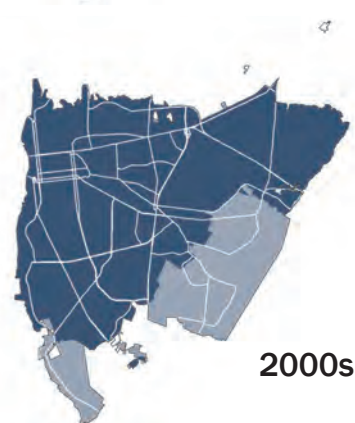
1970s



1980s



1990s



2000s

Annexation and Jurisdictional Boundaries

At the time of the first survey of Wilmington in 1769, Wilmington was approximately 140 acres, centered around the intersection of Market and Front streets. Since then, the city has expanded its jurisdictional boundaries many times through annexation. The vast majority of the city's land expansion occurred after 1945, with the city limits growing by more than 350% between 1945 and 1979 and by more than 117% between 1980 and 2002. Wilmington today encompasses 33,857 acres, or 52.90 square miles, including all of the land and water within the city limits. This is similar to the total area of Asheville, Cary, Fort Myers, Florida, and Buffalo, New York.

Source: City of Wilmington



2010s

Wilmington currently has a population density of 2,013 persons per square mile. For comparison, the land area of San Francisco is 46 square miles with a population density of nearly 18,000 persons per square mile, the peninsula of Charleston has a land area of eight square miles and a population density of 4,330 persons per square mile, and Cary has a land area of 55 square miles and a population density of 2,340 persons per square mile.

Unlike many other North Carolina cities, Wilmington does not have extraterritorial jurisdiction, and the changes to the state's annexation laws in 2012 mean that the ability of the city to annex significant new land is effectively eliminated. Based on the Cape Fear Public Utility Authority's extension of water and sewer infrastructure and the availability of vacant land, it is likely that future population growth outside of the city limits will occur mainly along the US Highway 421 Corridor and the northeastern portion of unincorporated New Hanover County. To manage new growth and development and avoid sprawl, it is critical that the city, New Hanover County, and the utility authority work together on decisions of where, how, and when to extend utility infrastructure.

This plan is based on the desire for a more compact and walkable development pattern with residential, retail, services, and jobs located more closely together. The land available for greenfield development in New Hanover County is largely outside of the city limits; however, there is ample opportunity for infill and redevelopment within the city limits, where existing infrastructure is already in place.

Existing Land Use and Zoning

The largest user of land in the city is low-density single-family residential, making up 39% of the city's total parcel land area.



Growth Factors Report

4.1

4.2

Population Density

City	Land Area (sq. miles)	Population Density (per sq. mile)
Cary	55	2,340
Charleston (peninsula)	8	4,330
San Francisco	46	18,000
Wilmington	53	2,013

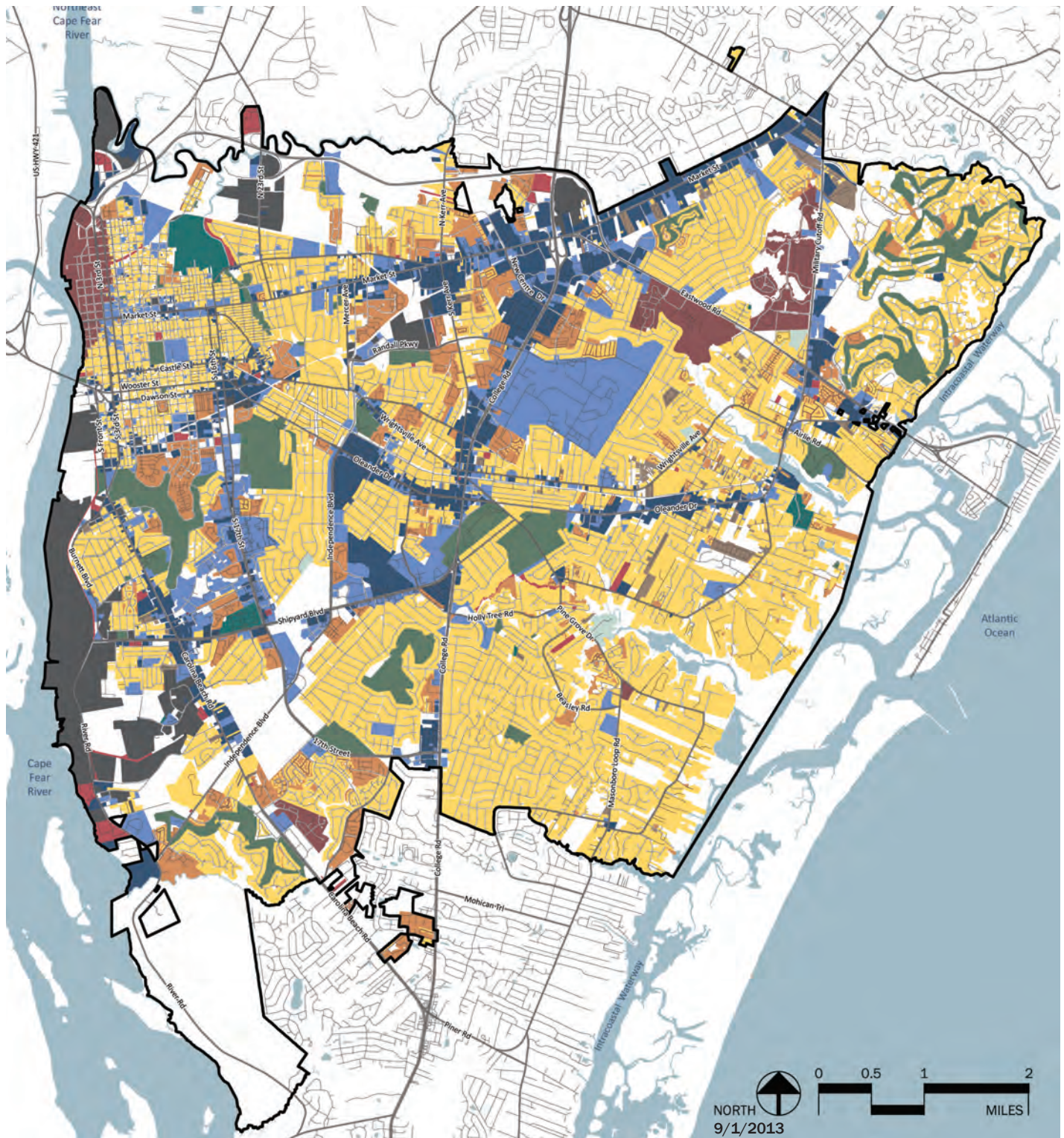
Extraterritorial Jurisdiction (ETJ)

The North Carolina General Assembly grants cities the authority to exercise extraterritorial jurisdiction (ETJ) – the ability to plan and regulate development immediately adjacent to its corporate boundaries. The purpose of this authority is to ensure that new urban growth is compatible and meshes well with the existing city. Wilmington's ability to extend its ETJ was abolished in 1972, after New Hanover County began zoning the unincorporated parts of the county.

Current Land Use

Current Land Use	Total Acreage*	Percentage of Total Parcel Area (citywide)
Single-family	11,130	39%
Vacant	5,959	20.9%
Office and Institutional	2,694	9.4%
Commercial	2,148	7.5%
Multi-family	1,969	6.9%
Parks and Recreation	1,714	6%
Industrial	1,377	4.8%
Mixed-use	726	2.5%
Mobile Home Park	268	0.9%
Utilities	260	0.9%
Cemetery	228	0.8%
Agriculture	70	0.2%

*These calculations are based on the total area of parcels within the city limits; water bodies and rights-of-way are not included in these calculations.



Current Land Use

This map illustrates the current land uses within the city. The predominant land use is low-density single-family residential, which is represented by the yellow areas on the map.



Growth Factors Report

4.1

	Single family		Parks and Golf Courses
	Multifamily		Industrial
	Mobile Home		Cemetery
	Commercial		Utilities
	Office and Institutional		Agriculture
	Mixed-use		Vacant

Future Development

Desired development patterns for Wilmington's future are shown on the Growth Strategies Maps, which provide the land use foundation for this plan. Unlike a traditional, parcel-specific future land use map, which does not thoroughly consider land use within the greater context, the Growth Strategies Maps capture infill and redevelopment trends, urban design preferences, tie land use preferences to transportation, and consider areas of the city with similar characteristics. These maps are intended to help achieve several purposes:

- To illustrate the distribution and intensity of changes in land use and development patterns over the lifespan of this plan;
- To help achieve the desired objectives of increased predictability and transparency in development decisions;
- To focus on urban form, achieving the community's desired future vision for Wilmington; and
- To create a logical framework for future zoning and development, and a compatible approach with New Hanover County, especially along the fringes of the city.

The Growth Strategies Maps are part of the plan, and carry the same weight as the policies themselves. The maps use identified geographic areas to express public policy on land uses across the city. The strategies associated with the maps were identified through the public input process and complemented by technical analysis and land development factors. The boundaries, while not firmly tied to parcel lines, are intended to be flexible, allowing for the consideration of broader objectives over a narrow focus on individual sites. For additional guidance on how to use and interpret the Growth Strategies Maps and the policies related to them, please refer to the Growth Strategies Maps portion of this plan.



Box Set Cross Reference

Growth Strategies Report and Maps

What Citizens Said

- Additional parks needed
- Traffic and congestion should be improved
- Large amphitheater/multi-use facility on riverfront needed
- Major improvements to public transportation are needed – better routes, increase choice ridership
- Efficient, interconnected, and dense development patterns are needed to help improve traffic issues
- Denser development patterns will improve transit services
- Redevelop northern downtown
- Like/keep greenspaces
- Increased density in some places is appropriate
- Improve drainage, no flooding
- Protect the character of single-family neighborhoods
- More redevelopment needed; abandoned sites and buildings are a problem
- Focus on reuse and redevelopment
- Historic districts and historic buildings are an asset to Wilmington
- Encourage smart growth – make communities walkable to encourage less traffic congestion and impacts on roads, new homes in clusters
- Improvements to Land Development Code needed
- Housing affordability is a major factor in choosing a place to live

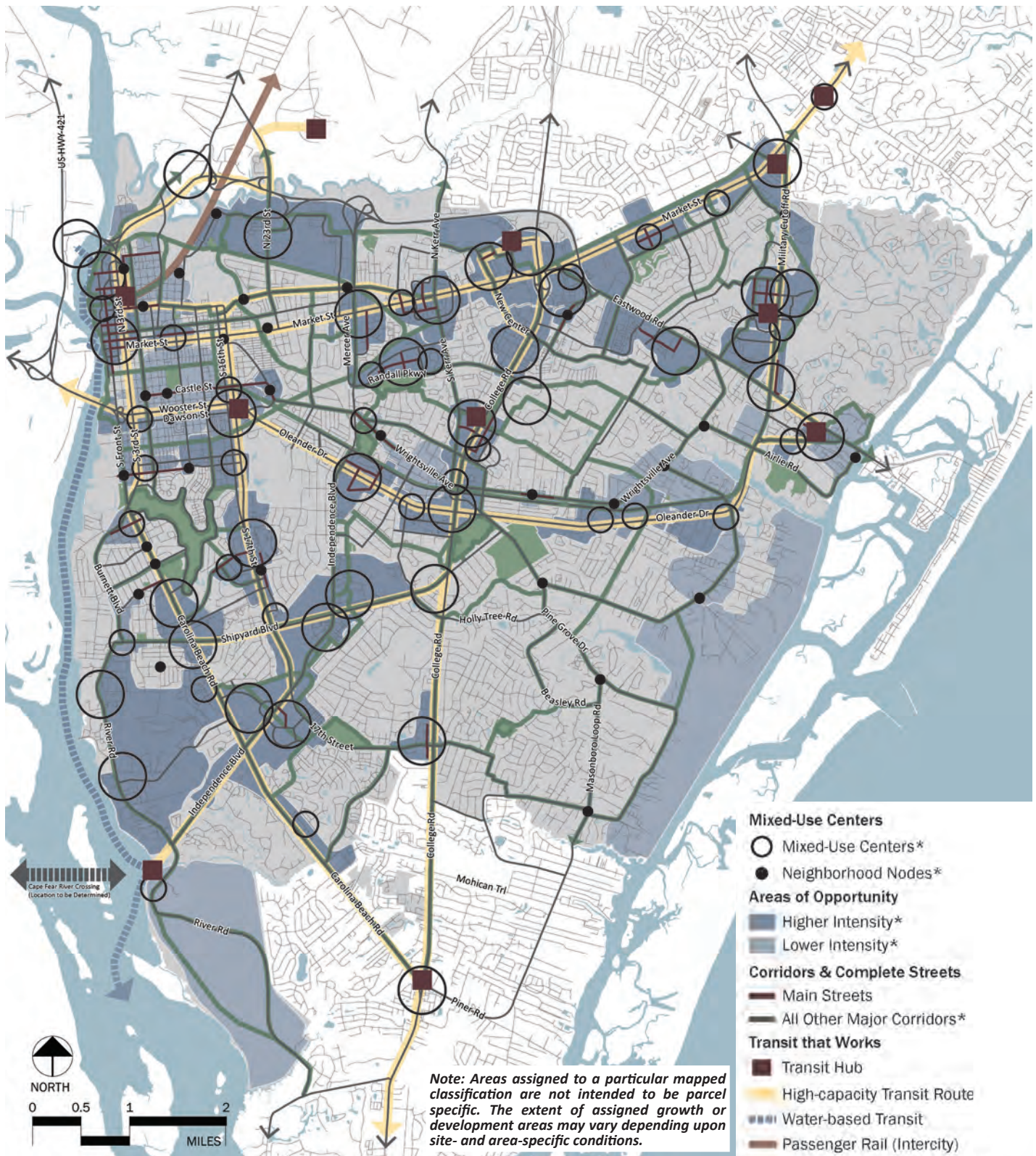
About “What the Citizens Said” Boxes

The Comprehensive Plan was developed with thorough public engagement and citizen input. Various means of obtaining the community's desires for future growth were used for to create these policies. Consult the Foundations Report for more information on these efforts and their results.



Box Set Cross Reference

Foundations Report



Land Development Issues and Themes

Wilmington's location on the coast, temperate year-round climate, revitalizing downtown, and high quality of life will continue to make Wilmington an attractive place to live. By 2040, Wilmington is expected to grow by nearly 60,000 people; the three-county region is expected to grow by more than 300,000 people. With very limited options for the city to grow outward, the city must now focus on infill, redevelopment, and growing inward and upward.

The past 60 years of suburban growth patterns, coupled with global economic, energy, and climate issues, have created a cumulative challenge of interrelated land use issues that Wilmington will need to address over the next 25 years. Wilmington's current Land Development Code is primarily based on outdated zoning theory and trends; the basis of the code is the city's early 1980s land use regulations. These

regulations reflect the explosive suburban growth patterns experienced across the country, and not a city poised for major redevelopment. Wilmington was a very different city in the 1980s, with lots of room to grow outward, city-run water and sewer services, and a regular annexation schedule. Wilmington today is primarily built out, with no internal control over water and sewer services, and very limited annexation options. The reliance of the current code on separation of uses forces inefficient development patterns and a heavy reliance on individual vehicle trips. This, in turn, impedes mobility, especially for those who cannot or do not drive, and increases air pollution, traffic, and commute times. The use of zoning districts with highly specific land uses has fallen out of sync with desired development patterns and Wilmington's modern development needs.

Principles for Development Regulation

The City of Wilmington and New Hanover County will soon begin the process of updating or replacing their respective development regulations. Here are some key principles providing guidance to those two efforts.

1. Reinforce and codify the principles expressed in this plan and help implement the priorities identified by the community.
2. Shift focus from separation of uses to more form-based principles, supporting a mix of uses, integrated pedestrian and bicycle amenities, and recreation and open spaces.
3. Reinforce the urban form and encourage placemaking and flexibility to suit different contexts. Foster development that enhances quality of life, minimizes traffic impacts, and creates safe, attractive, inclusive development for all citizens.
4. Consider the aesthetics of both public and private developments and the larger community. Elements such as landscaping, location of parking and services, building design, and public spaces should be maximized to enhance the built environment.
5. Foster a diversity of housing options for people of all incomes and at all stages of life.
6. Integrate transportation systems to lessen dependence on individual vehicle trips, reduce the need for expansive amounts of surface parking lots, enhance options for choice riders of the transit system, and facilitate mobility for people of all ages and abilities. Employ land development regulations and technical standards to balance pedestrian and bicycle transportation with automobile transportation.
7. Relieve development pressures on outlying rural areas and protect coastal resources by prioritizing compact, urban development within the city. Use development regulations and coordinate with other agencies to limit very low-density, sprawling development patterns. Develop regulations with a focus on balancing the built and natural environments.
8. Employ land development regulations to maximize efficient use of services and infrastructure, resulting in cost savings to citizens.

Citizen priorities identified during the comprehensive planning process include the ability to walk and bike safely from residential areas to commercial areas, reduced traffic congestion, high-quality development, increased housing options, and the creation of unique places (placemaking). The Land Development Code should be re-envisioned as a placemaking tool that helps create and maximize these priorities. The city's Technical Standards and Specifications Manual, the design and construction companion to the Land Development Code, should be reconsidered concurrently with amendments to the code to help reinforce the principles for development regulation, which are listed on the preceding page.



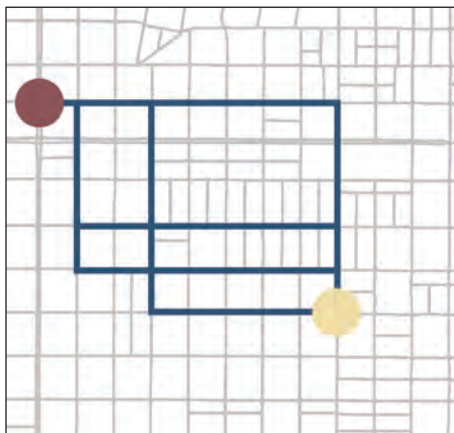
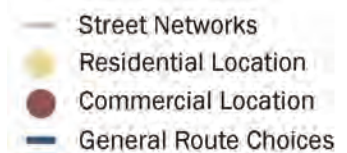
Getting Around

The ability to walk and bike safely from residential areas to commercial areas is a top priority for Wilmingtonians.

Source: NACTO.org

Street Systems, Separated Uses, and Traffic Implications

The amount of routes available for travel and the degree to which uses are separated from one another can have direct implications for traffic congestion, walkability and the creation of great places.



Connected Grid System

Separated uses as part of a cohesive, walkable street network allow a range of travel options for both pedestrians and motorists. Traffic congestion is unusual along these streets. The network allows separate uses to be part of a multi-use area, because they are well-connected to one another.



Expanded Grid System

Expanded grids include large blocks that are connected. This system provides mode choice; however, it can be uncomfortable for pedestrians and bicyclists due to grid interruptions, long walking distances and large automobile corridors. Land uses are usually kept separate, not directly accessible to one another as part of a multi-use area.



Disconnected "Pods"

This type of separated zoning and street network forces inefficient development patterns and a heavy reliance on individual vehicle trips. It also impedes mobility, pedestrian safety and opportunities to achieve a higher return on investment often associated with mixed-use environments. Walking from place to place is nearly impossible.

Evaluating Zoning Proposals and Consistency with the Comprehensive Plan



The Growth Strategies Maps are drawn from the policies and assumptions contained in the Comprehensive Plan and a technical analysis of urban form. Based on these principles and analysis, the maps show appropriate levels of intensity within each part of town. While the Growth Strategies Maps will influence future zoning, existing land uses are not affected, nor is the right of property owners to use the land for its purpose as currently zoned. The maps are supplemented with the companion Growth Strategies Report.

The designation of an area to a specific category on the Growth Strategies Maps does not mean that a particular zoning classification is recommended. A range of densities and intensities applies within each category, and the use of different zoning districts within each category should reinforce this range.

The Growth Strategies Maps include general recommendations for each designated area, including levels of change in density, intensity, and/or land use, transportation coordination, and urban form compatibility, but not specific zoning classifications.



Box Set Cross Reference

Growth Strategies Report and Maps

The categories employed in the Growth Strategies Maps should not be interpreted to support or preclude developments without consideration of the policies and intent of the Comprehensive Plan. Site considerations relating to topography, soils, conservation resources, or hydrology are also important in establishing the specific use and intensity of a particular parcel.

Similarly, the presence or absence of adequate streets, schools, parks, and other community facilities should be considered before a development is approved that would otherwise be in conformance with the Growth Strategies Maps. Determination of the consistency of a proposed use or zone with the Comprehensive Plan should include consideration of the following questions:

- 1 Is the proposal consistent with the themes and policies contained in the Comprehensive Plan?
- 2 Is the form and function of the proposed development appropriate for the category designated on the Growth Strategies Maps?
- 3 Will community facilities, parks, and other infrastructure be available at the appropriate levels to serve the development as proposed?

Policies

1.1 Current and Future Land Uses

Wilmington's population is growing. This chapter and the Growth Strategies Maps build upon the city's existing land use patterns and provide a generalized guide for development, redevelopment, and conservation decisions. The maps included in this plan are generalized depictions of levels of change and intensity over the next 25 years; they recommend a range of suitable urban forms, patterns, and developments within the context of character areas. The Growth Strategies Maps are different from the city's zoning maps, which are parcel-specific and establish requirements for setbacks, land use, height, parking, and other attributes.

1.1.1

The Growth Strategies Maps should be used in conjunction with the Comprehensive Plan policies to evaluate zoning consistency, urban form, and code changes.



Related Policies

2.1.1

1.1.2

All conditions proposed as part of a land use decision should be consistent with the Comprehensive Plan, including the Growth Strategies Maps.



Related Policies

8.3.4



Key Planning Theme

**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.

1.2 Citywide Growth

Wilmington has expanded and grown dramatically over the past 50 years, based largely on an auto-dependent pattern of segregated land uses. Due to rising infrastructure and energy costs, diminishing land resources, and various environmental impacts, Wilmington needs to be committed to efficient growth patterns that support a sustainable city. As there are very few large tracts of vacant land left in Wilmington, the city will increasingly experience infill and redevelopment, which demands different considerations than past greenfield development patterns, regulations, and land uses. Wilmington's citywide growth policies guide infill and redevelopment and promote a more compact development pattern, walkable neighborhoods, and transit-accessible corridors. Growth policies also promote wise use of land, such as increased connectivity, lower vehicle miles traveled, and improved air quality. Citywide growth policies also support placemaking opportunities, especially as corridors, centers, and neighborhoods undergo redevelopment.



Related Policies

9.0

1.2.1

Development should create places, streets, and spaces that are visually attractive, safe, accessible, functional, inclusive, have their own distinct identities, and maintain or improve desired character.



Related Policies

9.2.1

9.6.3

8.3.4

1.2.2

Development should occur in a compact pattern that reinforces the efficient provision of public services and utilities, improves the performance of the transportation network, preserves open space, and reduces negative impacts of low-intensity and non-contiguous development patterns.



Related Policies

5.5.4

8.1.17

1.3 Land Use and Transportation

1.2.3

Large-scale development should include provisions for parks, community facilities, and other amenities to help meet the demands created by the development.



Related Policies

8.2.3

1.2.4

Development and infrastructure investments should promote healthy communities and active lifestyles by providing enhanced bicycle and pedestrian circulation, access, and safety.



Related Policies

2.6.12

1.2.5

The city should encourage providers of infrastructure services, such as schools, utilities, transportation, parks, and others, to support efficient growth and development, especially in areas of the city and unincorporated county where services are already in place.



Related Policies

8.1.18



Growth Factors Report

2.8

1.2.6

Cluster development should be encouraged, where appropriate, to achieve open space preservation or creation, especially in those parts of the city with special environmental concerns, less urban development patterns, or flooding concerns.



Related Policies

6.2.3 6.5.1

Outside of the Greater Downtown, the majority of Wilmington's population lives, works, and plays within an auto-dependent land use framework. It is no longer practical or appropriate to make land use decisions that are not coordinated with transportation decisions. To reduce motor vehicle miles traveled and to improve air quality, Wilmington must coordinate land use and transportation policies and decisions, focusing on reducing motor vehicle trips and encouraging more pedestrian, bicycle, and transit-friendly communities. Such communities should be within and adjacent to mixed-use centers and major road corridors (or accessible to them by sidewalks, trails, or transit). Growth should be directed to areas with available development capacity based on these attributes.



Related Policies

2.1

1.3.1

Transportation decisions, strategies, and investments should be coordinated with and support the city's land use goals.

1.3.2

The design and scale of transportation facilities should be compatible with planned land uses. Consideration should be given to the desired character of the area, as outlined in the plan, including the Growth Strategies Maps.

1.3.3

Development should provide pedestrian and vehicular connections between and within individual development sites to provide alternative means of access along corridors.



Related Policies

2.4



Obsolete Development Pattern

This typical suburban development pattern is problematic for a number of reasons. The lack of interconnectivity between compatible land uses limits walkability and adds traffic to already-congested major thoroughfares.



Coordinated Development Pattern

The use of secondary streets allows two separate uses to resemble a complete, mixed-use neighborhood. Walking is possible and traffic is not forced onto the thoroughfare. "Cut-through" traffic can be avoided with good design and a more complete network citywide.

1.3.4

Mixed-use development that provides a range of services within walking distance of integrated residential development should be promoted as a way to help reduce motor vehicle trips. Developments that reduce reliance on single-occupancy motor vehicles should be supported.



Related Policies

9.6.2 6.4.1 9.3.1

1.3.5

Transportation facilities, services, and investments should be targeted to promote and accommodate anticipated population growth in mixed-use centers, commercial corridors, and neighborhoods.



Related Policies

5.1.1

1.3.6

Transit-oriented and transit-ready development should be promoted around existing and planned transit stations and stops.



Related Policies

2.5.9

1.3.7

Sites within proximity to planned or proposed major transit lines should be developed with a relatively high residential density and a mix of uses to take full advantage of and support the city's and the region's investment in transit services.



Related Policies

2.5.9

1.3.8

Pedestrian-friendly and transit-supportive development patterns should be promoted along multimodal corridors and areas identified for intensive transit investments.

1.3.9

Development near major road intersections or interchanges should cluster to create a node or nodes at the intersection, preferably including vertical and horizontal mix of uses.

1.3.10

Development should be built upon an interconnected system, potentially including frontage and backage roads, to provide visibility from the major street while limiting driveway connections to the major street.

1.4 Compatibility

During the past decade, Wilmington has seen an increase in infill and redevelopment, as major undeveloped tracts have largely been built-out. Autumn Hall, Mayfaire, Riverlights, and Barclay West have consumed or will soon be consuming the last remaining substantial tracts of undeveloped land within the city. Smaller-scale infill and redevelopment at all scales are rapidly becoming

the city's major development focus. Appropriate development densities and intensities must be accommodated within the context of nearly 70 years of suburban growth patterns. There are many areas where new higher-intensity nodes will abut areas expected to see less change. The following policies are meant to supplement the Growth Strategies Maps to help ensure that future infill and

redevelopment does not negatively affect desired character in or near these locations. These policies are also intended to ensure that appropriate transitions are provided between developments and land uses of varying intensities.



Related Policies

9

1.4.1

Quality design and site planning should be promoted so that new development infill and redevelopment is implemented with minimal adverse impacts on desired character of the existing built environment.



Related Policies

9.5.4

9.6.3

1.4.2

New commercial development should be properly managed through the use of development regulations, the development review process, and other tools. The intent is to avoid unreasonable impacts, such as traffic, parking, litter, shadow, light, view obstruction, odor, noise, and/or vibration impacts on nearby residential areas.



Related Policies

2.4.4

9.1.3

1.4.3

When new institutional uses are permitted in residential neighborhoods, they should be designed and operated in a way that is sensitive to neighborhood issues, maintains quality of life, and enhances the services provided to the neighborhood.

Adaptive Reuse of Historic Buildings

Maintaining the character of the existing built environment is important when considering infill development in historic neighborhoods.

Source: City of Wilmington

1.4.4

Low- to medium-density residential areas and/or low-intensity mixed-use developments should serve as transitions between lower-density neighborhoods and more intensive commercial, residential, and mixed-use areas. Where appropriate transitions are not possible within a development site, infill and redevelopment adjacent to areas of lower intensities should provide effective physical buffers to avoid adverse impacts.



Related Policies

9.5.5

9.6



Reduce Infill Development Impacts with Buffers and Transitions

The relationship of sites to one another is a critical factor in city building. The impacts of infill development and increases in density can be minimized with appropriate site design techniques. This is not limited to distance alone or thick vegetation areas, which often prevent neighborhood cohesion and walkability. Excessive distances between residential and commercial land uses have unintended consequences, such as traffic congestion.

Numerous solutions are available to achieve walkable, mixed-use centers and corridors without negatively impacting adjacent lower density areas, these are just a few:

- A Upper-floor Setback**
Design the building so that upper floors are “stepped back” from adjacent residential areas.



- B Greenways (Off-Street Multi-use Pathways)**
Land dedicated to greenway corridors can be used as active, linear open space between transitional densities.



- C Vegetated Buffer**
The use of heavy plantings can “screen” one site from another. Pedestrian connections can be used in some locations.



- D Parking in the Back**
Following a good urban design principle of bringing new buildings up the street can also move it away from adjacent lower density areas.



- E Alleys**
Alleys place a service corridor between two sites backing against one another. This should serve as many sites as possible, including commercial.



- F Transitional Zoning**
Zoning should strive to use moderate-density areas between high- and low-density areas. This is not limited to land use, but should also consider transitions in urban form.



1.5 Mixed-use Development

The resurgence of mixed-use downtowns, employment centers, and retail centers is a national trend that is clearly evident in Wilmington in areas such as Mayfaire, Autumn Hall, and Greater Downtown. Mixed-use centers bring together medium- to high-density residential and nonresidential uses within a walkable, bicycle-friendly, and/or transit-accessible development framework. Uses can be mixed vertically (within buildings) and horizontally (between buildings). The diversity of uses and activities in mixed-use centers make them vibrant destinations that attract attention due to the level of activity. A mixed-use center should provide a full service environment and diverse uses, including housing at a variety of price points, offices, retail, service, entertainment, civic, and open space, for residents, employees, and visitors.



Related Policies

5.1

9.4



Suburban Mixed-use

North Hills in Raleigh is a nationally-recognized model mixed-use redevelopment of a suburban location. There are vertical mixed-use buildings and a horizontal mix of uses in this successful pedestrian-friendly commercial center.

Source: James Willamore \ North Hills, Raleigh \ CC BY-SA 2.0 \ creativecommons.org

1.5.1

Mixed-use centers should be made up of a diverse mix of uses and integrated design that avoids segregation of uses. Centers should have well-planned public spaces that bring people together and provide opportunities for active living and social interactions.



Related Policies

9.6.2

1.5.2

Integration and mix of uses should be provided within all “Areas of Opportunity” and “Mixed-use Centers” identified in the Growth Strategies Maps. These developments may vary in scale and intensity, but should all contribute to the city’s livability, manage future growth, and provide bike, pedestrian, and transit-accessible destinations.

1.5.3

The development of mixed-use activity centers with multimodal transportation connections should be promoted. Convenient and accessible residential and employment should be a part of mixed-use centers.



Related Policies

5.1

1.5.4

The dedication of land for the construction of transit stations and stops within mixed-use centers should be coordinated as part of the development review and zoning process.



Related Policies

2.4.4

1.6 Commercial Districts, Corridors, and Nodes

As Wilmington annexed and grew to envelop the land between the Cape Fear River and the Intracoastal Waterway, existing residential and commercial development was taken into the city. At the same time, underutilized commercial areas and maturing neighborhoods were often left behind for new developments. The revitalization of Wilmington's commercial districts and corridors is of great importance to the city due to their influence on an area's redevelopment potential, adjacent and nearby property values, and gateway aesthetics. Wilmington's commercial districts and corridors hold great promise and the potential to capture future residential and commercial demand and for creating viable transit options.



Box Set Cross Reference

Growth Strategies Maps



Place-based Corporate Architecture is Possible

Major commercial tenants have been able to construct their buildings to a higher development standard in other cities. These buildings achieve an important urban design goals - putting the parking in the back.

Source (All Images):
City of Wilmington

1.6.1

Pedestrian-oriented centers of commercial development should be encouraged at key locations along major corridors, such as the "Main Streets" identified on the Growth Strategies Maps. Auto-oriented strip commercial development should be discouraged.



Related Policies

9.2.3

9.4.1

2.6.1

1.6.2

The redevelopment of aging and high-vacancy shopping centers to multi-story, mixed-use developments with housing, public spaces, and recreation facilities should be encouraged.

1.6.3

To minimize traffic impacts and preserve the long-term viability of residential uses and major streets, new single-family lots with direct motor vehicle access to arterial streets, as shown on the Functional Classification Map, should be discouraged.

1.6.4

Within commercial districts, development should be designed at a height, mass, scale, and form that is appropriate and provides a suitable transition to the surrounding areas.



Related Policies

9.5.1

1.6.5

The location of high-impact commercial uses that generate excessive late night activity and noise should not negatively impact the quality of life in nearby residential areas.



Related Policies

9.5

1.6.6

Commercial infill and redevelopment should be bicycle- and pedestrian-friendly.

Shopping Center “Retrofit” - UNCW and Kmart as Mixed-use Center

The area immediately south of UNCW campus on the east side of College Road represents a unique redevelopment opportunity. This collection of outdated commercial sites could be converted to a vibrant academic mixed-use center, serving as a walkable destination for college students and the surrounding neighborhoods. Due to the commercial corridor location, this concept would have minimal negative impact on single-family areas.



Existing Condition

Source: Google, 2015

- A** Southern extension of UNCW campus with parking deck and pedestrian walkways.
- B** Regional stormwater pond as functional open space; complete intersection improvements as campus gateway.
- C** Street network extended south into mixed use development area.
- D** UNCW Center for Innovation and Entrepreneurship made accessible from main campus.
- E** Apartments made walkable to mixed-use center by pedestrian paths and street connections.
- F** Mixed-use center “main street” directly accessed from College Road.
- G** Parking garage “lined” with mixed-use buildings makes higher densities possible.



Urban Redevelopment Concept for UNCW and S. College Road Area as a Mixed-use Center

Source: City of Wilmington

1.7 Neighborhood Conservation and Revitalization

Wilmington's neighborhoods are among its greatest assets. Even the most stable neighborhoods will experience some degree of change, as no part of the city can be frozen in time; how, where, and when this change happens is critical. Historic residential neighborhoods can be maintained and conserved, and reinvestment in aging inner-ring suburbs can be encouraged to foster housing choices, both in terms of house type and price points. More recent residential developments can be adapted for greater connectivity and infilled with additional compatible housing, including accessory dwelling units. Large-scale infill and redevelopment can embrace traditional neighborhood

development patterns with walkable, connected residential development.

The city currently has two primary tools available for preserving neighborhood character, first, the use of local historic districts or overlay districts and second, the neighborhood conservation overlay district. While there are several locally-designated historic districts, there have been no neighborhood conservation overlay districts created in the city. Both tools can provide for zoning-based standards to protect desired neighborhood character.

1.7.1

Growth should be accommodated in the city through mixed-use neighborhoods with a variety of housing types and price points.



Related Policies

3.1.1

10.4.3

9.6.1

1.7.2

Revitalization and stabilization of neighborhoods at risk should be facilitated through grants, loans, housing rehabilitation efforts, commercial investment programs, capital improvements, public-private partnerships, and other actions.



Related Policies

5.2.4

1.7.3

The need to increase housing supply, neighborhood commerce, and to mature as a city should be balanced with the need to protect desired neighborhood character, preserve historic resources, and protect the natural environment.



Related Policies

3.2.4

9.5.3

11.2.5



Suburban, Single-family Home



Historic, Single-family Home

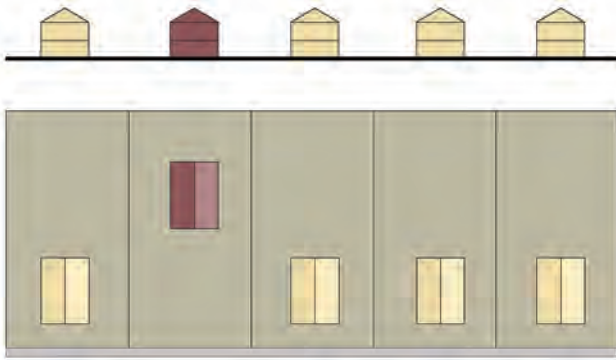
Source (All Images): City of Wilmington

Infill Development Principles for Neighborhoods

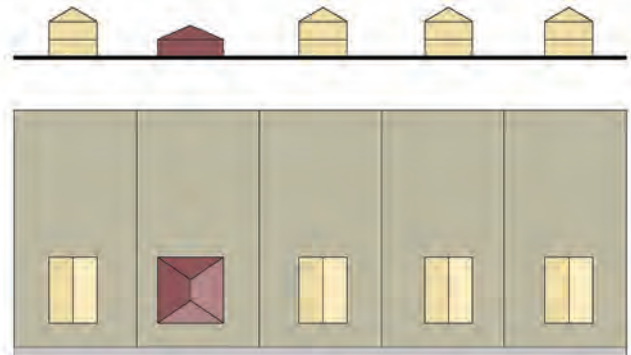
Developing new residential or mixed-use buildings within established neighborhoods will require special attention to urban form and stylistic factors. Elements of building design such as massing, scale, orientation, placement of doors and windows, and many others can determine if and how a structure fits with its neighbors. Strategies for infill development in commercial and mixed-use districts must also involve context-sensitive site design. These diagrammatic illustrations show a few ways new structures can be designed to fit.

■ Good
■ Poor

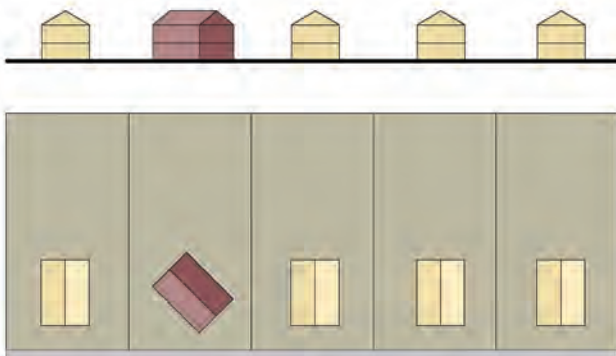
A Respect the Rhythm of the Street – Front Setback Line



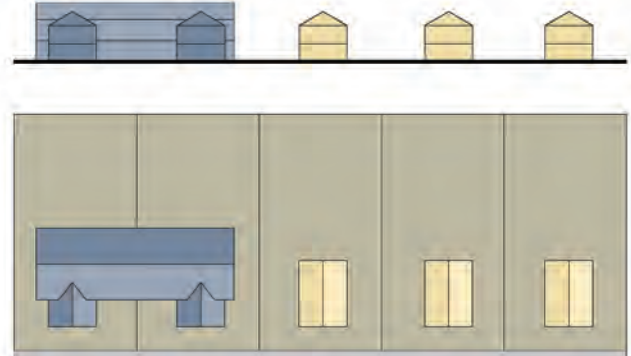
B Respect the Rhythm of the Street – Building Height



C Respect the Rhythm of the Street – Building Orientation



D Respect the Rhythm of the Street – Frontage Massing



E Use Graceful Building Types - Accessory Dwelling Units



F Use a Liner Building to Complete the Street Frontage



1.7.4

Unique character areas that have become marked by vacant or abandoned buildings, underutilized older buildings, and low occupancy rates should be priority areas for rehabilitation and adaptive reuse.



Related Policies

6.9.2

10.1.2

1.7.5

Historic and unique neighborhoods with an abundance of desired character should be protected and conserved through the use of zoning, reinvestment, and other tools.



Related Policies

11.1.2

9.6.3

1.7.6

The creation of flag lots, lots typically located at the rear of another lot with little or no street frontage and accessed by a driveway or narrow strip of land, should be discouraged.

1.7.7

Large, oversized blocks in neighborhoods and subdivisions should be avoided in favor of smaller, walkable blocks and enhanced networks that create better connections and help facilitate walking and reduce the need to drive.

1.7.8

Usable open space that preserves natural landscapes and high-quality ecological resources should be encouraged in new residential development.



Related Policies

11.1.1

6.2.2

1.7.9

Infill development should enhance or improve the existing physical development pattern of the area. The development of lots that have been historically difficult to infill or redevelop should be facilitated.

1.7.10

Infill sites within existing neighborhoods should be developed consistently with the design elements of nearby structures and in a manner that enhances or improves the character of the area.



Related Policies

9.6.3

1.7.11

Student-oriented housing, including dormitories and rent-by-the-room multi-bedroom apartments, should be located near the community college and university campus, with access to transit and bike and pedestrian facilities connected to the campuses.



Related Policies

8.4.8

1.7.12

Accessory housing should be encouraged in association with single-family homes, in new development and also in existing neighborhoods.



Key Planning Theme

Changing Places, Revitalizing Spaces

The built environment encompasses places and spaces created or modified by people, including buildings, parks, land use patterns, and transportation systems.

1.8 Institutional Land Uses

Wilmington is fortunate to have a university, a major community college, a regional hospital system, and a growing technology and research sector. Since these public and private institutions and industries often have large campus settings, their future growth and expansion impacts neighborhoods, commercial corridors, and the transportation network. Due to their contribution to the city's economic and social fabric, these types of uses are encouraged, while recognizing the need for proactive and collaborative planning and communication.

1.8.1

Adequate land for offices, laboratories, business incubators, and flexible space should be planned for to accommodate Wilmington's growing technology industries, particularly in the "Areas of Opportunity" identified on the Growth Strategies Maps.



Related Policies

5.7.2

1.8.2

Enhanced partnerships among the city's large institutions should be encouraged to coordinate future growth and development of these institutions in a manner compatible with surrounding development character and neighborhoods.



Growth Factors Report

2



Key Planning Theme

Changing Places, Revitalizing Spaces

The built environment encompasses places and spaces created or modified by people, including buildings, parks, land use patterns, and transportation systems.

1.9 Retail Land Uses

Wilmington's retail uses are located primarily along major road corridors. The downtown core is a major existing mixed-use center. There are also several smaller mixed-use centers within the Greater Downtown that provide local retail goods and services and local restaurants. The Mayfaire area provides an expanding base of national retail goods and services and local and national restaurants. Built in 1956, Hanover Center is the oldest major retail shopping center in Wilmington and one of the oldest in North Carolina. Today, Hanover Center offers a mix of local, regional, and national retailers. Built in 1979, Independence Mall, just across Oleander Drive from Hanover Center, is the only enclosed mall within 60 miles of Wilmington and features national department stores to anchor smaller national and local retailers. The remainder of Wilmington's commercial shopping is located along major streets, and consists primarily of disconnected, one-story, strip commercial centers. Wilmington's policies on retail development focus on strengthening current mixed-use centers, encouraging connectivity within and between existing retail developments, and encouraging infill and redevelopment in mixed-use and commercial centers that is pedestrian-friendly and less reliant on motor vehicle access.

1.9.1

Major retail development should be discouraged in viable industrial areas, both to protect the city's industrial land stock and to avoid an oversupply of retail development, resulting in abandonment of retail spaces elsewhere.

1.9.2

Regional retail development, including "big box" and regional malls, should be located where access is available from at least two major roadways, with access via both roadways; internal connections should be supported.

1.9.3

Retail development should be encouraged in "Mixed-use Centers" as identified on the Growth Strategies Maps and should be discouraged in linear strip patterns.



Related Policies

5.5.4 9.6

1.10 Industrial Development

The city's primary industrial area is along the Cape Fear River, in and around the Port of Wilmington, with some additional land area along N. 23rd Street. Industrial zoning currently makes up about 10% of the city's total land area; however, industrial uses make up just 5% of the city's total land area. That means that half of the city's industrial-zoned land is not actually in industrial use. Historically, Wilmington had industrial development concentrated along the riverfront and rail corridor. In the past 20 years, however, land along the riverfront within the Downtown Core has transitioned to mixed-uses, with no industrially-zoned land remaining in the Downtown Core. Land along the city's rail corridor has also started to transition to other uses, including multifamily housing and commercial development.



Port of Wilmington

The city's largest industrial footprint is found in the areas in and around the state port.

Source: City of Wilmington

1.10.1

Viable industrial, flex, and warehouse space should be protected to help foster competitive opportunities to locate jobs and industry near the state port, airport, and Interstate 40 and other major roadways.



Related Policies

5.5

1.10.2

The rezoning and redevelopment of industrial land for non-industrial uses should be supported when the location can no longer viably support industrial activities or is located such that industrial use is not consistent with the Growth Strategies Maps. The reuse and redevelopment of non-viable, outdated industrial buildings for new uses should be supported.



Related Policies

6.9.2

1.10.3

Adverse impacts created by industrial uses should be mitigated through a variety of measures, including industrial zoning classifications that reflect the varying impacts of different kinds of industrial uses.

1.10.4

Transportation facilities should be designed to accommodate the needs of industrial uses. Particular attention should be paid to designing and designating truck routes to minimize conflicts between freight and other modes, and freight and neighborhoods.



Related Policies

2.9.3

1.11 Infill and Redevelopment

Efficient use and reuse of land within the existing city limits will be critical as the population continues to increase. A growing population, limited ability to expand outward through annexation, and physical barriers to development to the east and west, all make growing inward and upward more important than ever. Under the current land development regulations, including the Land Development Code and the Technical Standards and Specifications Manual, there are many unintentional barriers to infill and redevelopment. Most of the vacant land remaining in the city consists of scattered lots of two acres or less. There are very few remaining greenfield development sites in Wilmington. Successful infill and redevelopment

in Wilmington means creating complete, well-functioning neighborhoods with densities that support increased transportation choices, a wider variety of convenience services and amenities, adding vitality to older neighborhoods, and creating additional social, recreational, and entertainment opportunities.

In the long view, the public and private sectors benefit from promoting infill and redevelopment instead of sprawling development patterns. Accommodating growth in Wilmington, where there is infrastructure already in place, reduces growth pressures on outlying areas, provides for efficient use of land and services, and can help maintain and improve quality of life in all areas.

1.11.1

Land development regulations, technical standards, and development review procedures should facilitate and encourage infill and redevelopment.

1.11.2

In collaboration with regional partners, the city and other local governments in the region should focus on reducing sprawling development patterns and encouraging infill and redevelopment that helps achieve the goals of a healthy, diverse, and efficient community.



Related Policies

2.2.7

5.8.2

1.11.3

Areas well-suited for infill and redevelopment, should be redeveloped in a way that maintains or enhances the desired character of the surrounding area, improves access to goods, services, and amenities, increases housing options, and improves the overall quality of life in the vicinity.



Infill Housing Development

Source: City of Wilmington



Mixed Use Development

Source: Coldwell Banker - Wilmington

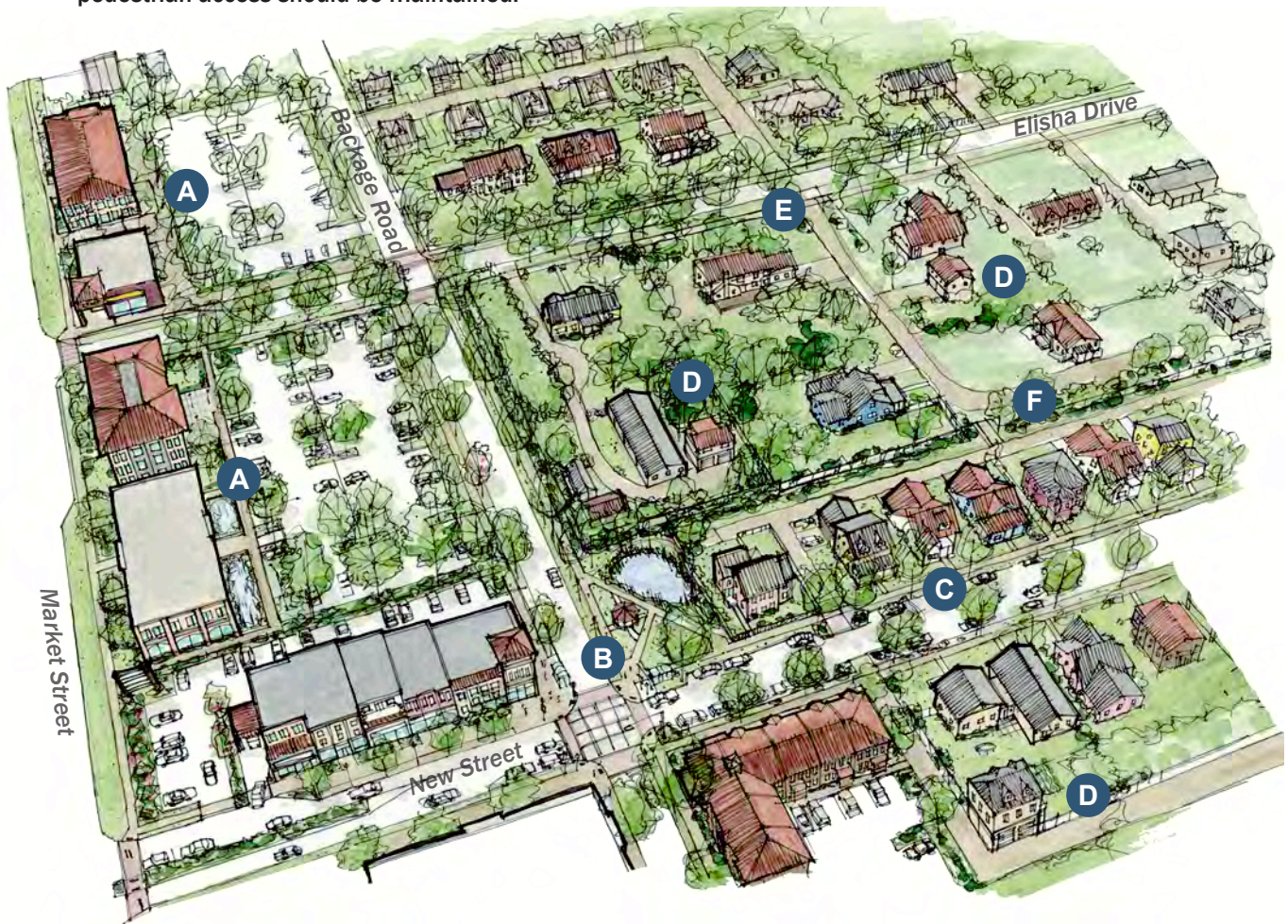
Infill Development - Outer Market Street

The Market Street Corridor Study (2010) calls for the development of various urban nodes along the busy corridor. In this example, commercial development has been placed close to Market Street and away from existing neighborhoods. The transition from Market Street into these neighborhoods is accomplished with moderate density building types, screening, alleys and other methods. This is all made possible by a “backage road” that allows traffic to operate off of Market Street to access housing and businesses.

- A** Commercial and mixed-use buildings front onto Market Street and parking lots in the rear. Both sides of the building should have pedestrian access.
- B** Intersection of new “backage road” and new main entry street form a prominent focal point. Bus shelters and a pocket park are noteworthy.
- C** New residential development (neotraditional style with rear alleys instead of front driveways).
- D** Accessory dwelling unit (backyard or garage apartment, also called a “granny flat”).
- E** Manufactured homes are upgraded to larger houses over time.
- F** Vegetative screening, fences and alleys can be used to buffer new and existing development, but pedestrian access should be maintained.



Existing Condition
Source: Google, 2015



Urban Redevelopment Concept for Sites at Market Street and Elisha Drive

Source: City of Wilmington



2 Transportation

- 2.1 Land Use and Transportation Coordination
- 2.2 Street Systems
- 2.3 Transportation Demand Management
- 2.4 Street Design, Complete Streets, and Age-friendly Design
- 2.5 Public Transportation
- 2.6 Bicycle and Pedestrian Circulation
- 2.7 Parking Management
- 2.8 Transportation Safety, Traffic Calming, and Neighborhood Traffic
- 2.9 Commercial Transport

Cape Fear Memorial Bridge

Built in 1969, the steel vertical-lift bridge spans the Cape Fear River between Brunswick County and New Hanover County. It is currently the tallest bridge in North Carolina and features a lift span that can be raised 135 feet (image opposite).

Source: City of Wilmington

“A developed country is not a place where the poor have cars. It’s where the rich use public transportation.”

— Enrique Penalosa



Introduction

Developing a balanced, efficient, multimodal transportation network that minimizes impacts to the natural environment, supports job growth, and reinforces the livability of Wilmington's neighborhoods is of critical importance. Wilmington will need to balance the needs of all modes of transportation, including pedestrians, transit, bicycles, and automobiles. This chapter is a guide for future development of the city's corridors, streets, highways, rails, bicycle, and pedestrian networks. The comprehensive transportation network, developed in a sustainable pattern, supports development and desired urban form, minimizes motor vehicle miles traveled, and reduces air pollution and greenhouse gas emissions. The city and the region should use transportation assets to strategically support projects that help to implement policies and goals and recognize the interplay between infrastructure investments and land use.

The Current Transportation Network

Wilmington has an established network of local streets, arterials, and highways. Within Greater Downtown, there is a grid pattern; outside of Greater Downtown, the street network is much more irregular in nature. While some of the roads within the city are maintained by the North Carolina Department of Transportation (NCDOT) or are under private maintenance, the city maintains 408 miles of streets, 370 miles of sidewalks, 23 miles of on-street bike lanes, and 24 miles of greenway and multiuse trails.

It is expected that, as Wilmington's population continues to grow, the city's street system network will become increasingly congested; motor vehicle miles traveled (VMT) and motor vehicle hours traveled (VHT) are both likely to increase with population growth. The city's major corridors already experience significant congestion, especially at peak travel times; without changes to our existing land use patterns and improved coordination between land use and transportation decisions, levels of service on these facilities will continue to decline during the life of this plan. To meet the city's needs into the future, options beyond increasing the capacity of existing streets will need to be developed. These options will need to include increased mobility choices, such as more convenient transit service, safe walking and biking options, and spreading the demand on our roadways beyond peak travel times.

Wilmington is largely built out, and the transportation system is now constrained by both the built and natural environments. These constraints will require making the best use of existing transportation infrastructure and encouraging modes of travel that reduce traffic congestion and deterioration of the network. The older parts of Wilmington's street system were developed before the advent of the automobile and these parts of the city still lend themselves to walkability. Much of the city developed after 1945 lacks a street grid and walkability. A strict separation of uses, with those elements required to meet daily needs divided into "pods" contributes greatly to automobile dependency. Automobile dependency contributes to increased congestion on city streets, increased motor vehicle miles traveled, and increased air pollution. Outside of Greater Downtown, an uncoordinated development pattern has led to disconnected development, traffic congestion, lack of pedestrian safety, and a general absence of clearly defined community identity.



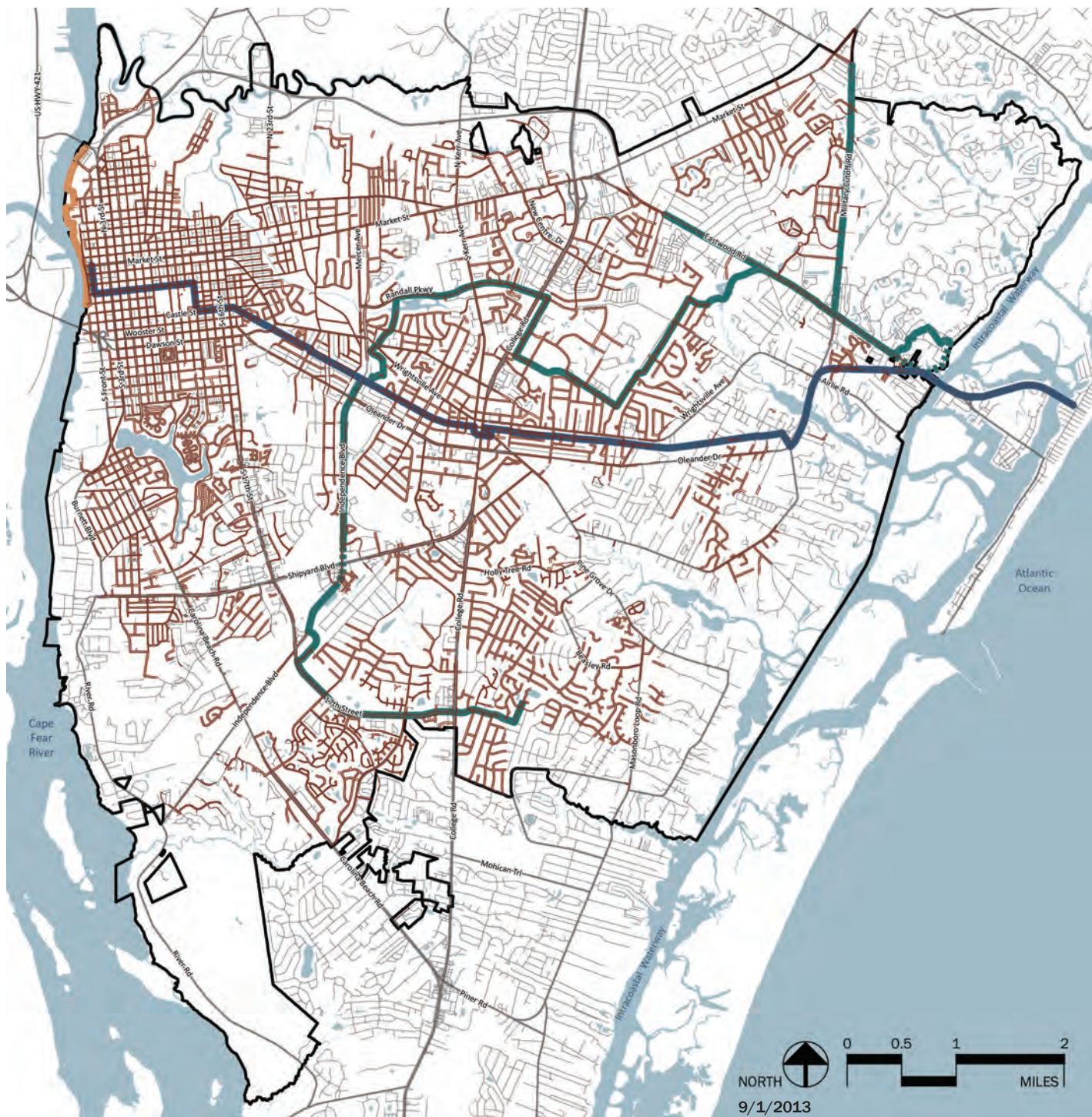
Related Policies

1



Growth Factors Report

7



Transportation Network

The city's transportation network includes all local streets, arterial roads, and highways as well as sidewalks, bike lanes, greenways, and multi-use paths.



Related Resources

p. 47: Functional Roadway Classification Map

- Local Streets
- Arterial Roads/Highways
- Sidewalks
- River-to-Sea Bikeway
- Cross-City Trail
- Riverwalk

Transit-oriented and Transit-ready Development

Better coordination of transportation, transit stop locations, public spaces, development density, and land use will have a great impact on the livability and economic success of Wilmington. High-density mixed-use development patterns should be located around express bus lines, the proposed multimodal transportation center downtown, and future transit stations. Areas of increased density increase transportation options, increase housing options, and have positive environmental impacts. This approach is known as transit-oriented development (TOD); it has been successful in many American cities and should be an important feature of Wilmington's future.

With the transit stop as the focal point, development density and mix of uses are typically highest close to the transit stop and gradually decrease moving away from the stop. Walkability and connectivity are encouraged through the overall design, especially in the centers of such developments, including small block lengths, wide sidewalks, mid-block crossings, buildings lined with retail and other active ground-floor uses, and parking garages. Development will be "transit-ready" as the provision of transit services meets the increase in demand.

Equity

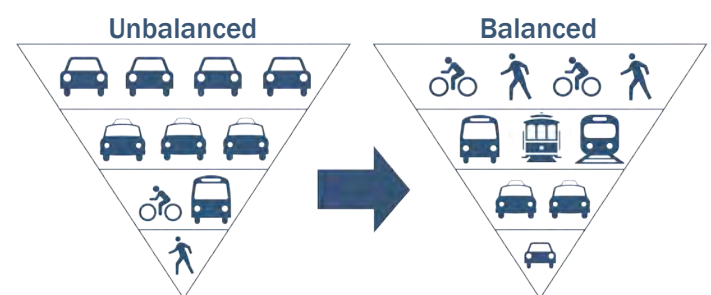
After housing, transportation is the second largest expense for most households. Households lacking transportation options may spend as much as 25% of household income on transportation costs. Housing located closer to employment centers and services such as shopping and restaurants may reduce household transportation costs to as little as 9% of household income.¹

Lower-income households often spend a higher portion of their income on transportation expenses. Low automobile ownership rates and fewer affordable transportation options greatly impact these citizens, limiting them to a smaller radius of travel.² Low-income households tend to have higher levels of transit ridership.

What Citizens Said

- New bike and pedestrian connections are needed
- Improvements to existing bike and pedestrian infrastructure are needed, including wider sidewalks, crosswalk improvements, and adding bike lanes to existing streets
- Lack of non-private automobile transportation options impedes the ability to age in place
- Traffic and congestion need to be improved
- Improvements at specific intersections are needed
- Improve traffic signage
- Use roundabouts at major intersections to improve traffic flow
- Major improvements to public transit are needed, including better routes, improved frequency and reliability, improved bus stops, cleaner buses, improved headways and reliability, and increased choice ridership
- Implement the Market Street road diet
- Keep and protect street trees and the existing tree canopy
- Restore the streetcar line from downtown to Wrightsville Beach
- High-speed passenger rail service is needed
- Efficient, interconnected, and dense development patterns are needed to help improve traffic and transit issues
- Repave roads; better road maintenance needed
- Improve the city's gateways
- Additional river crossing is needed
- Regional north-south and east-west connector roads through the city are needed

Transportation Pyramid



In the balanced pyramid, users that utilize the least amount of space, such as bicyclist and pedestrians, come first. Transit comes next since these modes carry more people than a passenger vehicle.

What is Multimodal Transportation Planning?

Multimodal transportation planning considers various ways of getting around, including walking, cycling, automobile, and public transit, and connections among these modes. In Wilmington, there are several levels of transportation planning happening at various scales and with various objectives. In addition to the city's comprehensive and small-area plans, the following planning activities also occur:

- When site plans are submitted for infill and redevelopment, traffic impact analyses are often required to evaluate traffic impacts and mitigation strategies for a particular development or project.
- The *Metropolitan Transportation Plan* is a fiscally-constrained action plan that identifies specific projects and programs to be implemented within a few years, and includes funding information and a schedule for state-, federal-, and locally-funded transportation projects in the region. This plan includes airport, ferry, bicycle, mass transit, pedestrian, freight/rail, and roadway projects. This plan is required of the Wilmington Metropolitan Planning Organization (WMPO) and must be updated every five years.
- Mode-specific or area-specific transportation plans such as *Walk Wilmington: A Comprehensive Pedestrian Plan*, the *Wilmington/New Hanover County Comprehensive Greenway Plan*, and the *WAVE Short Range Transit Plan* identify ways to improve a particular mode of transportation or specific part of town.
- Corridor plans, undertaken by the city, county, and/or WMPO, identify projects and programs to be implemented along a specific street or roadway.
- The WMPO, in partnership with the city, develops long-range and strategic transportation plans for the region with planning horizons typically around 20 years.
- The *Congestion Management Plan* details the WMPO's traffic congestion management process. This plan reviews the entire transportation network for congestion, how congestion data is collected and evaluated, and what strategies are used by the WMPO to address congestion. Strategies are aimed at reducing congestion while enhancing safety and multimodal mobility region-wide. This plan is required by the Federal Highway Administration.
- The North Carolina Department of Transportation (NCDOT) develops a state transportation improvement program that details which projects will be funded in this area of the state, known as Division 3.



Connecting Public Transit

Facilities that allow for multi-modal connections service pedestrians, bicyclists, transit users and motorist.

Source: Dan Reed \ CC BY-SA 2.0 \ www.creativecommons.com



Planning for Multi-Modal Transportation

Planning and constructing multi-modal, transportation infrastructure promotes greater, regional mobility.

Source: Richard Drdul \ CC BY-SA 4.0 \ www.drdul.com



Box Set Cross Reference

Growth Strategies Report and Maps

Lack of transportation options also affects population groups with limited mobility, including senior citizens, the disabled, and those who are too young to drive. Input collected during the comprehensive planning process revealed that lack of transportation options is a major factor in limiting the ability to age in place. Combined with a lack of school bus ridership, limited safe walking and biking routes to schools are increasing peak hour traffic congestion around schools. While there have been major improvements in recent years to Wilmington's active transportation (bicycle and pedestrian) network, gaps and missing connections still impede citizens from making even short trips without cars. A balanced transportation network and integrated development patterns can increase social equity, making mobility better for all citizens, regardless of income, ability, and age.

Policies in this chapter support the following: the creation of a well-connected, multimodal transportation network, increased densities in appropriate locations, walking as a practical option for short trips, bicycling for both short- and long-distance trips, sustainable transit services, conservation of energy resources, and reduced greenhouse gas emissions and air pollution. All of these factors can contribute to the success of Wilmington's quality of life and local economy. In fact, in a survey conducted during the comprehensive planning process, two-thirds of respondents indicated that investing in schools, transportation choices, and walkable areas is a better way to grow the local economy than traditional approaches of recruiting companies.



Foundations Report

1.6

Key Issues for Transportation

The following factors are key considerations in the development of the policies of this chapter. More background information on these underlying issues and relevant maps can be found in the **Growth Factors Report**.

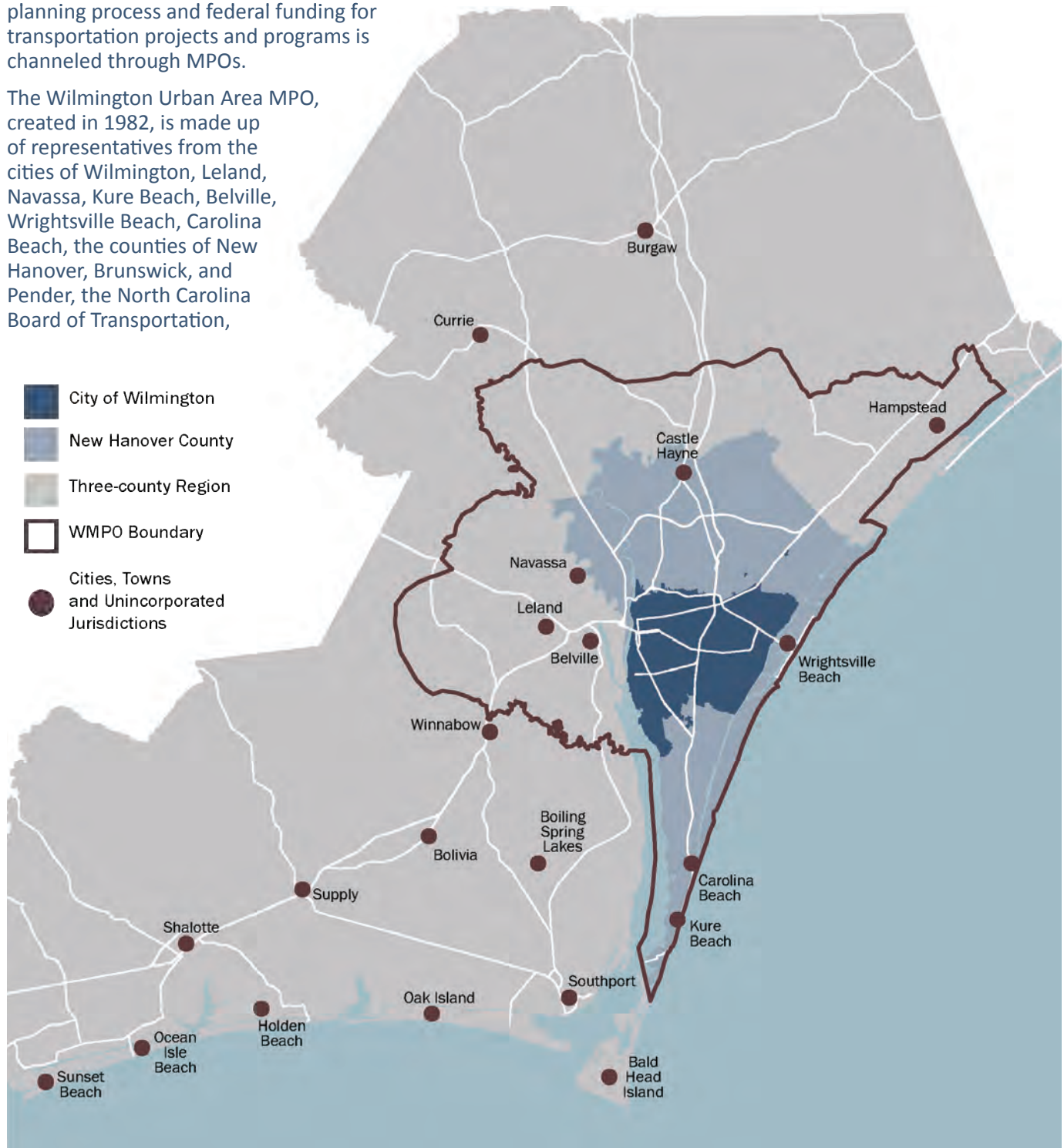
- The development of sprawling and segregated land uses, which lead to high dependency on single-occupancy motor vehicle trips, are no longer an option in Wilmington, as the city is nearly built out and many streets are operating at or above their designed capacity.
- It will be beneficial to better coordinate land use and transportation planning to enable efficient and connected development patterns to improve circulation and mobility. Site plans and traffic impact analyses must be reviewed beyond simply peak vehicle trip generation.
- Road widening to address traffic congestion often does not solve the problem as development moves outward and quickly consumes the added capacity.
- Even with programmed investments, the transportation system is projected to be severely constrained in future years.
- Projected population growth will continue to transform Wilmington and reinforce Wilmington as the center of the region.
- Traffic calming (slowing traffic) will continue to be an issue for many neighborhoods as traffic levels grow on major streets and drivers seek alternative routes using local streets.
- Transportation facility design should reflect the desires of the local community.
- Wilmington currently lacks sufficient facilities that provide transit, bicycle, and pedestrian accessibility and help reduce congestion.
- Continued coordination among partners, including the City of Wilmington, North Carolina Department of Transportation, the Wilmington Urban Area Metropolitan Planning Organization, Wave Transit, and the other cities and counties in our region.
- Safety issues must be addressed along corridors, at intersections, and at locations frequented by cyclists and pedestrians. The design of a street should be coordinated with the placemaking and pedestrian priorities of the city.
- Achieving a balanced transportation system will require greater investment in transit and bicycle and pedestrian infrastructure. Additional infrastructure (e.g., sidewalks, crosswalks, bus shelters, benches, and other amenities) is also needed to transform the transit system from one with only transit-dependent ridership to one that includes choice ridership as well.
- Comprehensive Plan strategies should be considered in the development of the city's capital improvements program (CIP).

What is a Metropolitan Planning Organization (MPO)?

A metropolitan planning organization is a federally-mandated and federally-funded transportation planning and policy-making organization. The 1962 Federal Aid Highway Act requires an MPO for any urbanized area with a population greater than 50,000. These planning agencies were created to ensure that existing and future transportation spending is based on a continuing, cooperative, and comprehensive planning process and federal funding for transportation projects and programs is channeled through MPOs.

The Wilmington Urban Area MPO, created in 1982, is made up of representatives from the cities of Wilmington, Leland, Navassa, Kure Beach, Belville, Wrightsville Beach, Carolina Beach, the counties of New Hanover, Brunswick, and Pender, the North Carolina Board of Transportation,

and the Cape Fear Public Transportation Authority (Wave Transit). The city of Wilmington serves as the lead planning agency, and the WMPO staff is housed within the City of Wilmington Department of Planning, Development, and Transportation. The WMPO currently serves a 494-square mile planning area and a population of over 252,000 people.



Policies

2.1 Land Use and Transportation Coordination

Over the past 70 years, Wilmington has experienced significant population and geographic growth and development. Most of this development came in the form of low-density, suburban-style land uses that have caused traffic volumes on city streets to increase much more rapidly than the rate of population growth. Transportation projects designed exclusively to address automobile congestion, such as building new streets and adding additional lanes to existing streets, are not always effective, long-term solutions to the city's mounting congestion. Roadway investments geared towards easing travel for the single-occupant automobile must be balanced with investments in other modes, such as public transportation ("transit"), carpooling or ride sharing, greenways, bike lanes and paths, and sidewalks. They must also be balanced with investments that make better use of existing infrastructure such as optimizing traffic signal systems and encouraging travel demand management solutions.

Land use patterns have significant impacts on trip generation and travel behavior. Compact, mixed-use, and walkable developments, while not a panacea, help mitigate traffic generation and traffic impacts to the street system. They do this by reducing the need to drive for every trip, shortening travel distances, and making it easier to use transit and make non-motorized trips. Successful mixed-use areas with multimodal

access can thrive with less need for parking, freeing up land and capital for open space, and productive, revenue-producing uses. Land use and transportation decisions must mutually reinforce each other.

For decades, conventional transportation planning and engineering have attempted to maximize vehicle traffic speeds, minimize congestion, and reduce crash rates by focusing exclusively on the automobile. Alternatives to roadway expansion, such as transportation demand management (see 2.3) and multimodal planning, are newer approaches and as such, have fewer long-established tools available. Industry practice has moved towards a "complete streets" approach (see 2.4) and the city has adopted a complete streets policy for city streets. While conventional funding of transportation solutions still supports the automobile over alternative modes, an unprecedented shift in funding allocation for alternative modes is currently underway with more funding considerations being made for bicycle, pedestrian and transit options.



Related Policies

1.3



Box Set Cross Reference

Growth Strategies Report and Maps



Gary Shell Cross City Trail serves as Multi-Use Greenway

Source: City of Wilmington



WAVE Transit Regional Bus Service

Source: WAVE Transit

2.1.1

Transportation planning and development, expansion, and investment in transportation facilities should be coordinated with the Growth Strategies Maps.



Related Policies

1.1.1

2.1.2

Safe and attractive transportation choices among all modes should be encouraged through street patterns that consider multimodal transportation alternatives and access to and circulation between adjacent neighborhoods, parks, and commercial and employment centers.



Related Policies

8.1.3

9.6.6

10.2.2

2.1.3

New roadways and widening of existing roadways should utilize context-sensitive design to minimize impacts on historic buildings, neighborhoods, parks, and sensitive natural areas.



Related Policies

6.2.4

8.1.1

9.1.8

11.2.3

6.3.3

2.1.4

Comprehensive transportation impacts, including parking and impacts on all modes of transportation should be identified and addressed before a development or redevelopment is implemented.



Key Planning Theme

Economic Opportunity

Fostering opportunities for economic growth and development that enhance the concepts of each of the other themes is critical to future prosperity.

Land Use and Transportation Coordination

The role of transportation professionals is evolving and more frequently requires them to understand how transportation investments can be consistent with the principles and practices of land use planning and development. At a minimum, the coordination of land use and transportation requires that those concerned with the well-being of a community (or region, state or nation) assess and evaluate how land use decisions effect the transportation system and can increase viable options for people to access opportunities, goods, services, and other resources to improve the quality of their lives. In turn, the transportation sector should be aware of the effects the existing and future transportation systems may have on land use development demand, choices, and patterns.

Source: U.S. Department of Transportation Federal Highway Administration



Market Street Corridor Study

Master planning efforts that coordinate the design and placement of land uses with major transportation investments is encouraged to continue.

Source: City of Wilmington



High Density Coordination Example

Portland, Oregon effectively uses a modern streetcar system and high-density zoning along its route.

Source: City of Portland; NACTO

2.2 Street Systems

Wilmington is served by a collection of streets with two primary functions: providing mobility for through traffic and providing access to adjacent land uses. Wilmington's street system has been organized according to a "functional classification" framework of interstates, freeways/expressways, arterials, collectors, and local streets. Different types of streets should be used to help design a roadway network that allows mobility for all modes of transportation, recognizing that some streets will provide greater mobility for automobiles, while others will provide greater mobility for bicycles and pedestrians. Transit should appropriately bridge the gap in terms of the hierarchy of the street system and prioritized mobility.

Economic development and population growth since World War II has occurred without adequate coordination between land use and transportation decisions. This has contributed to the evolution of the transportation network at a micro-scale, meeting the needs of one development at a time, resulting in an incremental development pattern and transportation system. This pattern disconnects developments and concentrates traffic congestion at certain points in the system. Challenges to coordinated, large-scale planning for the transportation network leads to the use of major streets to move both intra-city and inter-city (local and regional) traffic. This pattern leaves gaps in the system, relies on a few primary routes, and largely precludes the use of alternate routes when collisions or other congestion occur. For example, a lack of sufficient north-south routes in Wilmington requires "stair-step" movements to get through the city when major congestion occurs on College Road. Alternatively, the existing grid in the Greater Downtown provides for many options for traveling north-south and east-west and it should be preserved; Street closures, intersection closures, one-way streets, and "super streets" can degrade the grid.³ The street grid in the Greater Downtown illustrates the benefits of having vehicular-oriented streets that carry substantial amounts of traffic (e.g. 3rd Street), which allows for the majority of other streets to be preserved for alternative modes of transportation.

2.2.1

Gaps in the street system should be eliminated by providing for network connectivity. The existing grid network should be preserved and extended where feasible to increase overall connectivity.



Related Policies

10.6.1

Case Study: Tysons Corner

The growing area outside of Washington, DC has recognized that a grid system composed of superblocks (A) will no longer meet their needs. Their plan calls for the creation of small blocks that shorten walking distances and provide efficient movement of all transportation modes (B). While Wilmington's street system inside of the 1945 Corporate Limits provides this type of network, the area outside of this boundary does not.



Source: Cityline Partners

2.2.2

New residential, commercial, and mixed-use developments that require construction or extension of roadways should include a multimodal network. The use of cul-de-sacs and dead-end streets should be minimized.



Related Policies

3.2.7

9.3.1

10.5.4

2.2.3

New development should be encouraged to connect to the existing street network through collector streets, which should tie into the existing network at multiple points to improve trip distribution and emergency access. Street stubs for future connections should be encouraged.

2.2.4

Access management strategies should be applied based on the functional characteristics of the roadway, surrounding land uses, and roadway users. Curb cuts along public streets should be minimized. Internal connections between parking lots should be encouraged.



Related Policies

9.3.4

2.2.5

When considering closure of public streets, alleys, and other rights of way, affected city departments and utility providers should consider the integrity of the city's street network, pedestrian and vehicular safety, emergency access, the ability to provide utility services, impacts on health and safety, and the welfare of the community.



Related Policies

8.3.1

2.2.6

Adding lanes to increase traffic capacity should be considered only after the street exceeds an established

threshold of full capacity and all other alternative approaches have been considered. Improvements to the street network should increase vehicle dispersion and circulation.

2.2.7

Ongoing regional transportation planning efforts should be supported to coordinate planning, operations, and funding priorities and to identify existing and future transportation corridors that should be linked across jurisdictional boundaries.



Related Policies

1.11.2

5.8.2

2.2.8

New roadway projects and major reconstruction projects should preserve desirable existing trees where possible, or plant new street trees where necessary. Multi-lane roads should be enhanced with landscaped medians when possible.



Related Policies

6.2.4

9.1.6

6.3

2.2.9

Bridge monitoring, maintenance, and rehabilitation should be coordinated with the North Carolina Department of Transportation and the Federal Highway Administration. Bridge improvements, including provisions for all travel modes, should be considered when roadway investments are being pursued.



Key Planning Theme

Getting Around

Diverse modes of transportation are needed for an inclusive, connected community.

Roadway Functional Classification

Federal guidelines are used to determine the functional classifications of all roadways in the city's network. Their determination is made in concert with the N.C. Department of Transportation and must be reviewed and approved by the Federal Highway Administration. The functional classification map defines the role that each roadway plays in the overall roadway network of the city. Beyond their purpose as a framework for identifying the particular role a roadway plays in moving vehicles through the network, the classifications carry with them expectations about roadway design,

including speed, capacity, and the relationship with existing and future development. Federal legislation uses functional classification in determining eligibility for federal funding and transportation agencies describe roadway performance, benchmarks, and future targets using functional classifications.

Source: U.S. Department of Transportation, *Federal Highway Administration, Highway Functional Classification Concepts, Criteria, and Procedures, 2013*

Roadway Functional Classifications

Examples	Location	Functional Classification	2013 Volume (Vehicles Per Day)
College Road	Between New Centre and College Acres drives	Major Arterial	64,576
Shipyards Boulevard	Between S. 17th Street and Independence Boulevard	Major Arterial	29,456
Oleander Drive	Between 51 st and 52 nd streets	Major Arterial	31,754
Randall Parkway	Between Brailsford Drive and Marlboro Street	Minor Arterial	14,987
23 rd Street	Between Shirley Road and J.R. Kennedy Drive	Minor Arterial	15,657
Pine Grove Drive	Between Brightwood and Greenville Loop roads	Minor Arterial	12,265
Greenfield Street	Between S. 12 th and S. 13 th streets	Major Collector	6,045
Princess Place Drive	Between Montgomery and Evans streets	Major Collector	9,433
George Anderson Drive	Between S. 17th Street and Chippenham Drive	Major Collector	4,679
Northern Boulevard	Between Carolina Beach Road and Washington Street	Local Road	1,327
Audubon Boulevard	Between Peachtree Avenue and Oleander Drive	Local Road	1,668
Colonial Drive	South of Market Street	Local Road	563

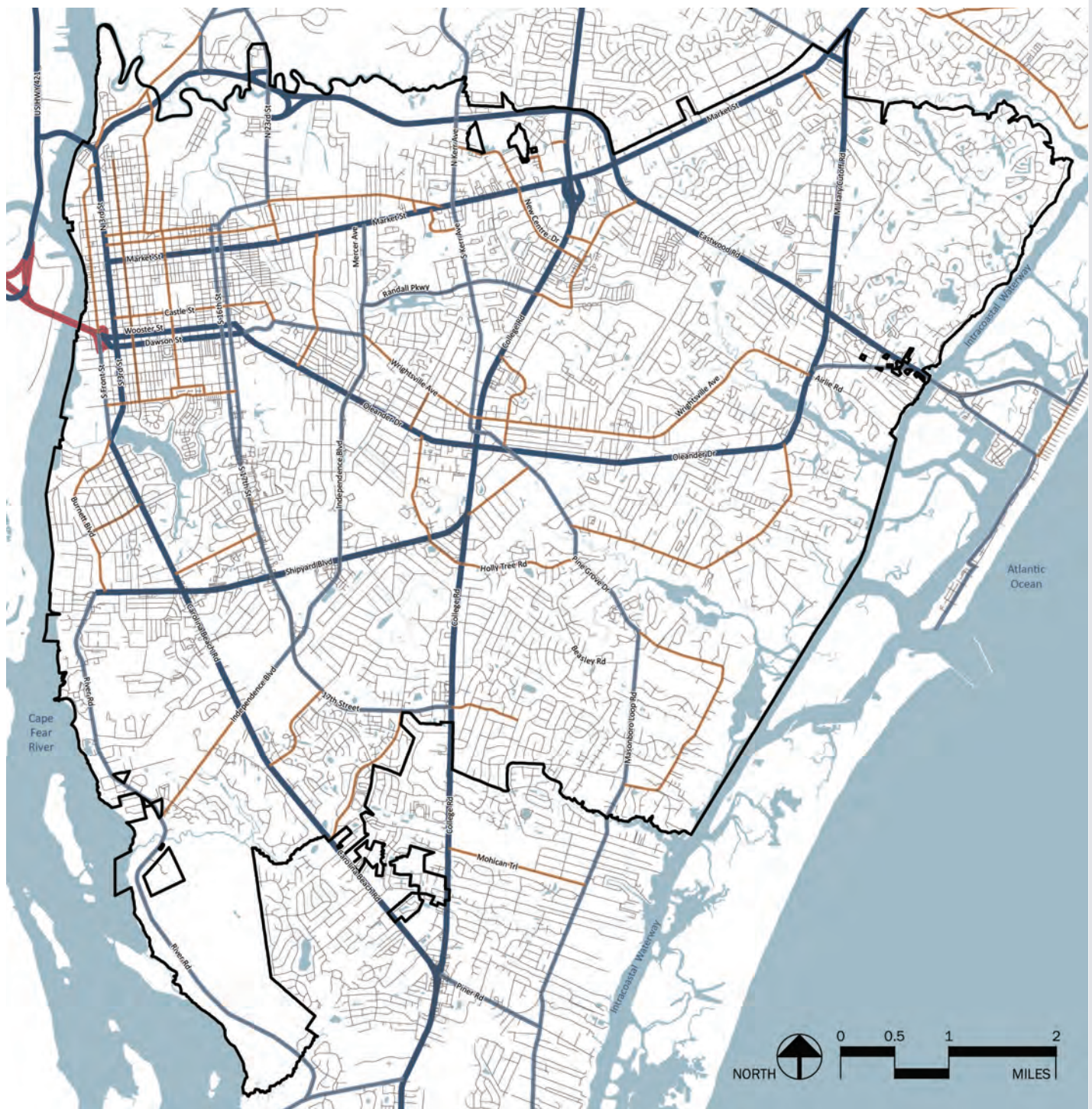
Functional Classification vs. Urban Streets

Many streets predate the advent of the functional classification system, making the system unsuitable for the diversity of land uses and travel characteristics throughout the urban area. While certain types of classifications make streets eligible for highway aid, once aid is given, federal design standards that do not consider local context may be assigned and any variation requires a design exception.

Streets are complex places where functional classification schemes are generally too limiting as a basis for designs capable of achieving social and economic goals for quality of life, mobility, and urban vitality. Standards must be adapted to the urban

environment to make streets a supportive element of a socially and economically thriving public realm. Street design standards should be consistent with citywide goals for safety, economic growth, development, and urban design. Standards should attempt to capture the unique local relationship between the built realm and the surrounding streetscape, encapsulating the varying scales at which motorists, bicyclists, and pedestrians interact with individual corridors as well as the overall street network.

Source: National Association of City Transportation Officials *Urban Street Design Guide*



Functional Classification Map

All streets within the city's transportation network are assigned a functional classification that identifies the role each road plays in moving vehicles through the network.



Growth Factors Report

7.1

- Local Road
- Collector
- Minor Arterial
- Principal Arterial
- Freeway / Expressway

2.3 Transportation Demand Management

In addition to increasing the capacity and levels of service of streets, the city can also adopt strategies and policies aimed at reducing single-occupancy vehicle demand or to redistribute this demand in space and/or in time. This approach is known as transportation demand management. Examples include employer-provided showers and bike parking to encourage employees to bike to work and allowing employees to work non-traditional work hours and/or telecommute so that they are not commuting during peak travel hours.

As with any network, managing demand can be a cost-effective alternative to increasing capacity. A demand management approach has the potential to improve the natural environment, public health, placemaking, and economic development that also extends the life of transportation infrastructure.

2.3.1

Programs that increase vehicle occupancy should be encouraged. Employer-based transportation demand management programs should be supported.



Related Policies

6.4.3

8.1.16

10.2.11

2.3.2

An integrated, multimodal transportation system that offers safe and attractive choices among travel modes should be promoted.



Growth Factors Report

7

2.4 Street Design, Complete Streets, and Age-friendly Design

Most transportation corridors should be more than just roadways for cars. Corridors can be designed and classified to reflect a balance between many modes of transportation and the surrounding land uses. “Complete streets” is the concept that streets are designed to enable safe access and mobility for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

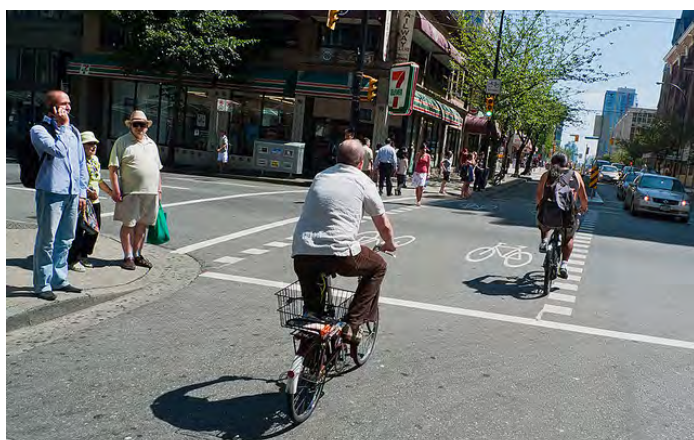
In the past, the city relied on street standards based primarily on the anticipated motor vehicle traffic volume of a given street without significant consideration given to other modes of transportation or adjacent land uses. This volume-oriented approach, while simple and direct, did not allow much design flexibility when creating a new street. Moreover, it often resulted in streets that perform poorly in other respects, such as serving pedestrians and bicyclists and in enhancing the visual appeal and quality of life in the area it serves. Urban form, trees, and buffers should all relate to the modes of transportation they support and the land uses they serve.

The way in which streets relate to the land uses they serve and the role of the pedestrian, bicycle circulation, and transit should be given proper consideration. Including the elements of street character and land development, in addition to capacity and function, broadens the notion of capacity to include the movement of people, not just cars.

A robust, multimodal transportation network improves the quality of life for all citizens, but especially for those who cannot drive, such as the elderly and the young. Strategic increases in development density, along with coordinated transit enhancements, can create a network where even those who have limited mobility to have access to neighborhood amenities. For transit to be age-friendly, it must be available, reliable, affordable, safe, and serve appropriate destinations. The design and location of bus stops are important, and busses and other transit vehicles must be accessible to those with limited mobility. Supplemental paratransit options should be readily available.

For the bicycle and pedestrian network to be age-friendly, the network must be easily accessible and well-connected. Pavement must be smooth, clean, and free of trip hazards. Sidewalks must be clear of obstructions and wide enough to accommodate a wheelchair, with low ramps leading into crosswalks. Ideally, there should be separate paths that accommodate bikes and pedestrians.

For the street network to be age-friendly, streets should have adequate, non-slip, regularly spaced pedestrian crosswalks that allow safe pedestrian crossing. Streets should have well-designed and appropriately placed physical structures, such as medians and traffic islands that help pedestrians cross busier roads. Pedestrian crossing signals must be adequately timed to allow those who walk slower to safely cross the street and drivers must yield to pedestrians.⁴



Two-way Bike Lanes



Complete Street Amenities

Source (All Images): Richard Drdul \ CC BY-SA 4.0 \ www.drdul.com

2.4.1

The majority of the city's streets should be designed as public spaces that are scaled for pedestrians and should be enhanced with appropriate street trees and landscaping.



Related Policies

9.2.6

6.3.3

2.4.2

Complete street design standards that provide mobility for all types of transportation modes and users should be promoted on all streets.



Related Policies

9.4

10.2.7

2.4.3

New roadway projects and major reconstruction projects should provide appropriate and adequate right-of-way for safe and convenient movement and amenities for all users, including bicyclists, pedestrians, transit riders, and motorists.

2.4.4

When reviewing traffic impact analyses for infill and redevelopment, level of service measurements should include all modes of transportation, including bicycles, pedestrians, and transit, in addition to automobile level of service.



Related Policies

1.4.2

1.5.4

2.4.5

Complete street amenities should be designed with all users in mind, with multimodal amenities appropriate for the type of roadway. The use of undivided multi-lane streets should be limited; raised and/or landscaped medians should be used where feasible, to provide safe landings for pedestrians and vehicle travel.

Complete Streets Policies and Elements

Complete streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities.

The North Carolina Board of Transportation adopted a *Complete Streets* policy in 2009. The policy directs the NCDOT to consider and incorporate all modes of transportation when building new projects or making improvements to existing infrastructure. Under this policy, NCDOT collaborates with cities during the planning and design phases of new streets or improvement projects. Together, they will decide how to provide the transportation options needed to serve the community and complement the context of the area.

Wilmington Complete Streets Policy

The city of Wilmington strives to design all transportation projects in a balanced, responsible, and equitable way to accommodate and encourage alternative modes of travel including walking, bicycling, and use of public transportation.

- Adopted by Wilmington City Council, May 2010



Additional Information

NC Department of Transportation
Complete Streets



Before



After

Complete Streets Retrofit

A complete street design can include striping and signage, including gateway treatments, to improve pedestrian safety.

Source (All Images): nacto.org



Box Set Cross Reference

Growth Strategies Maps



Additional Information

Boston Complete Streets



Key Planning Theme

Getting Around

Diverse modes of transportation are needed for an inclusive, connected community.

2.5 Public Transportation

Public transportation in Wilmington and New Hanover County is provided by the Cape Fear Public Transportation Authority, operating as Wave Transit. Wave Transit currently operates 16 fixed routes, a rubber-tire trolley on a fixed route through the Downtown Core, a car/vanpool program in partnership with the Wilmington Metropolitan Planning Organization, and “dial-a-ride” and paratransit services. Additionally, Wave Transit operates the “Seahawk Shuttle” around the university’s campus, in partnership with University of North Carolina Wilmington, to provide transit to students. Currently, Wave bus routes are operating on a coverage model and have hour-long headways (the average time it takes between busses moving along the same route).

While Wave operates at a regional scale, the city must do what it can to facilitate improved transit services within the city. Additional transit services are required to enhance mobility options, reduce total motor vehicle miles traveled, and encourage high-density transit-oriented development around planned transit station areas. Transit connections to major destinations such as downtown, New Hanover Regional Medical Center, Mayfaire, University of North Carolina Wilmington, and area beaches, need to be made. Enhanced local bus service will be needed to deliver riders to other modes, including, for example, future rail stations.

Coverage and Convenience Transit Models

In the simplest terms, a “coverage model” of public transportation routes provides services to the largest possible geographic area, despite the time it takes to cover the area. A “convenience model,” on the other hand, is structured to provide the most convenient routes in terms of time and ease of use, and may not cover as much geographic area.



Growth Factors Report

7.10

Bus rapid transit systems are less expensive than light rail or streetcar systems, at least initially, because they are developed on existing streets and require only moderate improvements to the infrastructure. They utilize modern, low-floor bus vehicles that provide many of the amenities that attract commuters who have a choice as to how they travel. Bus rapid transit has four essential elements: dedicated lanes for busses, pre-boarding payment, bus priority at intersections, and platform-level boarding. Because bus rapid transit relies on dedicated lanes, trips can be significantly faster than traditional bus trips.

The *Cape Fear Commutes 2035 Transportation Plan* establishes five corridors for the development of bus rapid transit: Market Street, Oleander Drive, S. 17th Street, Carolina Beach Road, and a corridor between downtown and the University of North Carolina Wilmington. The updated plan, *Transportation 2040*, will focus policies on particular elements of bus rapid transit programs, such as improvements to hard infrastructure, transit amenities and pedestrian access, reduced headways, and express bus service on key routes. Wilmington’s geography, rapidly-approaching build out, and limited availability of right-of-way makes full bus rapid transit a particular challenge, necessitating this incremental approach to bus rapid transit.

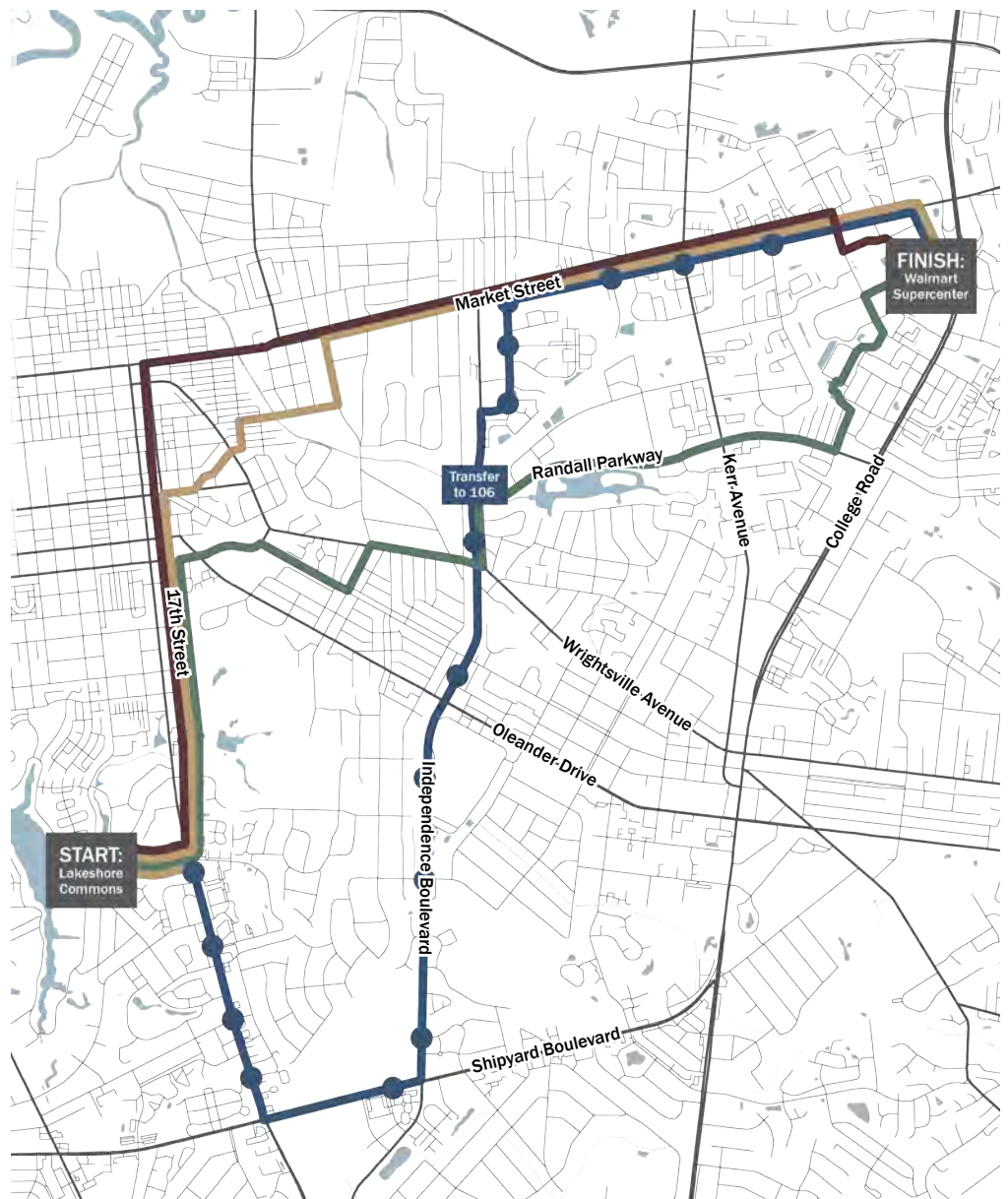
Policies in this chapter are intended to foster transit usage through the extension of existing lines, the provision of new service, and the provision of direct pedestrian and bicycle access to transit station areas and destinations. To foster usage by all citizens, bus stops, busses, and other transit vehicles must be accessible to those with limited mobility. Increased transit usage will further Wilmington’s efforts to become a more sustainable and energy efficient city. With transit and land use tightly linked, and transit stations integrated into walkable, transit-oriented development, transit can become an economic development generator. In addition to the existing *Cape Fear Commutes 2035 Transportation Plan* and the *Walk Wilmington: A Comprehensive Pedestrian Plan*, plans for new transit services, including regional rail, bus rapid transit, new bus routes between activity centers, and new bus service should supplement the Create Wilmington Comprehensive Plan.

Trip Scenario: Lake Shore Commons to Walmart Supercenter

As of this writing, Wave Transit estimates that a 5.4 mile trip from the Lake Shore Commons, a senior living community, on Hospital Plaza Drive to the Wal-Mart Supercenter on Sigmon Road could take between 45 and 80 minutes using public transit, depending on the time of day and available bus route.⁵ This trip would require an approximate 0.5-mile walk to origin and destinations. The same trip is estimated to take 12 minutes by car, about 35 minutes by bike, and about an hour and forty-five minutes on foot.⁶

For transit to be successful, supportive land use planning and infrastructure investments must occur concurrently; an extensive bike and pedestrian network that makes direct connections to transit stops and from transit stops to nearby destinations is necessary. This includes roadway design, pedestrian treatments at signalized crossings, safety islands, and other improvements that make it safe to cross streets.⁷

ROUTE	TRAVEL TIME
 Automobile	 12 minutes
 Bicycle	 35 minutes
 Pedestrian	 105 minutes
 Bus	 45 - 80 minutes



Paratransit

Paratransit is special transportation service for people with disabilities, often provided as a supplement to fixed-route bus and rail systems by transit agencies. Paratransit services may vary considerably in the degree of flexibility provided to customers, and may range from taxis or small buses that run along a more or less defined route and then stop to pick up or discharge passengers on request to fully on-demand transportation. The most flexible paratransit systems offer on-demand, call-up, door-to-door service from any origin to any destination in a service area. In addition to public transit agencies, paratransit services may be operated by community groups or not-for-profit organizations, and for-profit private companies or operators. WAVE Transit offers this service to riders.

2.5.1

Quality transit services that enhance mobility options, meet the needs of city residents and visitors, focus on transit-dependent households, and incorporate age-friendly elements should be promoted.



Related Policies

3.4.4

2.5.2

The possibility of returning fixed-guideway systems to Wilmington and the region should be considered.



Related Policies

10.2.1

2.5.3

The possibility of returning a vehicular/pedestrian ferry to the Wilmington region should be explored.



Related Policies

10.2.1

2.5.4

Where opportunities exist, right-of-way for future transit should be preserved. New development and redevelopment should provide transit easements for planned alignments, rail stations, and bus stops within existing and planned transit corridors as appropriate.

Transit that Works

To attract ridership in communities that are already automobile-oriented, transit must satisfy these four criteria:

- A simple trajectory: One of the reasons people prefer rail to bus is that the route is a line or loop, easily understood and with few diversions.
- Frequent headways: Most people don't look at schedules and won't wait more than 15 minutes, so frequent service is essential. Waiting can be made more bearable by GPS-enabled time-to-arrival clocks.
- A dignified wait: Each transit stop should offer a safe, comfortable, clean, and dry place to sit, ideally with a cup of coffee and a newspaper available.
- Integration within urbanism: Effective transit attracts pedestrians more than drivers, who must shift from one vehicular mode to another. The path from the sidewalk to the streetcar, train, or bus should be direct and pleasant, and not trek riders across parking lots or other dead zones.

Source: The Smart Growth Manual



Wave Transit Bus Queue, Downtown

Source: WAVE Transit

Fixed-guideway System

A fixed-guideway system is any light, heavy, or rapid rail system, monorail, inclined plane, funicular, trolley, streetcar, or automated groove or track along which it moves, used primarily for carrying passengers.

2.5.5

Local and regional bus service along key corridors should be enhanced. Transit efficiency, including improved frequency of routes and transfer time, should be promoted within the Wave Transit system.



Related Policies

5.5.4

2.5.6

Bus shelters, seating, lighting, trash receptacles, and related elements should be provided at transit stop locations. Developments located within planned transit corridors, as shown on the Growth Strategies Map, should coordinate with Wave Transit to provide bus stop facilities at appropriate locations.



Related Policies

9.6.6

9.2.4

9.6.5

2.5.7

The use of transit facilities should be encouraged through enhancing the bike and pedestrian network near transit stops and sufficient sidewalk infrastructure should be installed near all transit stops. Where necessary, enhancements to make sidewalks compliant with the Americans with Disabilities Act (ADA) should be prioritized.

2.5.8

Features such as traffic signal priority, queue jumps, and exclusive transit lanes to improve transit reliability should be encouraged, where possible.

2.5.9

Transit-oriented development should be encouraged. Planning for transportation, transit stop locations, public spaces, density, and land use should be coordinated, and high-density, mixed-use development patterns should be encouraged around express bus lines, the planned multimodal transportation center downtown, and any future transit stations.



Related Policies

3.2.6

1.3.6

1.3.7

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-Oriented Development

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



Growth Strategies Report

Transit that Works, p. 42

2.6 Bicycle and Pedestrian Circulation

Like safe vehicular travel, bicycles and pedestrians are important components of Wilmington's transportation system. Where gaps in the bicycle and pedestrian networks exist, effective and safe circulation is hindered. In key locations, including retail and mixed-use centers, schools, and parks, a well-connected network is especially important. The quality of life of all Wilmingtonians will be enhanced by investing in bicycle and pedestrian networks and amenities.

Bicycle and pedestrian facilities have emerged as key priorities for citizens through the comprehensive planning process. Building on the recommendations of the *Walk Wilmington: A Comprehensive Pedestrian Plan* and the *Wilmington/New Hanover County Comprehensive Greenway Plan*, policies in this section are aimed at supporting the goal of making Wilmington a safe place for people of all ages and abilities to walk and bike, not only for recreation but for transportation. If walking and biking can easily be incorporated into citizens' daily lives, and can be a viable option for short trips, public health, energy conservation, air quality, and traffic congestion can be improved. Many citizens of Wilmington have indicated that they prefer to live in a walkable community, whether urban or suburban.⁸

The 2009 *National Household Travel Survey* indicates that 10% of all household trips are made within half a mile from home, and 20% of all trips are between half a mile and two miles from home. It is estimated that approximately 30% of workers commute five miles or less to work.⁹ A connected and safe citywide comprehensive bicycle and pedestrian network, support facilities (e.g., convenient and secure bike parking), and an educated driving and bicycling public will facilitate increased biking and walking, especially for shorter trips. Given that Wilmington is significantly built out and that the city is constrained by geography, solutions for retrofitting our bicycle and pedestrian transportation network will be important.



Growth Factors Report

7

2.6.1

Bicycle and pedestrian circulation, access, and safety should be enhanced, especially along corridors, downtown, in activity and employment centers, within densely-developed areas, at transit stations, and near schools, libraries, and parks.



Related Policies

1.6.1

4.2

6.4.1

10.2.3

2.6.2

A continuous bicycle and pedestrian network should be provided within and between existing and new developments to facilitate safe and convenient travel. New subdivisions, mixed-use developments, and large-scale commercial developments should include safe pedestrian walkways or multiuse paths that allow direct links between roadways and major destinations, transit stops, and schools.



Related Policies

4.2.2

4.2.5

5.2.5

9.5.2

2.6.3

New development, redevelopment, street reconstruction, and resurfacing projects should include bicycle and pedestrian facilities as appropriate for the roadway character. Existing development should be retrofitted with connections where possible.

2.6.4

Where possible, and especially along identified pedestrian priority streets, tools such as protected left turns, pedestrian head start, raised crosswalks, curb extensions, medians, pedestrian refuge islands or mid-block crossings, and restricted right turns on red should be used to improve pedestrian and bicycle movements and safety.



Additional Information

Walk Wilmington: A Comprehensive Pedestrian Plan



Additional Information

Wilmington/New Hanover County Comprehensive Greenway Plan

2.6.5

Safe and convenient pedestrian and bicycle facilities should be maintained and should be universally accessible, adequately lit, and properly designed to reduce conflicts between motor vehicles, bicycles, and pedestrians.



Related Policies

8.2.4

4.3.5

2.6.6

Pedestrians and bicyclists should be accommodated on bridges, interchanges, and over and underpasses, where permitted by law. Bicycle lanes and wide sidewalks should be included in all new bridges and over and underpasses.

2.6.7

The city's greenways, blueways, and trails network should be treated as part of the city's transportation network and connections should be planned for accordingly.



Related Policies

4.2

10.2

2.6.8

Bicycle facilities such as secure racks, personal lockers, and showers should be encouraged in new and redeveloped office and employment centers to facilitate bicycling and walking as viable alternative modes for commuting to work.



Related Policies

6.4.3

10.2.11



Pedestrian Refuge Islands

Islands provide a safe place for pedestrians to wait for gaps in traffic when crossing a wide or busy street.



Curb Extensions

Curb extensions calm traffic, increase visibility, and reduce the crossing distance for pedestrians.

Source (All Images): Richard Drdul \ CC BY-SA 4.0 \ www.drdul.com

Blueways and Greenways

Greenways can be generally defined as linear parks that are used for recreation and nonmotorized transportation. Greenways can be located in floodplain areas or adjacent to stream corridors that are unsuitable for development, along rail corridors that are no longer in service, or within utility easements. Greenways can provide connections between parks, schools, natural areas, and other trail networks. **Blueways** are water trails used by canoeists, kayakers, and paddleboarders that are intended for recreation, ecological education and wildlife preservation. Blueways can include, creeks, streams, rivers, lakes, and other waterways.

2.6.9

Infrastructure that encourages students to walk or bike safely to school should be supported. The city should continue to coordinate with the WMPO to partner with New Hanover County Schools, the Wilmington Police Department, and the North Carolina Department of Transportation to identify funding and opportunities to enhance walking routes to school.



Related Policies

4.2.3 8.4

2.6.10

Where appropriate, primary building entrances should front onto publicly accessible, easily discernible, and Americans with Disabilities Act-compliant sidewalks that lead directly from the street to the building entrance.



Related Policies

10.6.2

2.6.11

Wherever appropriate, roadways and rail corridors should be retrofitted with bicycle and pedestrian facilities such as multi-use paths, cycle tracks or bike lanes, bike boxes, and bike detectors.

2.6.12

The city should continue to coordinate with the WMPO to work with partners to identify creative funding solutions for bike and pedestrian infrastructure, including partnerships with the Cape Fear Public Utility Authority, the North Carolina Department of Transportation, parks and recreation partnerships, and public-private partnerships.



Related Policies

1.2.4 10.5.3



Additional Information

NACTO Urban Street Design Guide



Cycle Tracks

Cycle tracks are dedicated bike facilities that combine a separated bike path with on-street infrastructure.



Sharrows

“Sharrows,” or shared-use arrows, are street markings indicating that cyclists and motorists must share the road.



Bike Boxes

Bike boxes are designed to prevent bicycle-car collisions at intersections, particularly between motorists turning right and cyclists going straight.

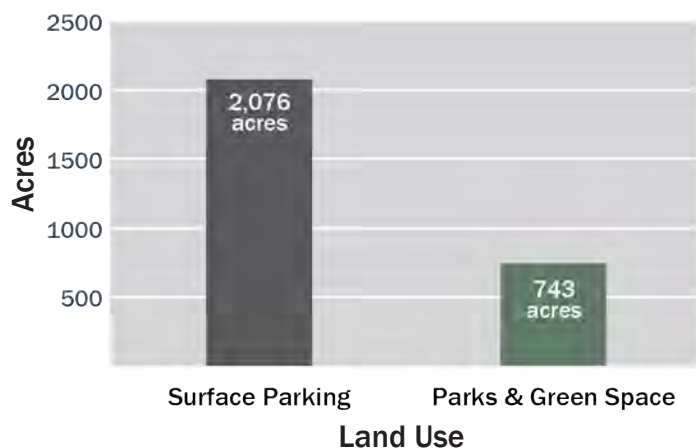
Source (All Images): Richard Drdul \ CC BY-SA 4.0 \ www.drdul.com

2.7 Parking Management

Parking is an essential component of the transportation system. A typical automobile is parked for about 23 hours a day, and may use several parking spaces each day: one at home, one at work, one at a stop on the way home, etc. Parking convenience affects the ease of reaching destinations and overall accessibility.

While the city has long required minimum parking standards, no universal review or inventory of parking has been conducted to date. Because there is no easy way to track the inventory and growth of parking in Wilmington over time, it is difficult to measure how much of the city's land area has been consumed by parking. Without knowing the inventory, it is difficult to plan for future demand or manage supply, and without a properly managed inventory, it may seem that there is a lack of parking in certain locations, despite an actual overabundance. For many years, Wilmington's policy has been to require discrete parking with every new development, based on a minimum requirement that depends on the estimated peak demand for each land use. Parking lots are provided on-site, and are often not connected to each other. As a result, most parking lots are full only a few times a year, if ever.

As of this writing, an estimated 2,076 acres of land (over 3 square miles) in Wilmington is currently dedicated to surface parking lots, not including on-street parking, parking decks, or single-family residential driveways and garages. This translates into roughly 334,928 off-street parking spaces, or four parking spaces per registered vehicle in the city.¹⁰



Providing a generous supply of parking is costly. The direct, annualized cost of parking can range from \$250 per space (if otherwise unused land is available and construction and operating costs are minimal) all the way up to \$2,250 per space for structured parking with attendants.¹¹ There are costs to developers to construct parking spaces, costs to drivers who occupy them, “opportunity costs” of the land that gets dedicated to parking rather than a more productive use, and environmental and traffic impacts. Since most of the parking in Wilmington is free, these costs are passed on to consumers, whether or not they use the parking. Land owners pass on the costs in rents and purchase prices; businesses often pass on the cost of parking lots to consumers in the prices of the goods they sell. The indirect costs to the city include increased impervious surface coverage, stormwater management costs, reduced design flexibility, reduced efficiency for walking, biking, and transit usage, and increased traffic congestion. By managing the supply of parking, both in public lots and through development standards, the city can encourage transit, bicycling, and walking as viable means of travel. This would also have positive effects on air quality and roadway congestion.¹² Reduced parking requirements would also have a positive impact on infill and redevelopment, as developers have reduced redevelopment costs and increased buildable land area.

Policies in this section focus on providing sufficient parking for businesses, while protecting adjacent land uses and the environment. Reduced parking requirements should be used to promote walkable communities and alternative modes of transportation. On-street and shared parking should be maximized through the use of parking management tools (policies and programs that result in more efficient use of parking resources).



Additional Information

[City of Wilmington Parking Study](#)

2.7.1

The amount of land devoted to surface parking should be minimized through measures such as parking decks and underground parking, shared parking, flexible ordinance requirements, improved parking standards, the implementation of transportation demand management plans, and provision of public transit to reduce parking needs.



Related Policies

8.1.15

8.1.16

10.1.2

10.2.11

2.7.2

Parking and development that encourages multiple destinations within pedestrian-connected areas should be encouraged.

2.7.3

A parking program and management strategies should be established at existing and planned transit stations.

2.7.4

On-street parking and drop-off areas should be located adjacent to sidewalks as a buffer to vehicular traffic, to maximize on-street parking turn-over, and for customer convenience. Excessive parking between sidewalks and building fronts should be discouraged.

2.7.5

Shared-use parking should be encouraged for land uses where peak parking demands occur at different times of the day, reducing the overall total number of spaces needed. Parking lots should be sized and managed so that spaces are frequently occupied.

2.7.6

Parking lots should include vehicular and pedestrian connections between and through lots. Parking facility quality should be considered equally with quantity of parking spaces. Parking lot design should minimize pedestrian conflicts, make use of appropriate landscaping, and properly manage stormwater.



Related Policies

8.1.16

9.3.7

6.3.5

2.7.7

The capacity of existing parking facilities should be optimized through tools such as small vehicle, motorcycle, and bicycle spaces, allowing motorcycles to share spaces, maximizing on-street parking, reducing the minimum parking space area requirement for low-turnover spaces such as residential and employee parking, and removing equipment and storage from parking spaces.

2.7.8

Single-occupancy automobile trips should be discouraged through parking supply and/or pricing strategies in areas where supply is limited and alternative transportation modes are available.



Streets for People

Lack of a sidewalk, the expansive roadway, site frontage dominated by surface parking and limited protection from traffic is not a comfortable walking environment. Repairs include on-street parking, streetscape elements and buildings that address the street for pedestrian usage.

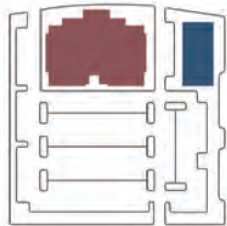
Source (All Images): City of Wilmington

Shared-use Parking

Shared parking scenarios reduce the need for excessive surface parking lots, reduce impervious surfaces, and allow for a more compact development pattern (especially one containing a mix of uses). Peak demand for parking is different for each use. For example, many office parking lots are empty after 5pm. Development can take advantage of these alternating times to reduce the number of overall parking spaces within a development project.

Example Development:

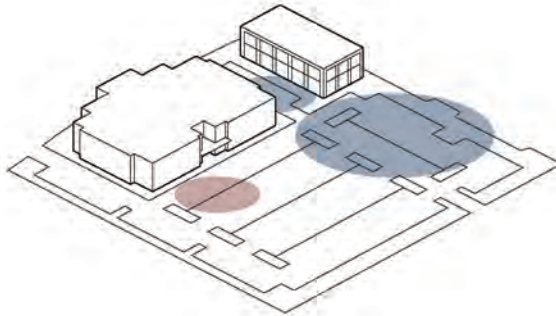
- **Movie Theater**
- **Office(s)**



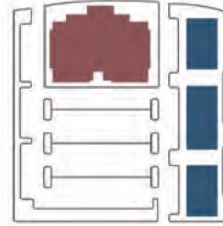
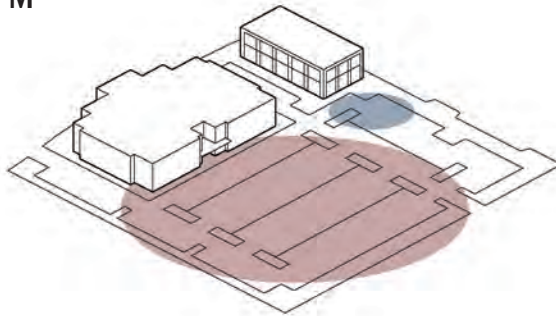
Individual Parking

The cinema and office building have been constructed to accommodate their own parking only.

AM



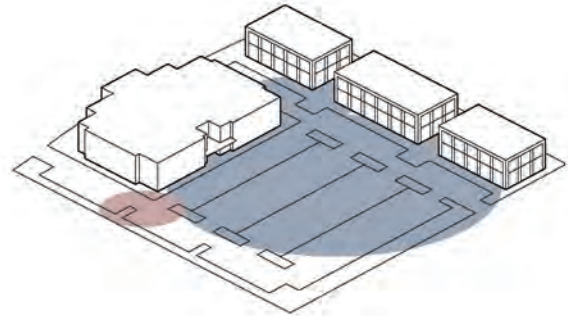
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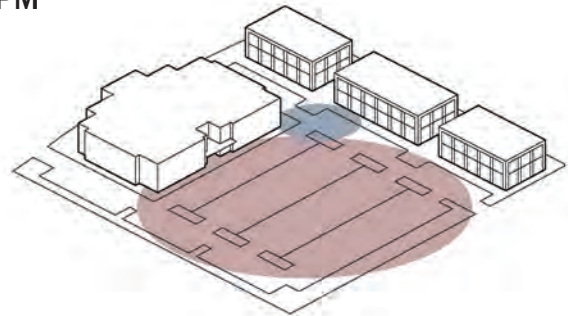
Shared Parking

The parking has been combined based on when parking is needed by each use. Additional offices can be developed in place of excessive parking.

AM



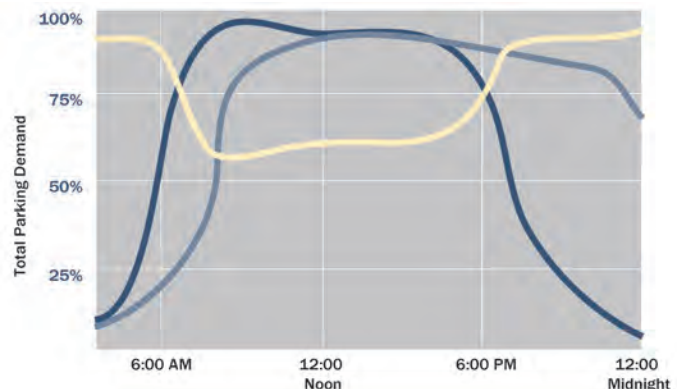
PM



Achieving Mixed-use with Shared Parking

By allowing for and encouraging shared parking, the total number of parking spaces required for mixed-use developments or single-use developments in mixed-use areas can decrease. Developers benefit, not only from the decreased cost of development, but also from the "captive markets" stemming from mixed-use development. For example, office employees are a captive market for business lunches at restaurants in mixed-use developments.

- **Office**
- **Retail**
- **Residential**
- **Entertainment (Not Charted)**



2.8 Transportation Safety, Traffic Calming, and Neighborhood Traffic

A multimodal transportation system that efficiently moves users to their destinations is important; however, it is more important that users arrive at their destinations safely. Reducing conflict points between modes, such as motorized vehicle conflicts with bicycles and pedestrians, can greatly enhance safety. Traffic calming is another way to enhance safety and is a common desire in many of Wilmington's neighborhoods. As traffic levels continue to rise on major streets, drivers will use alternative routes to make trips. This additional traffic should be channelized at appropriate speeds on arterials and collector streets, or made to abide by lower speed limits on local streets.

Policies in this section support a safe, multimodal transportation network for all users, and include consideration of traffic calming, bike and pedestrian crossings, and crash analysis.

2.8.1

Safe routes for motorists, transit riders, bicyclists, and pedestrians should be provided. The city should work with its partners to improve the multimodal system to enhance safe transportation options across modes.

2.8.2

Traffic calming measures should be incorporated into the design of new or retrofitted local and neighborhood streets, within schools and parks, and around pedestrian-oriented business areas. Pedestrian and bicyclists should have safe, convenient, well-marked means to cross streets.



Related Policies

9.5.2

2.8.3

The data necessary to assess transportation network safety performance should be collected and maintained. Ongoing education and enforcement should be supported. The safety impacts of proposed roadway capacity projects, including impacts to bicycle and pedestrian safety, should be evaluated and documented.

2.8.4

Feasible solutions to lessen the impacts of major street improvements on local streets should be developed with neighborhoods on an individual project basis.

Importance of Reduced Travel Speeds

Reducing travel speeds for vehicles through traffic calming or changing the legal speed limit can save human lives, thus enhancing the livability of a city. Consider the following statistics:

PEDESTRIANS HIT BY A VEHICLE TRAVELING...

20 MPH



9 out of 10
pedestrians survive

30 MPH



5 out of 10
pedestrians survive

40 MPH



1 out of 10
pedestrians survive

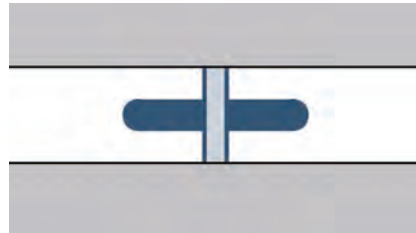
Source: Federal Highway Administration

Traffic Calming Measures



On-Street Parking

On-street parking narrows the street and slows traffic by creating friction for moving vehicles.



Pedestrian-friendly Medians

Medians that include a pedestrian refuge can help slow traffic while providing a safe crossing for non-motorists.



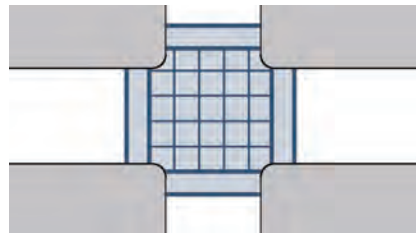
Two-way Traffic Flow

Two-way streets, especially those with narrower cross-sections, encourage motorists to be more cautious and wary of oncoming traffic.



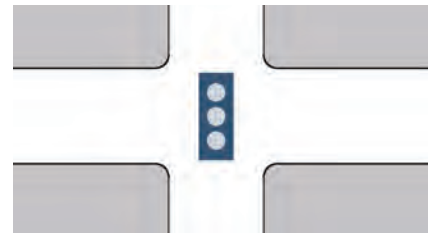
Bulb-outs / Neckdowns

Bulb-outs, or neckdowns, are curb extensions at intersections used to reduce the roadway width.



Raised Intersection

This is a flat-topped area, usually raised to sidewalk level, that covers the entire intersection.



Signalization & Timing

Traffic signal timing can be adjusted to help lower traffic speeds between intersections.



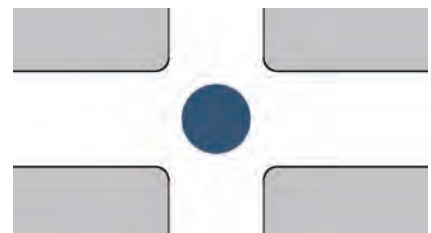
Mid-block Pedestrian Crossing

Mid-block crossings shorten distances between intersections and provide safe crossings for non-motorists.



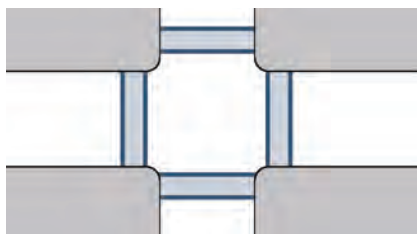
Building Frontages

A dense built environment can constrain sightlines, making drivers more aware of their surroundings.



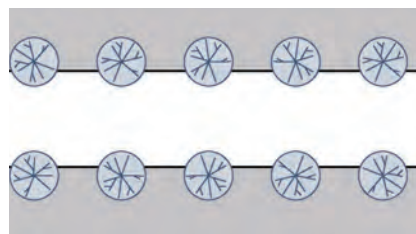
Traffic Circle

Traffic circles, or roundabouts, are raised islands often used in place of traffic signals or four-way stops.



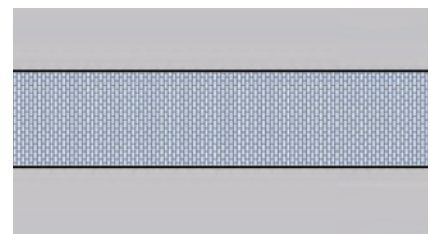
Frequent Crosswalks

High-visibility crosswalks alert drivers to be more cautious and aware of non-motorists.



Street Trees

Trees narrow a driver's visual field and create rhythm along the street.



Textured Streets (Brick, etc.)

Textured surfaces can be used in conjunction with other traffic-calming devices or used alone.

2.9 Commercial Transport

The movement of freight by plane, train, truck, and ship is an important part of Wilmington's economy. Wilmington is home to one of only two state sea ports, which is supported by both the rail and roadway networks. While trucks serve a variety of destinations in the city, rail operations are focused heavily on moving freight to and from the state port. There are approximately 33 at-grade railroad crossings in the city that are potential traffic and safety concerns, especially as traffic increases on roadways and railroads. The Wilmington International Airport is just outside the city limits.

The safe and efficient movement of goods via rail, truck, air, and ship is supported through the policies in this section. A reduction of the impacts of rail and truck operations on adjacent neighborhoods and sensitive lands is also important.

2.9.1

The safe and efficient movement of truck traffic in, around, and through the city via designated truck routes should be properly managed.

2.9.2

Infrastructure improvements and the use of emerging technologies that facilitate the clearance, timely movement, and security of trade, including facilities for the efficient intermodal transfer of goods between ships, trucks, rail, and air modes, should be supported.

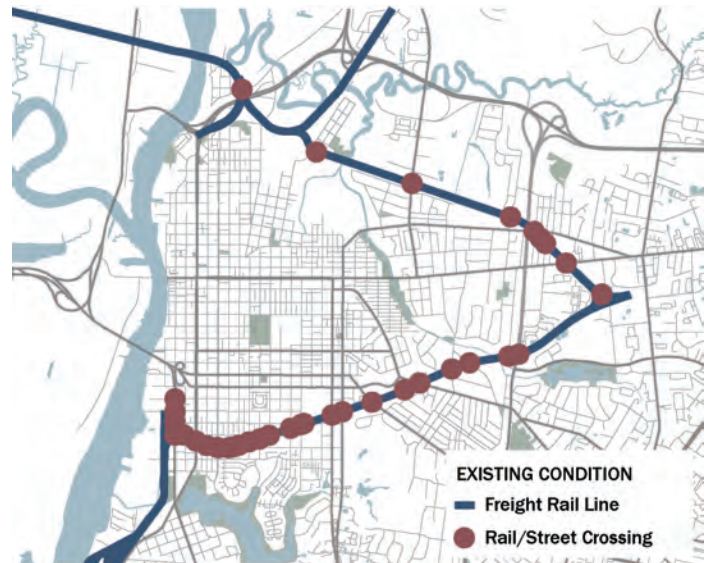
2.9.3

Roadway and railway design and retrofit, to include complete streets upgrades, should balance the needs of freight movements along with the needs of all other types of transportation.

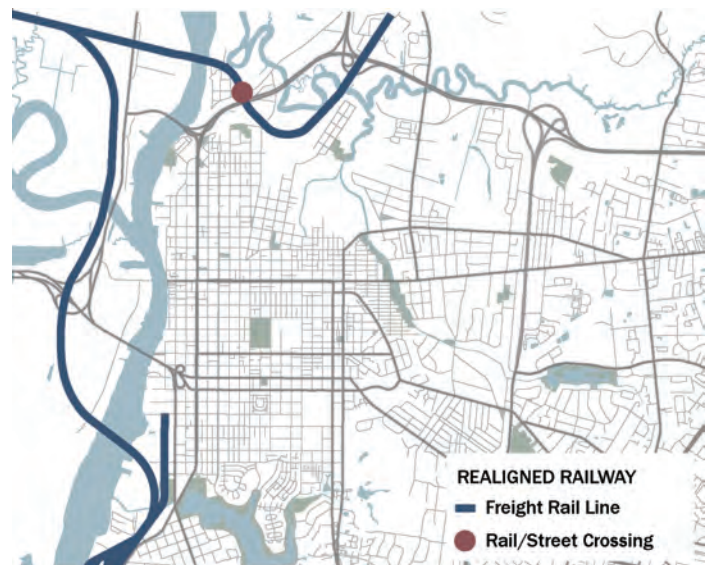


Related Policies

1.10.4



Existing



Proposed

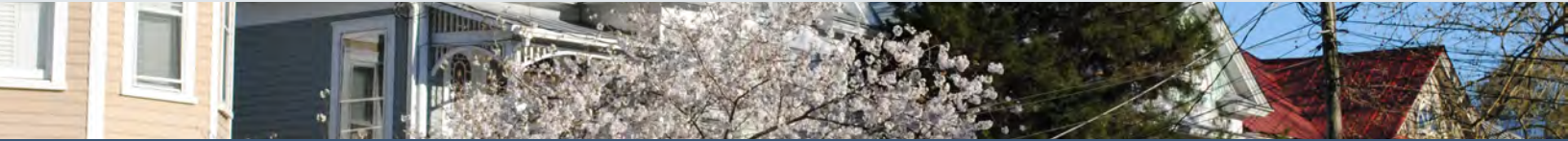
Freight Rail Realignment

The current freight rail system running through the city is inefficient for everyone. Numerous rail crossings are located in along this circuitous route. An alternative alignment is being explored to eliminate these rail crossings and make it easier to ship goods to and from the state port. This would enhance street connectivity and livability for Wilmington residents.



Growth Strategies Report

Transit that Works



3 Housing

- 3.1 Diversity of Housing Options
- 3.2 Affordability
- 3.3 Special Needs Housing
- 3.4 Fair Housing, Universal Design, and Aging in Place

Robert R. Taylor Senior Homes - 2013

Image (opposite) of Taylor Estates, a 192-unit affordable housing development in the Northside neighborhood.

Source: City of Wilmington

“Modern life demands, and is waiting for, a new kind of plan, both for the house and the city.”

— Le Corbusier



Introduction

Quality and availability of housing are critical to the quality of life in Wilmington. Wilmington has a lot of land dedicated to housing, with 46% of the city's land area in residential use. Wilmington's housing stock is primarily single-family homes (nearly 57% detached and 12% attached), followed by multifamily development (approximately 30%), and around 3% of the housing stock is mobile homes. According to 2010 Census data, of the more than 46,000 housing units in Wilmington, slightly more than half (52%) are renter occupied and just under half (48%) owner-occupied.

Homeownership rates in the North Carolina are slightly higher than both the national average and Wilmington's rate, at approximately 67%.¹³ The city has a rich diversity of neighborhoods and homes, with a variety of housing ages, styles, types, and design.

The table below shows median home values and rents for Wilmington and the region (ACS, 2008-2012). Wilmington's median home value is significantly higher than average home prices in the three-county region

while rents are slightly more comparable. While there is generally a diversity of housing types and price-points available citywide, there is little integration of housing types and price points within individual neighborhoods.

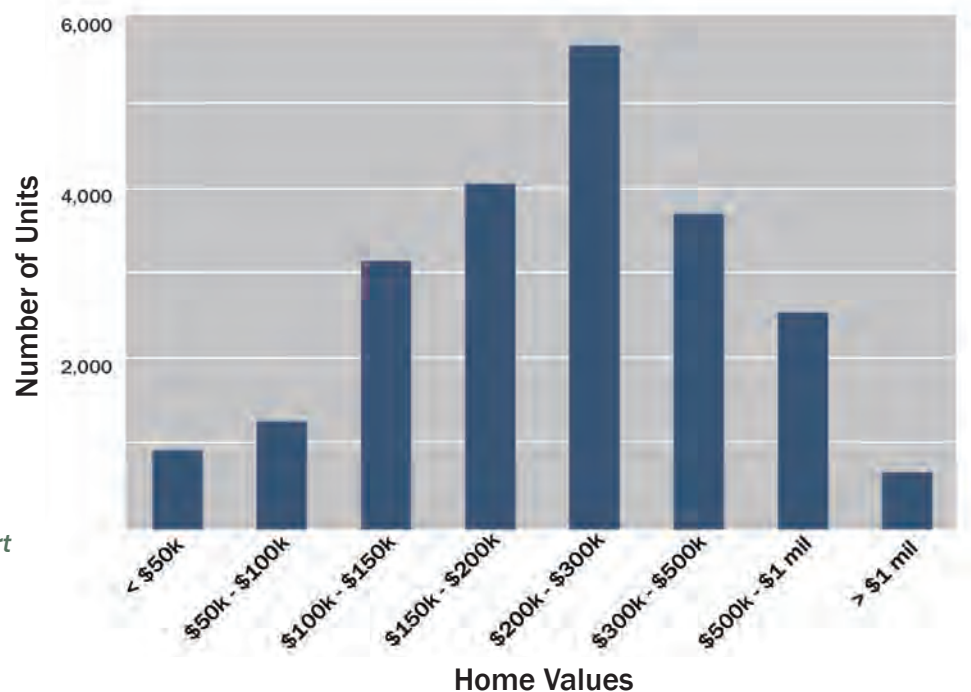
It has become generally accepted that 30% of income is the maximum amount a family can afford to spend on housing (including utilities), regardless of housing type or tenure, and still have enough money left over for nondiscretionary spending.¹⁴ For some Wilmington households, of course, spending more than 30% of household income is a lifestyle choice, which does not necessarily negatively impact their household budgets.

Wilmington Area Median Home Values and Monthly Rents

	Wilmington	New Hanover County	Brunswick County	Pender County	North Carolina
Median Home Value	\$230,700	\$222,000	\$187,000	\$152,000	\$153,600
Median Rent	\$844	\$889	\$828	\$762	\$759

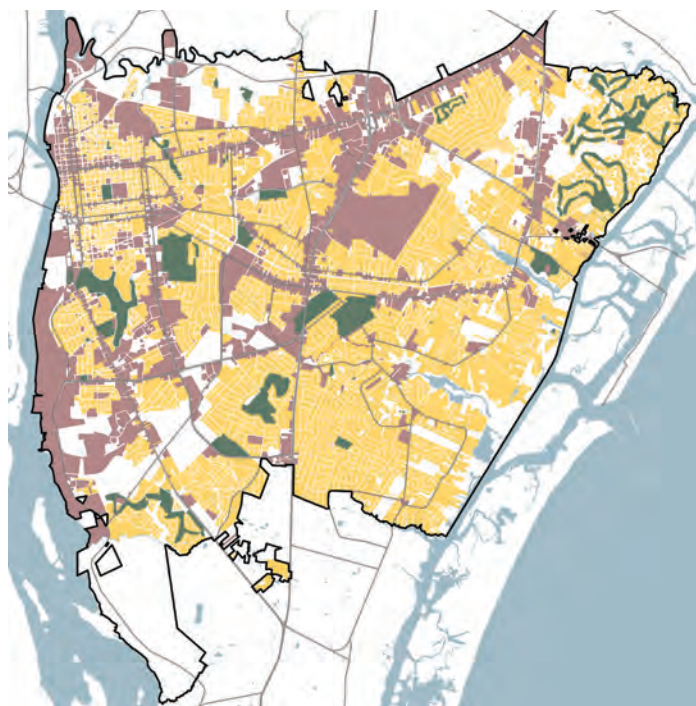
Homes by Value

According to the American Community Survey (2009-2013), Wilmington homes have a median value of \$226,200. This chart shows the value distribution among the homes in Wilmington.



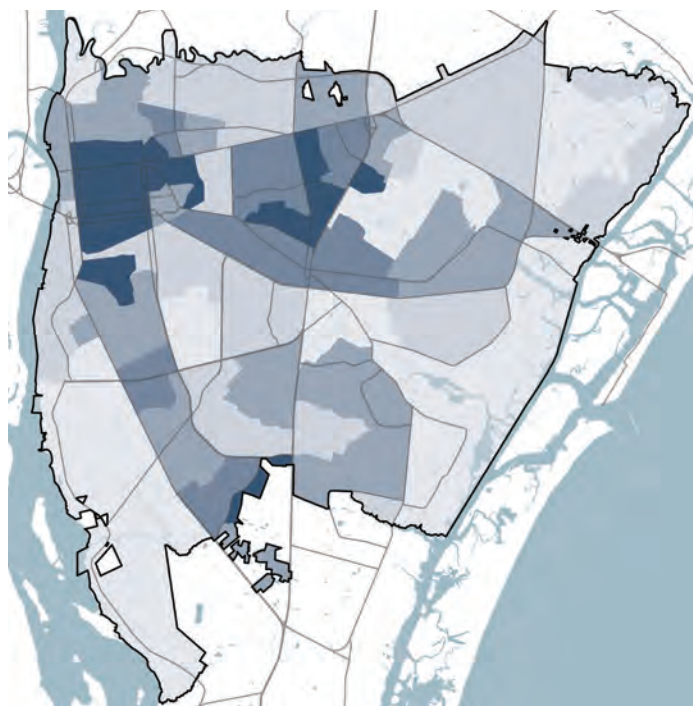
Growth Factors Report

6.1



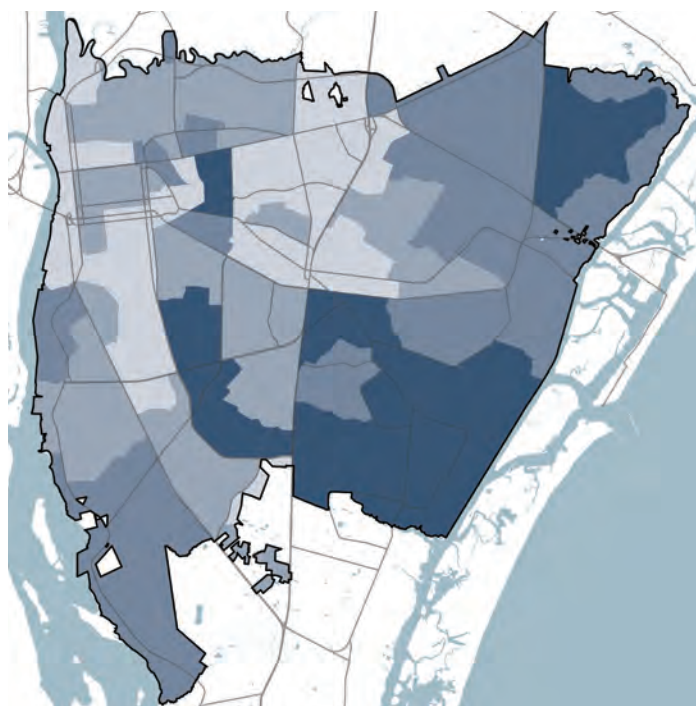
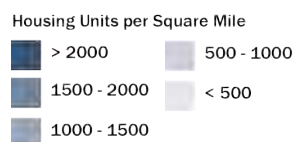
Land Used for Housing

This map depicts residential and non-residential land uses, parks, and vacant land. Approximately 46% of the land within the city is currently used for housing.



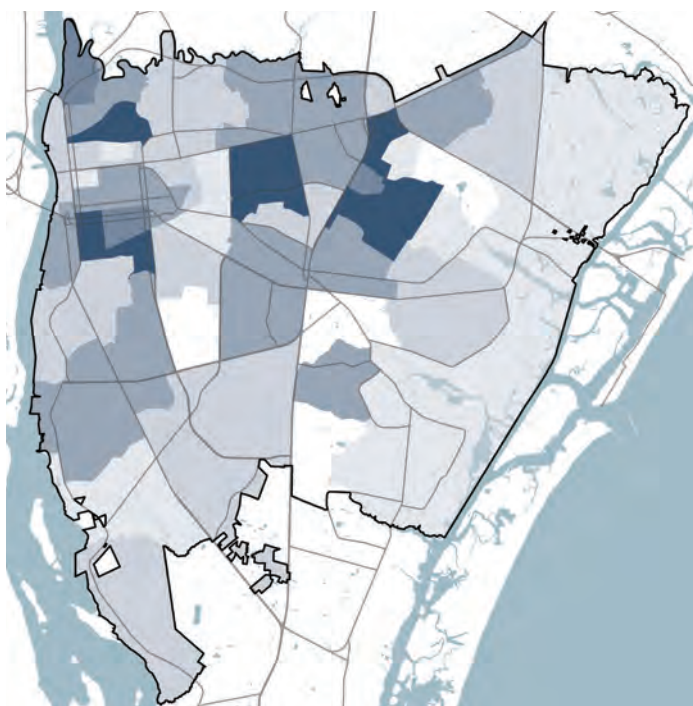
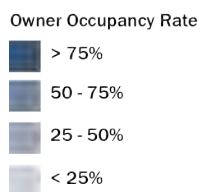
Housing Density

This map depicts housing density across the city by census block group.



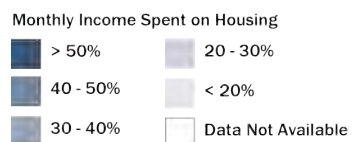
Housing Tenure

This map depicts level of owner-occupied housing across the city by census block group.



Housing Affordability

This map depicts the percentage of monthly income spent on housing (average monthly income/average rent) across the city by census block group.



The current fair market rent for Wilmington is estimated to be \$661 for a one-bedroom apartment, \$818 for a two-bedroom apartment, and \$1,078 for a three-bedroom apartment.¹⁵ According to the American Community Survey, the average rent in Wilmington in 2012, however, was approximately \$850.¹⁶ It is estimated that 19% of all Wilmington households with a household income of less than \$20,000 spend more than 30% of their household income on housing. Housing affordability puts living inside the city limits beyond the reach of many.

It is estimated that as many as 50,000 people commute into Wilmington each day for work.¹⁷ When workers cannot afford housing near their jobs, the entire region is impacted. Commuting requires workers to spend more on transportation, and as a result, they have less disposable income to spend on necessities, such as food, health care, savings, and child care, and nonessential items. Spending less on retail goods and services impacts the local economy. Transportation costs contain no equity or long-term residual value and are simply consumable costs. The greater the number of workers with long commutes, the greater the traffic congestion. Already congested highways and roads

around the region become more congested, affecting everyone in the region. Further, an increase in longer distance commuters mean fewer potential transit riders. When transit ridership declines or flattens, it becomes increasingly difficult to maintain and improve transit services. Finally, increasing sprawl and traffic negatively impacts the natural environment, consumes additional rural land for housing, and reduces the overall quality of life within the region.¹⁸

Affordable housing helps provide stability for families, improve opportunities for education and career development, and reduces the risk of homelessness for families that depend on low-wage jobs or are on fixed incomes. As our aging population continues to grow, it is expected that demand for affordable housing will also grow concurrently. Housing for a broad socioeconomic spectrum is a key factor in community viability and economic growth.

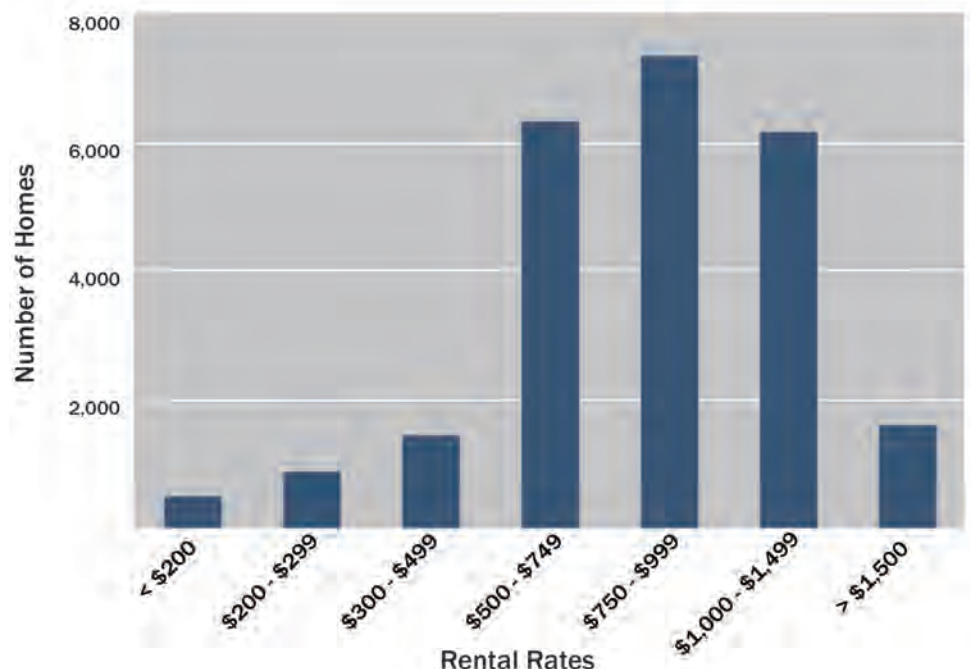


Growth Factors Report

6.1

Rental Rates

According to the American Community Survey (2009-2013), the majority of homes for rent in Wilmington are available for between \$500-\$1,499, with a median rental price of \$855.



Housing Programs

The city of Wilmington is designated as a participating jurisdiction for the HUD Community Development Block Grant and HOME Partnership programs. As such, the city receives funding annually to support affordable housing development, homeownership, and rehabilitation of substandard housing. The city is the only jurisdiction in the region to receive funds directly from HUD. Over the years, the amount of federal funding to support local housing efforts has declined.

Through partnerships with nonprofit groups, the Wilmington Housing Authority, and the North Carolina Housing Finance Agency, the city has been able to increase the affordable housing stock within the city limits. In partnership with local banks, the city has leveraged the homeownership pool to put nearly 400 low- to moderate-income families into homeownership, from the inception of the program in 1991 through 2013. The city also offers loan programs for home repair and rehabilitation for low- and moderate-income families; since beginning this loan program in 1977, nearly 1,000 households have received loans or grants through the city rehabilitation programs.



Growth Factors Report

6.2

Additionally, working with both nonprofit and for-profit affordable housing developers, the city has leveraged federal and state tax credits, private financing and other funds to support development of more than 500 units of affordable rental housing for elderly, disabled, and low-to-moderate income families. By providing development subsidies, these projects can provide rents below fair market rent for low-to-moderate income households.

As of this writing, there are 2,528 citizens residing in public housing, tax credit public housing units, and project-based voucher units.¹⁹ The Wilmington Housing Authority (WHA) maintains 1,305 housing units, there are currently 425 tax credit public housing units, and 104 project-based voucher units. Additionally, there are currently 1,958 active housing choice vouchers in Wilmington. The WHA reports that there are more than 1,850 people on the waiting list for housing or housing vouchers. The supply of public housing units is distributed unevenly across the city, with more than half (56%) of the units concentrated within the Greater Downtown, and nearly all (98%) of the units located in the northwestern portion of the city. A map of Wilmington Housing Authority properties can be found in the *Growth Factors Report*.

What is the Wilmington Housing Authority (WHA)?

The Housing Authority of the City of Wilmington was organized and incorporated in 1938 under the terms of the Housing Authority law of the State of North Carolina (Chapter 456, Public Laws of 1935). A housing authority established pursuant to the 1935 Act is declared in the Act to be “a public body, and a body corporate and politic” and exists primarily to relieve “unsatisfactory housing conditions” by constructing new housing.

The mission of the WHA is to provide quality, affordable housing in safe, attractive communities for the families they serve.

WHA receives funding from the U.S. Department of Housing and Urban Development to manage and administer housing and related programs for low-income residents.

Although the mayor of the city of Wilmington appoints the nine-member Board of Commissioners of the WHA, it is not a department or agency of the city.

In addition to the WHA's housing units, there are a number of other types of privately-owned assisted housing units in Wilmington, broken down as follows:

Privately-Owned Assisted Housing

Program or Type of Assistance	Number of Units
Low-income Housing Tax Credit Units	806
HOME Rental Units	291
Government-subsidized Units	797

The city's Code Enforcement division and Historic Preservation unit work to enforce the minimum housing code. The city demolishes an average of 10 deteriorated housing units each year; however, there are still many areas where the quality of the housing stock is deteriorating. In these areas the deteriorated homes act as a deterrent to reinvestment in the community, and may even present an image that the community does not care about itself. This may, in turn, lead to an increase in code violations, vacated structures, and criminal activity.



Key Planning Theme

Changing Places, Revitalizing Spaces

Since the built environment has profound consequences for individual and community well-being, all elements of the built environment should enhance the character and functionality of the community.

What Citizens Said

- Housing types and price points should be integrated within neighborhood areas to ensure that schools have a diverse population
- A variety of design and architectural styles is desirable
- Lack of housing options within an affordable price range is a concern
- While there is a strong desire to be able to age in place, many factors may preclude this, including housing costs, home design (not accessible) and size, lack of access to convenient public transportation, and lack of access to non-motorized transportation opportunities
- A variety of housing types and price points helps make Wilmington a more attractive place to do business
- There is an overall lack of affordable housing
- Public housing should not be concentrated on single sites, but should be scattered throughout the city and integrated into all neighborhoods
- Citizens enjoy the single-family neighborhoods and their character, charm, and mature trees and landscaping
- Housing should be connected via sidewalks and bike paths to general services such as pharmacies, schools, and grocery stores
- Transitions in land uses and increases in density around established neighborhoods should enhance existing neighborhood character
- Provide co-housing options, especially for seniors
- Neighborhoods with a mix of age ranges and easy access to transit and non-vehicular transportation are important
- Allow existing residential areas to increase density by making it easier to build "granny flats," garage apartments, and small cottages

Policies

3.1 Diversity of Housing Options

Fundamental to residents' quality of life is the quality of their home. Wilmington has a large supply of attractive, quality housing. Much of this supply consists of single-family detached houses priced in ranges higher than the affordability measures established by HUD. Choices are more limited for young, elderly, mobility-limited, smaller households, those with lower incomes, and those with special housing needs. Very few neighborhoods accommodate a mix of households with a range of incomes; this lack of internal neighborhood diversity limits opportunities for people to stay in their neighborhood as their situations and housing needs change. Assisted housing is disproportionately concentrated in the Greater Downtown. Keeping the market well-supplied with housing options meeting the diverse needs of various age and income groups will help moderate the costs of owning and renting, lessening affordability problems, and lowering subsidies needed to produce affordable and workforce housing units.



Related Policies

5.2 9.5

3.1.1

Mixed-income neighborhoods should be promoted throughout the city, particularly within identified high-density centers and corridors, downtown, and near employment centers, and by dispersing, rather than concentrating low to moderate income housing.



Related Policies

1.7.1 5.2.1 10.4.3

3.1.2

Dispersal and production of affordable and workforce housing units, housing with universal design elements, and senior housing units should be promoted throughout all areas of the city.



Diverse Housing Types

Multi-family and single family homes can be designed and developed to exist harmoniously in the same neighborhood, including side-by-side.

Source: City of Wilmington

3.1.3

Quality design and appearance for all housing, including assisted and market rate housing, should be encouraged.



Related Policies

5.2 9.6.1

3.1.4

Zoning policies should provide opportunity and incentives for developers to build a variety of housing types, from single-family to multifamily, including accessory dwelling units, at a range of price points.

3.1.5

The preservation of existing housing units, rather than demolition, should be encouraged, especially structures of historic significance.

3.1.6

“Location-efficient housing” should be promoted, encouraged, and preserved where already existing to help supply Wilmington with diverse housing options that are accessible to individuals and families of all incomes, needs, and preferences.



Related Policies

6.7.2

5.2

10.4.3

11.3



Key Planning Theme

Unique Places, Captivating Spaces

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

Location-efficient Housing

“While the concept of energy efficiency is a familiar term, locations can be efficient too. Compact neighborhoods with an interconnected street network, access to transit, mixed land uses, and convenient retail and services are highly efficient communities. When brought together, these elements enable an efficiency of scale.

Broad transportation choices and high access to key destinations that contribute to a vibrant and healthy life are enhanced in such neighborhoods. These neighborhoods require less time, money, and greenhouse gas emissions for residents to meet their everyday travel requirements, and thus have high location efficiency.”

Source: <http://www.cnt.org/tcd/projects/location-efficiency/> (6/30/14)

Alternative Housing Types

Housing diversity and the ability to adapt to innovative housing arrangements can increase affordability and housing availability close to services. Infill development can reduce transportation costs for urban residents.

Cottage Courtyard

This housing type consists of small houses arranged surrounding a common open space. Not every house has direct access to a driveway.



Source: City of Wilmington

3.2 Affordability

Census data for 2006-2010, compiled by HUD,²⁰ reports that 43% of households in Wilmington pay more than 30% of gross income for housing, and over 20% of households are paying 50% or more of their income for housing. Further, the data show that only 9% of existing rental units are affordable to renters earning 30% or below of the area median income, and only 21% of existing rental units are affordable to renters earning 50% of area median income. Likewise, for owner households earning 80% of the area median income, only 14% of the existing housing stock is affordable.

It is estimated that 19% of all Wilmington households with a household income of less than \$20,000 spend more than 30% of their household income on housing. Housing affordability puts living inside the city limits beyond the reach of many.

Even at somewhat moderate incomes, many public sector employees and service providers, including teachers, police officers, fire fighters, and those working in the tourism and hospitality industries, find themselves priced out of the local housing market. Without an adequate base of workforce housing, Wilmington's employers will experience a shortage of potential workers in important segments of the economy. Transportation costs absorb a larger share of household budgets, reducing the opportunities to move farther out to find lower-cost housing. Within the rental housing market, the greatest affordable housing need is for households with incomes below 60% of the area median family income. For ownership housing, affordable housing is usually priced within reach of households with incomes up to 80% of area median income, while workforce housing addresses the needs of households earning up to 120% of area median income. There are two challenges to be addressed: creating new affordable and workforce housing, and preserving existing affordable housing units.

3.2.1

Increasing the city's range of housing assistance programs benefitting low- and moderate-income persons should be considered.

3.2.2

The city should work in partnership with nonprofit housing providers to expand their capacity to provide housing.

3.2.3

Scattered-site rental housing units on infill lots should be utilized where appropriate and where design is compatible with the neighborhood scale and context.



Related Policies

11.3.3

3.2.4

The construction of accessory dwelling units such as garage apartments, "granny flats," "mother-in-law suites," should be allowed to provide housing options in areas with existing infrastructure and access to goods and services.



Related Policies

1.7.3

Affordable Housing, Workforce Housing, and Public Housing

For the purposes of this document, "**affordable housing**" is housing built, owned, and maintained by the private sector which the gross housing costs, including utilities, comprises no more than 30% of the household income. While a public subsidy, such as a tax credit to the developer or Section 8 voucher for a tenant, may be included to make a housing unit affordable, it is not necessarily required for a unit to be considered affordable. There are often income limits associated with such housing units.

"**Workforce housing**" is more loosely defined and refers to privately-owned and maintained housing that is within the range of affordability for "essential workers" in our community, including police officers, fire fighters, teachers, nurses, and service workers. Workforce housing typically has no public subsidy.

"**Public housing**" is built, owned, and maintained by the Wilmington Housing Authority. Safe, clean rental housing is provided for low-income, elderly, and disabled individuals and families based on established income limits developed by HUD.

3.2.5

Acquisition and assembly of vacant and substandard residential lots for new affordable, workforce, and/ or mixed-income housing should be considered as part of the capital improvements program and as part of the city's community development and housing process.



Related Policies

4.3.4

3.2.6

The location of affordable housing in areas with access to transit services including current and future transit stations should be incentivized, including, but not limited to, zoning and development incentives.



Related Policies

2.5.9

3.2.7

Public transit and safe, convenient, non-motorized transportation options should be expanded to serve housing in all areas of Wilmington.



Related Policies

2.2.2 10.5.4

3.2.8

Energy efficiency standards for all new publicly-supported housing construction and rehabilitation should be supported.



Related Policies

6.7.2

Chronic Homelessness

"Chronically homeless" is defined as "an unaccompanied, disabled individual who has been persistently homeless for more than a year or who has been homeless for four or more episodes over a period of three years."

3.3 Special Needs Housing

The city, in partnership with various agencies, has developed and started to implement *The 10-Year Plan to End Chronic Homelessness and Reduce Homelessness in the Lower Cape Fear Region*. The plan is a regional effort designed to work through an integrated community collaboration that focuses and directs the community's resources toward clearly defined strategies that address the multiple facets of why there is a homeless problem in Wilmington. The plan outlines the key goals, outcomes, indicators and strategies necessary to successfully eliminate chronic homelessness in the Cape Fear region.



Additional Information

The 10-Year Plan to End Chronic Homelessness and Reduce Homelessness in the Lower Cape Fear Region

3.3.1

Agencies and organizations that address the root causes of homelessness including re-entry, deinstitutionalization, and poverty should be supported.

3.3.2

Efforts to provide workforce training, access to transportation, access to affordable child care, counseling and other strategies to help low-income residents reach self-sufficiency and afford housing should be supported.

3.3.3

Linkages and coordination between public and nonprofit agencies and the business community in support of affordable housing and supportive services should be strengthened.

3.3.4

The efforts of governmental, nonprofit organizations, and the private sector to provide appropriate emergency shelter, housing, and support services to homeless and those at risk of homelessness should be promoted.

3.4 Fair Housing, Universal Design, and Aging in Place

The federal Fair Housing Act prohibits discrimination by landlords, real estate companies, banks and lending institutions, and homeowner insurance companies that make housing unavailable to persons because of race or color, religion, sex, national origin, familial status, or disability. While progress has been made, discrimination still impacts some Wilmington families, closing them out of the market and preventing access to quality housing. The city does not have a fair housing department or agency to receive complaints, conduct testing, and promote education and outreach, and does not have the legislative authority to undertake such programs.

The rapidly growing aging population in Wilmington faces many barriers to aging in place. The lack of transit and transportation options, combined with a generally low density and segregation of land uses, makes it difficult for people to remain in their homes as they age. This is especially true as they are less able to drive a private vehicle. There is a shortage of well-located, low-maintenance housing for older residents in Wilmington. While some older adults prefer to age in the same home or same neighborhood, others may wish to join “older adult” communities. Over the next 25 years, Wilmington is expected to face an increasing demand for housing suited to the needs of the elderly and persons with disabilities, and housing that can evolve to meet the residents’ changing needs over their lifetime.

Incorporated at the time the home is built, universal design includes wider door frames, structural accommodations for adding grab bars at a later date, counters that can be accessed by persons in wheelchairs, and other features that would allow persons with limited mobility to function. Beyond the housing unit itself, access to transit is very important for the young, elderly, and persons with disabilities.

“Social equity” is the concept that all people – no matter the color of their skin, age, income level or ability – have access to programs, facilities, places and spaces that provide equal opportunity for a higher quality of life.

3.4.1

The city should collaborate with New Hanover County and nonprofit partners to ensure compliance with the federal Fair Housing Act to provide equal access to housing and prevent unfair lending practices.

3.4.2

Universal design and lifecycle housing should be encouraged to facilitate the ability of homeowners and neighborhood residents to age in place in their homes and neighborhoods.

3.4.3

Housing rehabilitation programs that assist elderly homeowners to repair, modernize, and improve the energy efficiency of their homes should be supported.

3.4.4

The development of accessible housing for residents with disabilities, particularly near transit stations and corridors, should be encouraged.



Related Policies

2.5.1



Key Planning Theme

Creating a Place for Everyone

Wilmington wants a welcoming community that includes arts and culture, activities for youth, families, and seniors, and high-quality housing that is available to everyone.



4

Parks, Recreation, and Open Space

- 4.1 Planning for Parks
- 4.2 Greenways, Blueways, Trails, and Connectivity
- 4.3 Equity
- 4.4 Recreational Facilities and Programs
- 4.5 Recreational Water Access

Our Central Park
Image (opposite) of
Greenfield Lake Park and
Gardens in the morning.
Source: City of Wilmington



“The future will either
be green or not at all.”

— Bob Brown

Introduction

Water has long been the lifeblood of the city. Commercial and recreational access to the river, creeks, and Atlantic Intracoastal Waterway have been a common thread of life in Wilmington. Throughout Wilmington's 275-year history, the city's parks, recreation areas, and greenspaces have enhanced the lives of citizens and visitors alike. The character and use of park lands have evolved to meet changing demands. From the city's original development along the Cape Fear River, to today's ballfields, playgrounds, and nature preserves, parks and greenspaces are a vital part of the lifestyle and culture of Wilmington and New Hanover County.

Wilmington's parks and recreation system currently consists of more than 743 acres, with 572 acres of outdoor recreation and open space, 22 miles of greenways, trails, and the Riverwalk, three swimming pools and a splash pad, the Boxing and Physical Fitness Center and Fit for Fun Center, 1,157 feet of downtown docking facilities, a boat ramp on the Cape Fear River, an 18-hole golf course, 16 miles of multi-use trails, three recreation centers, and many other amenities. As the city continues to grow and redevelop, it is expected that additional parks, special landscapes, open and greenspaces, and natural and recreation areas and greenways will be needed to maintain and enhance the quality of life in Wilmington. With undeveloped land in

limited supply and environmental concerns increasing, current and future citizens of Wilmington will need to rededicate themselves to ensure that future generations have healthy natural systems and adequate parks and recreation areas.

The purpose of this chapter is to help establish a policy framework to guide programming, management, and development of the parks, recreation, and open space systems in Wilmington over the next 20-25 years. The following strategies focus on equity, renovation and preservation of existing parks space, acquisition of new parks space, and adaptations to a growing population. These policies will guide decision makers toward continuing a parks and recreation system that is balanced across the community, enhances quality of life, and serves the varied needs of all residents.

These issues impact not only this element of the Comprehensive Plan, but have larger impacts on the community's prospects for continued growth and development. Park amenities and greenspaces influence the economic well-being and quality of neighborhoods, land use decisions, growth management efforts, and the livability of our city. Connecting these issues and addressing them comprehensively will enhance the wellness and welfare of current and future residents.



Innes Park in Downtown
One of several "pocket parks" in downtown provide grass and shade.
Source: City of Wilmington



Cape Fear Riverwalk
Voted the nation's best American riverfront in 2015, the popular walkway connects people to the Cape Fear River.
Source: City of Wilmington

Parks are not islands – they are part of a network of public spaces that also includes streets, sidewalks, greenways and plazas. Thinking about parks in this larger context is essential to ensuring that all residents of a community feel connected to and comfortable in all open spaces. Signage and other way-finding tools, pedestrian safety measures, and crime prevention strategies are integral to park users’ experience not just within parks, but also in traveling to and between parks. This means that parks need to be considered as part of the larger infrastructure of neighborhoods and the city as a whole, and city agencies must coordinate to create a safe, cohesive public realm.

Parks and open spaces within the city serve the daily needs of the community, promote the social, cultural, mental, and physical well-being of our citizens, and are important amenities for achieving better places to live. In a broad sense, parks promote a livable community, a higher quality of life, and a sense of place and belonging to the community.

The Growth Factors Report provides an in-depth analysis of the city’s park, recreation, and open space inventory. The *City of Wilmington 2010-2015 Parks, Recreation, and Open Space Master Plan* offers guidance on meeting future parks and recreation needs. This chapter provides a vehicle for coordinating parks and open space policies across multiple city departments. These policies are generally consistent with prior plans, but where differences exist, this chapter provides additional and more up-to-date guidance. Future revisions to the *Parks Master Plan* will be used as a detailed working supplement to the Create Wilmington Comprehensive Plan; this plan serves to implement the parks master plan.

What Citizens Said

- More sidewalks, bike paths, and trails are needed
- Pedestrian and bike access needed on river bridges
- Extend Gary Shell Cross-city Trail and add new trails
- Extend trails into Brunswick and Pender counties and into Monkey Junction and beach towns
- Lighting along Gary Shell Cross-city Trail is needed
- Parking along Gary Shell Cross-city is needed
- Neighborhood connections to trails needed
- Pet waste stations, trash cans, and regularly cleaning/upkeep of trails needed
- More ballfields, especially soccer fields, needed
- Additional public access to water (river, waterway, creeks) needed, including boat launches and non-motorized access
- Some of Wilmington’s greatest assets are the beach, river, creeks and waterways
- Greenfield Lake Park and Gardens and associated activities are a great asset and resource
- More activities for teens/youth are needed
- Additional recreation centers are needed
- Swimming pools are concentrated around downtown, more are needed in other parts of the city
- Aquatics facilities (indoor) and programs needed
- Bike sharing stations are needed
- No more road development without bike and pedestrian infrastructure; bike and pedestrian needs should be considered a fundamental part of transportation infrastructure
- Preservation of trees and open space and natural areas is critical to the quality of neighborhoods

Policies

4.1 Planning for Parks

Planning is fundamental to the process by which new parks are created, starting with the determination of parks and recreation needs, to the identification and analysis of potential sites for acquisition, to the development of detailed park master plans for specific park sites. Accordingly, the city has developed a variety of park planning tools, methodologies, and processes, and has prepared many planning documents addressing both the entire parks system as well as specific components. These include the *City of Wilmington 2010-2015 Parks, Recreation, and Open Space Master Plan*, the *Wilmington-New Hanover County Comprehensive Greenway Plan* (2013), and *Walk Wilmington: A Comprehensive Plan*, all of which are incorporated into this chapter by reference.



Key Planning Theme

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.



Anne McCary Park
Source: City of Wilmington

4.1.1

The *Parks Master Plan*, neighborhood and small-area plans, and function-related plans should be implemented in a coordinated fashion to address specific components of the parks system. The *Parks Master Plan* and other special purpose park plans should be kept current through a regular schedule of updates and re-examinations.



Additional Information

Parks Master Plan

4.1.2

Siting, land acquisition, co-location, programming design, and construction opportunities should be coordinated between interdepartmental and external partners to align with growth projections and demographic information.



Related Policies

8.4.5

4.1.3

Programs and facilities should be continuously evaluated through user surveys, focus groups, evaluations, data regarding programmed and non-programmed usage, and demographic analysis in addition to participation at public meetings.

4.2 Greenways, Blueways, Trails, and Connectivity

Greenways are corridors of land that connect people and places. Most greenways contain walking and/or bike trails. Corridors that feature canoe or kayak access are known as blueways. Greenways serve to enhance both recreation and multimodal transportation. Greenway corridors may be either natural (rivers, streams) or man-made (rail corridors, utility corridors, roadways) that also serve as vegetative buffers, often protecting natural habitats, improving water quality, and reducing flooding and stormwater impacts. Greenways, blueways, trails, and even streets and streetscapes can enhance both the natural and built environments, offer safe and functional transportation alternatives, and promote the health and wellness of residents and

visitors. The economic benefits of a comprehensive trails system are many, and may accrue for many users, including residents, businesses, and the city and county. Trails typically increase adjacent property values, adding value for property owners and local governments. Trails attract residents and visitors alike, spurring economic development. Trails near businesses have been shown to increase sales while reducing the need for auto-dependency and parking. Finally, trails are less costly to construct than roads, and can save users fuel and vehicle maintenance costs; reduced traffic volumes benefit the entire community.²¹ The city can help promote a healthier community through the provision of trails and paths.



East Coast Greenway

The East Coast Greenway is a developing trail system linking many major cities along the east coast. Wilmington is positioned along the route, which runs from Canada to Key West, FL. Nearly 30% of the route is already on traffic-free greenways.

Source: www.greenway.org

Wilmington has recently taken significant steps toward improving the trail system in the city. The East Coast Greenway, a 2,900-mile trail from Calais, Maine to Key West, Florida, runs through Wilmington. Within the whole of New Hanover County, there are more than 42 miles of trail and bike facilities (38 miles are within the city of Wilmington). Within the city, sidewalks, bike lanes, trails, greenways, and multi-use paths provide access to numerous recreation, arts and cultural, shopping, and educational destinations, and connect Wilmington to the rest of New Hanover County.

4.2.1

Safety, security, ease of use, sustainability, and equity should be considered when planning, designing, and constructing new and maintaining existing greenways, blueways, and trails.

4.2.2

Neighborhood connectivity to trails and greenways should be facilitated. Connections between neighborhoods, shopping centers, schools, transit stops, and employment centers should function as transportation alternatives in addition to recreational amenities.



Related Policies

2.6.2

2.6.7

5.2.5

6.4.1

9.5.2

4.2.3

Partnerships with New Hanover County and New Hanover County Schools, health care providers, nonprofit groups, and others should be enhanced to create or improve greenways and trails in the city and the region.



Related Policies

2.6.9 8.4.7

4.2.4

Greenways should be employed as vegetative buffers to improve stormwater management and water quality. Park land and greenways along riparian buffers and waterways will provide environmental and recreational benefits.



Related Policies

6.2.4

4.2.5

Wilmington's greenway/trail network should include multi-use paths that connect other greenways, parks, and schools. New greenways should be designed to serve both recreational and transportation needs.



Related Policies

2.6.2 6.4.1

4.2.6

Floodplain property or upland connections for greenways or public open space should be protected through the site development process for residential and non-residential sites.



Related Policies

2.6.4

4.2.7

Public awareness of the trails/greenway network should be promoted, including an ongoing educational campaign on bike and pedestrian safety, driver awareness, bike and pedestrian rights and regulations, and the benefits of greenways, blueways, and trails as related to increased property values and health and environmental benefits.

4.3 Equity

All people, regardless of their age, income, gender, race, or physical ability, should have access to the programs, facilities, places, and spaces that make their lives and the Wilmington community a great place to live. Citizens and visitors to Wilmington should have safe access to parks and recreation. Parks facilities allow people to connect with one another, connect with nature, recreate, play, and relax. Studies by the National Recreation and Parks Association show that social equity and universal access to parks and recreation programs and facilities improves individual and community well-being by increasing community engagement, strengthens social and familial bonds, builds the local economy, improves mental and physical health, and can cause a measurable decrease in crime.²²



Gary Shell Cross-City Trail, Wilmington

This multi-use trail provides bicycle and pedestrian access to recreational destination across Wilmington.

Source: City of Wilmington



Greenfield Lake Park, Wilmington

This park is well-known for its central, picturesque Greenfield Lake where visitors come to enjoy nature.

Source: City of Wilmington

4.3.1

Community engagement in parks planning efforts should enhance the equitable distribution of access to parks and open space. Parks and open spaces should be periodically evaluated, as part of regular updates to the *Parks Master Plan*, to address any inequities in the distribution of these amenities.

4.3.2

Community gardens should be supported, where appropriate.

4.3.3

Joint use and creative reuse of land should be explored to improve access to parks and recreation amenities. Collaboration with partners, including New Hanover County and New Hanover County Schools, the University of North Carolina Wilmington, and Cape Fear Community College, should be utilized to maximize shared-use of facilities in throughout the city.



Related Policies

8.2.5

4.3.4

The reuse/redevelopment of vacant lots, public or utility-owned property, underutilized school sites, and oversized streets for parks and recreation amenities should be facilitated.



Related Policies

3.2.5 10.1.4

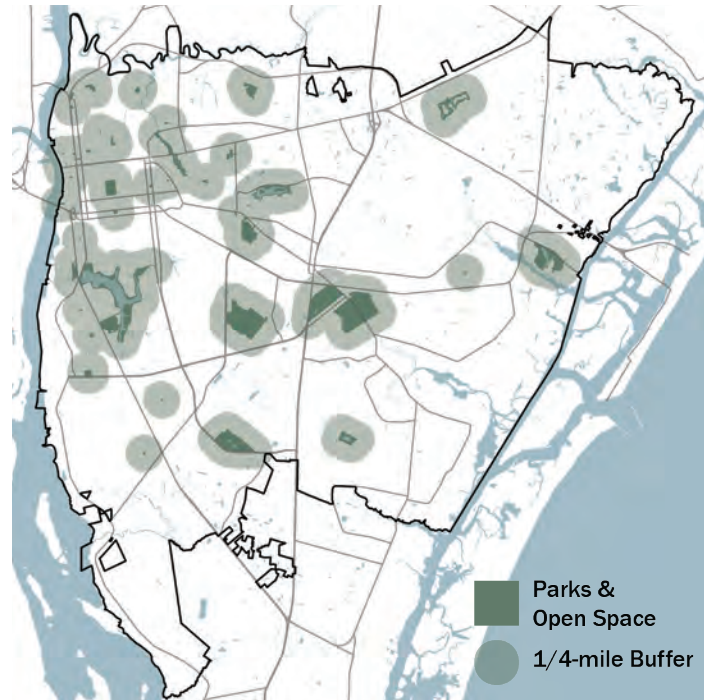
4.3.5

New facilities and renovations to existing facilities should be made accessible to persons of all ages and physical abilities. Parks and open spaces across the city, including downtown, should be child- and senior-friendly.



Related Policies

2.6.5



Parks and Open Spaces

The city maintains 743 acres of public parks and green space. City parks are categorized as either mini, neighborhood, or city-wide and a level of service standard has been established for each type. The table below provides the acreage of each type of park and the city's current level of service. To meet the level of service standard for the projected 2040 population the city will need approximately 19 additional acres for mini-parks and 6 acres for neighborhood parks.

Park Level of Service (LOS) Details

Park Type	2014 Acreage	Standard*	2014 LOS	2040 Acreage**
Mini	22.8	0.25 acres per 1,000 people	0.21	41.5
Neighborhood	77.1	1 acres per 2,000 people	1.5	83
City-Wide	643.6	2.5 acres per 2,000 people	12.1	207.5

* City of Wilmington Parks, Recreation, and Open Space Master Plan

** Acreage needed to meet level of service standard based upon projected 2040 population of 166,000 residents



Growth Factors Report

5.2

4.4 Recreational Facilities and Programs

When considering recreational facilities and programs the city of Wilmington must provide its citizens with a choice of active and passive recreation opportunities. Facilities should include trails, tracks, playgrounds, fields, and a variety of courts, gymnasiums, and activity spaces. Both indoor and outdoor facilities and programs, formal and informal, should be available and should be of sufficient quality, design, size, and geographic distribution for people of all ages and abilities. A system-wide approach should take into account individual neighborhoods, adjoining public facilities, and future opportunities, and should balance the allocation of resources, management, and use of facilities.



Empie Park, Wilmington

This suburban park is well-known for its excellent public tennis facilities and welcomes player of all levels.

Source: City of Wilmington

High quality recreation includes programs in aquatics, arts and culture, athletics, nature, summer and track-out camps, and individual and team sports and general play for people of all ages and abilities. Amusement areas, such as the paddle boats at Greenfield Lake, offer contact with nature and relief from the stress of daily life. To meet these needs, sufficient outdoor shelters, open spaces, and high-quality natural areas are required. Planning for equity, especially within a nearly built-out community, requires planning for flexible facilities with opportunities for future expansion, maximizing shared resources, and careful capital planning.

4.4.1

A variety of flexible facilities should be planned for, developed, and operated to support diverse programs and activities, aid in geographic distribution of resources, and decrease the need for additional land acquisition.

4.4.2

Sustainable design principles should be incorporated into the development and management of parks facilities.



Related Policies

6.6.1

8.1.8

11.3.1

4.4.3

Public-private partnerships should be employed to develop innovative arrangements for parks and other open spaces, to diversify recreational uses, minimize land acquisition needs, and reduce demand for public funding. Development of recreation amenities on privately-owned land to complement public facilities should be encouraged.



Related Policies

10.5.2

4.4.4

Adequate indoor facilities should be encouraged for both active and passive recreation, as well as space for community meetings, social activities, and special events and uses, including aquatics, arts, and educational programs.



Key Planning Theme

Creating a Place for Everyone

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.

4.5 Recreational Water Access



Source: Cape Fear River Watch



Source: City of Wilmington



Source: City of Wilmington

1. Kayakers on the Cape Fear River, Wilmington.
2. Public boat launch and water access, Dram Tree Park, Downtown Wilmington.
3. Commercial Dock servicing local bars and restaurants on Banks Channel, Wilmington.
4. Public boat launch and water access, Dram Tree Park, Downtown Wilmington.



Source: City of Wilmington

Whether on the Atlantic Intracoastal Waterway, the Cape Fear River, a local creek, or Greenfield Lake, Wilmington's waters are places of recreation, solitude, relaxation, and fun. Our recreational waters are restful settings for family picnics, running and walking, sunbathing, swimming, fishing, and boating. Because water access is a recreation resource in great demand throughout Wilmington and the region, planning for water access is a priority. Public access to and along Wilmington's various shorelines is an integral component of development.

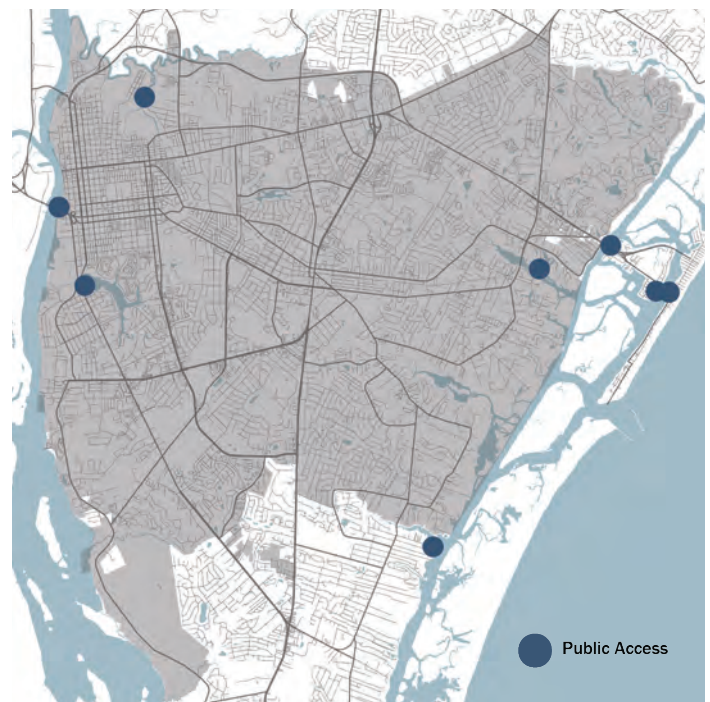
4.5.1

Residents and visitors should have access to public waters, including the Cape Fear River, area creeks and lakes, the Intracoastal Waterway, and the Atlantic Ocean. As new development and redevelopment occurs, public water access should be incentivized.

4.5.2

Public water access should enhance or minimize impacts to water quality, water resources access, natural landscapes, the scenic value of our waterways, or navigational access.

Public Water Access Locations



Growth Factors Report

3.5



5

Economic Development

- 5.1 Commercial Corridor Reinvestment
- 5.2 Neighborhood Reinvestment
- 5.3 Business Development
- 5.4 Education, Training, and Access
- 5.5 Economic Development and Land Use
- 5.6 Tourism and Hospitality
- 5.7 Targeted Industries
- 5.8 Regional Collaboration

Port of Wilmington

Image (opposite) of container ship docking at the Port of Wilmington, North Carolina's largest State Port.

Source (Opposite Page): North Carolina State Ports Authority
Source (Above): Tracy O. \ CC BY-NC 2.0 \ creativecommons.org

“Without continual growth
and progress, such words as
improvement, achievement, and
success have no meaning.”

— Benjamin Franklin



Introduction

In the broadest sense, economic development is the process of local wealth creation, through growth in jobs, income, and investment, and supported by improvements in the social, built, and natural environments. Continued economic vitality is not guaranteed, and Wilmington, like many cities, is still recovering from the Great Recession. In addition to national events and trends, increased cost of living, traffic congestion, and/or failure to maintain a high quality of place can undermine a city's economic strength. Wilmington and the region need targeted actions and investments to address economic development in collaboration with the business community.

The American economy is a new place. Planning for economic development has changed significantly in recent years. Changes in technology and employment preferences mean that planning for place and placemaking is more important than ever before. Successful economic development policies need to focus strongly on the qualities that make a community or region attractive; this is no mere matter of aesthetics. Today's economic conditions challenge planners and other local leaders to consider new models of economic development. This is especially critical in Wilmington, where there is very little vacant land left, and much placemaking will be accomplished by retrofitting existing development.

National trends show that both Millennials (those born between 1980 and 2000) and Baby Boomers (those born between 1946 and 1964) are critical in

shaping future growth and economic development in Wilmington. Both groups are shaping community competitiveness given their key characteristics of personal mobility, potential for new household formation, and importance as a vital talent pool for the economy. Further, lifestyle preferences for these two groups will have critical impacts on patterns for growth and development. According to a survey conducted by the American Planning Association, fewer than 10% of Millennials, Gen Xers, and Baby Boomers see themselves in traditional, auto-dependent suburban communities in the future, despite 40% of them living there today.²³ In a similar survey conducted in Wilmington, 82% of Millennials and 81% of Baby Boomers said they would prefer to live in a walkable neighborhood and two-thirds of all respondents said they believe that investing in schools, walkable communities, and transportation choices is a better way to grow the economy than traditional economic development methods.²⁴

For Wilmington to be competitive and prosperous in light of these national trends, Wilmington must consider these trends and take a closer look at development patterns, housing options, transportation, and placemaking. Mobility, particularly bicycle and pedestrian movement, has been ranked very important by many of those who participated in the public input process, regardless of where they live in the city. Auto use, while still dominant, is tending to plateau somewhat. These trends will likely continue to increase as many older citizens age in their existing homes and communities.



Wilmington Convention Center

Tourism services, including convention services, makes up a significant portion of Wilmington's economy.

Source: City of Wilmington



Pharmaceutical Product Development (PPD)

One of Wilmington's leading employers, PPD, attracts diverse, educated workers from across the globe.

Source: City of Wilmington

Today, traditional suburban living is being supplanted, in large measure, by many new types of neighborhoods, urban and suburban alike. A shift of this magnitude has not occurred since the post-World War II trend away from urban cores and into the suburbs. Just as it took several decades for this trend to be realized, it will take several decades for the trend back to more urban preferences to evolve. In fact, reports estimate that it could take 20 to 30 years for the market to respond to demands.²⁵ Walkable, bikable urban developments will not be as easy to execute as the more traditional suburban developments have been in the past, due in part to the lack of vacant developable land, the need to retrofit existing development, and a complex development process in already urbanized areas.

For Wilmington to thrive in the new economic and demographic realities, the city will need creative ways to support dynamic, productive, walkable communities. The city must embrace an economic development strategy centered on issues of place, particularly access, affordability, proximity and walkability, and innovation.

Technology and technological infrastructure are also important components of Wilmington's economic development strategy. Next generation technology, the "sharing economy," and a culture of innovation and connectivity are important factors in attracting new businesses and residents to the area.

The region as a whole maintains a significant number of hospitality and tourism jobs, along with education, health care, and retail trades. There has been continued job growth in the area of "arts, entertainment, recreation, and visitor" industries as well as a recent growth in the healthcare and sales sectors. Wilmington is a regional banking hub, and there has been recent growth in the banking and financial industry in Wilmington.²⁶ While many North Carolina cities have recently seen an increase in manufacturing jobs, Wilmington has not.²⁷

Placemaking

Placemaking is both an overarching idea and a hands-on approach for improving a neighborhood, city, or region. Placemaking refers to a collaborative process by which the community can shape the public realm in order to maximize shared value, strengthening the connection between people and the places they live. Placemaking facilitates creative patterns of use, paying particular attention to the physical, cultural, and social identities that define a place and support its ongoing evolution. Placemaking capitalizes on a community's assets, inspiration, and potential, and it results in the creation of quality public spaces that contribute to people's health, happiness, and well-being.



Ellis Square, Savannah, GA

This site is located in the city's historic district, serving as the 'living room,' where visitors and residents alike gather, play and converse. Where historic markets were once active places of commerce, this space continues to serve as a center of activity.

Source: City of Wilmington

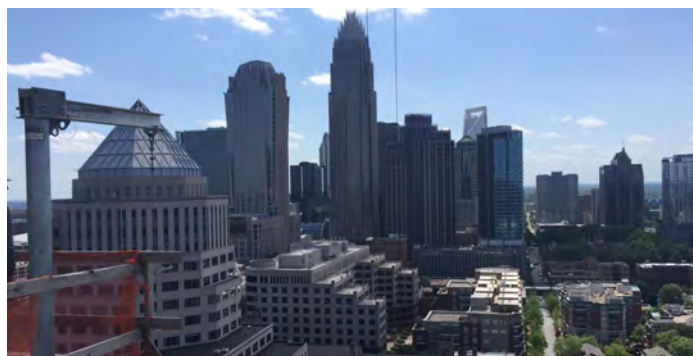


Key Planning Theme

Unique Places, Captivating Spaces

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

The city's role in shaping macro-level city and regional economic development policies and strategies is tied closely to the work being undertaken by New Hanover County and its regional economic development efforts. Economic development policies focus on local initiatives that will help advance Wilmington's competitiveness as a place through land use planning for mixed-use centers, walkable and transit-oriented neighborhoods, unique places, enhancing the city's corridors, fostering entrepreneurship, and encouraging job growth. Coordinating land use and transportation and expanding the city's economic base will help generate fiscal resources to fund the infrastructure and programs essential to achieving all of the themes of the comprehensive plan.



Uptown, Charlotte, NC

This area of Charlotte is one of the fastest growing urban districts in the United States. Only a few hours west of Wilmington, numerous development projects in this area are spurring economic development across industries.

Source: City of Wilmington

What Citizens Said

- Major factors in choosing a place to live include job opportunities for both spouses, good public education, cost of living
- More high-paying jobs are needed
- Wilmington should focus on job creation to retain recent graduates; lack of jobs contributes to "brain drain" in Wilmington
- Youth surveyed indicated a preference for jobs in science, technology, and medicine/health care
- Grow high-tech, creative class, and green jobs
- Wilmington should have a successful, vibrant, and economically diverse community
- Support small business owners to create jobs
- Wilmington has a "blank slate" in terms of marketing itself
- Market Wilmington as a good place to live and do businesses
- An economic development plan and economic development planner are needed
- Wilmington and the region are too small to not adopt a cooperative approach to economic development
- A high tide raises all ships – Wilmington needs a coordinated regional approach to economic development
- Too many economic development groups operating; groups are operating without a unified goal or vision
- Wilmington is a good place to visit and retire, but needs to be a good place to start and grow a career
- Wilmington should have major events venue as a economic development generator
- Many workers can work from anywhere; many industries don't need a major physical headquarters and may have workers all over the state/country
- Recruiting workers to Wilmington is difficult, as Wilmington is relatively unknown
- Cost of living is a major impediment to aging in place
- Economically diverse neighborhoods are critical for successful schools/classrooms

Policies

5.1 Commercial Corridor Reinvestment

Over time, needs change, technology progresses, and consumer preferences evolve. Without reinvestments to help shopping centers and business districts stay current with changing trends, some of the city's commercial corridors will suffer. Obsolete facilities, low rents, high vacancies, deteriorating buildings, and general decay plagues many highly-visible, highly-traveled commercial corridors. In the past, it was easy for retailers to move away from the aging development into modern shopping centers. Facilities left behind, both physically and economically, may blight otherwise healthy adjoining neighborhoods. With little vacant land left in the city, retailers wishing for newer, more modern facilities may opt to move out of the city altogether if our commercial centers are not progressive. Renewal and reuse can help counter downward trends, but it often requires public investment. Long-term economic and environmental sustainability demand that reuse and reinvention of the city's aging commercial corridors, including urbanization of these corridors and a move away from traditional suburban forms, take place on the part of both the public and private sectors. This is particularly true along the city's gateway corridors, which frame our image of the city.



Related Policies

1.6 9.4

5.1.1

Revitalization and redevelopment of Wilmington's aging commercial corridors through targeted economic development programs, improved development codes, infrastructure investment, and other means, should be a priority. The maintenance of these roadways should also be considered as part of any planning and redevelopment processes.



Related Policies

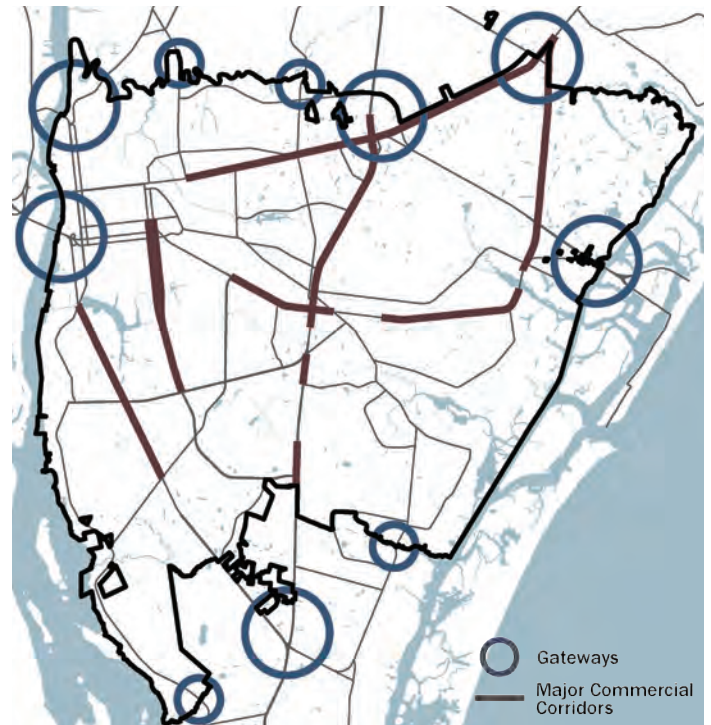
1.3.5



Additional Information

Market Street Corridor Study

Gateways and Commercial Corridors



Growth Factors Report

7.4

5.1.2

Mixed-use redevelopment should be promoted as a means of revitalizing and enhancing economic development in commercial corridors and creating transit- and pedestrian-oriented development patterns.



Related Policies

1.5

5.1.3

Public and private sector reinvestment efforts should be focused on those commercial areas that also serve as key gateways into the city, such as Dawson and Wooster streets, College Road and N. 3rd Street, including aesthetic and mobility improvements.



Related Policies

9.1.5

Commercial Corridor Enhancement - Carolina Beach Road

Major transportation corridors contain a great deal of potentially-developable land. Carolina Beach Road currently divides two neighborhoods, while properties along it are not achieving maximum potential return on investment. A better physical development pattern can result in economic development and investment.



Existing Condition
Source: Google, 2015

- A** Median, traffic signals and safe pedestrian crossings provided for efficient traffic flow.
- B** Increased building densities located close to the major roadway.
- C** Parking located at the rear and on the street; alleys used for access and service.
- D** Enhance existing desirable neighborhood patterns; access to existing businesses is enhanced.
- E** Shopfronts and other active uses along Carolina Beach “Boulevard” protected by landscaping and on-street parking.



Urban Redevelopment Concept for Carolina Beach Road

Source: City of Wilmington

5.2 Neighborhood Reinvestment

Wilmington has many wonderful neighborhoods, which has helped attract and retain residents and workers. Successful neighborhoods can benefit from easy access to support services, such as grocery stores, pharmacies, medical offices, parks, and shops. Quality retail near a residential neighborhood can provide a gathering place for residents while reducing the need to drive to meet basic needs. An enhanced sense of place and convenient access can provide a competitive advantage when attracting knowledge industry, creative class, and green tech workers. It also helps retain existing residents. Sustainable economies need quality housing and neighborhoods in proximity to jobs, including opportunities for residents at all income levels. Revitalization can be a long process, but it is most effective when efforts focus on a block-by-block process, rather than being thinly spread over many neighborhoods simultaneously.

5.2.1

In partnership with neighborhood groups, focused reinvestments to make safe, attractive, and walkable neighborhoods and attract skilled workers to Wilmington should be encouraged. A mix of housing types and price points should be encouraged to diversify neighborhoods, particularly around business clusters and schools.



Related Policies

3.1 9.6.1

5.2.2

Resources should be allocated to revitalize identified under-performing neighborhood business and residential areas. Technical and financial assistance to neighborhood business and merchant associations should be used to promote neighborhood reinvestment and reduce blight.



Related Policies

6.9.2 8.1.2 8.2.1

5.2.3

Redevelopment efforts should be focused on a small number of neighborhoods at any given time.

Clean Tech and Green Tech

“Clean tech” and “green tech” are often used interchangeably to describe jobs and technology that serve to minimize or reduce human impacts on the environment. Specific clean or green technologies include diverse range of products, services, and processes that harness renewable materials and energy sources, dramatically reduce the use of natural resources, and cut or eliminate emissions and wastes. “Green-collar” jobs and industries are typically in the environmental sector and implement environmentally conscious design, policy, and technology to improve conservation and sustainability. Clean sectors may also include non-manufacturing businesses with minimal environmental impacts.

5.2.4

In neighborhoods with little private investment and low social and economic indicators, additional development and density that enhances the area should be supported. Efforts to create a larger market base to support more and better goods and services for new and existing residents should be fostered.



Related Policies

1.7.2

5.2.5

Investments in public infrastructure, such as parks, schools, sidewalks, and streetscapes, should be done in a targeted manner in the neighborhoods of greatest need.



Related Policies

2.6.2 8.1.3 4.2.2

5.3 Business Development

Continuing to grow and develop Wilmington's business base to provide good jobs is critical to the long-term economic vitality and sustainability of Wilmington. Business attraction efforts should help the city and the region diversify the jobs base. All economies may experience continual shifts as existing businesses close or move and new businesses are born. To be successful, more new businesses must be created than are lost, and a share of those new businesses must achieve good long-term growth. Business recruitment should target those businesses and entrepreneurs most likely to find Wilmington an attractive location with an appropriate workforce. Wilmington can selectively seek industries, focusing on those that are consistent with the city's vision. These industries should be the target of focused marketing and recruitment efforts, although many sectors are encouraged to grow and invest in Wilmington and the region.

Wilmington can draw upon various state and federal programs as part of its recruitment efforts, including Urban Progress Zones, designated by the state to provide economic incentives to stimulate new investment and job creation in economically distressed urban areas, and Port Enhancement Zones, incentive packages available to industrial parks within 25 miles of the Port of Wilmington. Other programs and incentives, such as Neighborhood Revitalization Strategy Areas, Urban Revitalization Zones, brownfields redevelopment grants, and municipal service districts, are available to help spur economic growth and development. Additionally, the city has a multitude of non-governmental economic development partners active in the area, including Wilmington Business Development, Wilmington Downtown, Inc, Wilmington Film Commission, Chamber of Commerce, and Wilmington and Beaches Convention and Visitors Bureau, among others.

MARBIONC



Marine Biotechnology in North Carolina (MARBIONC) is a research- and development-based economic development program based at the University of North Carolina Wilmington that discovers, develops, and markets new products and technologies derived from the sea.

Source: HCC Public Information Office\CC BY-NC-ND 2.0\creativecommons

5.3.1

The city should be a leader in collaborative regional efforts.

5.3.2

Commercialization of research innovations to fuel growth of start-up businesses should be encouraged through partnerships with Cape Fear Community College and the University of North Carolina. Wilmington.

5.3.3

Business recruitment efforts should focus on industries and businesses that are environmentally conscious, promote sustainable practices, and reduce negative impacts on the environment. "Green-collar" business development that is consistent with the city's goals, particularly those with the potential for locating within easy access of unemployed or underemployed workers, should be supported and encouraged.



Related Policies

6.9.1

6.9.3

5.3.4

Technology and bioscience industries should be supported as a means to further diversify Wilmington's economy and play to the strengths of the region's research and training programs.

5.3.5

In collaboration with businesses and neighborhoods, issues and conflicts that inhibit economic growth and neighborhood development should be addressed in order to help grow and expand job opportunities and provide a healthy economic base.

5.3.6

Training, technical assistance, incentives and incubator facilities to foster small businesses, should be provided to help create a diverse and sustainable local economy. Incubator facilities should be provided in targeted areas, as appropriate.

5.3.7

Small businesses and entrepreneurs should be encouraged to locate in underserved communities.

5.3.8

The needs of budding niche industries should be supported and the space and infrastructure necessary to support these growing businesses should be proactively provided.

5.3.9

Wilmington's position as a leader in the film and television industry in the state should be capitalized upon as a local economic development opportunity.



Related Policies

7.3.1

7.4.1

10.3.6

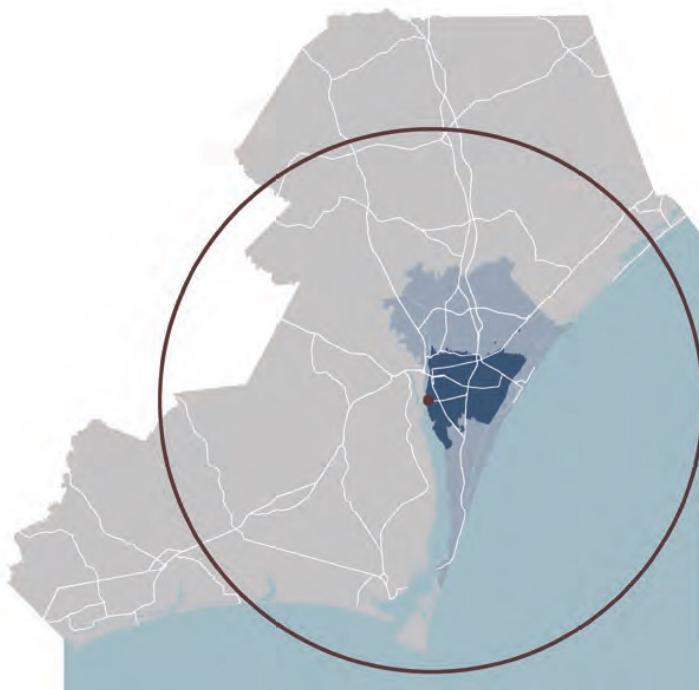
Cottage Industries

"Cottage industries" are those whose labor force consists of individuals and/or family members working at home, typically with their own equipment, and often working part-time.

Port Enhancement Zone

North Carolina offers tax credits and incentive packages for businesses that invest and create jobs within 25 miles of the state port.

Source: North Carolina's South East Regional Economic Development Partnership



Growth Factors Report

2.21

5.3.10

Low-impact, home-based businesses and "cottage industries" should be supported, where appropriate.

5.3.11

Private funding sources to increase the availability of venture capital should be supported to help the creation and growth of innovative, high technology businesses.

5.4 Education, Training, and Access

The region's greatest economic asset is its people. Wilmington thrives in large part due to its vibrant student population at both University of North Carolina Wilmington and Cape Fear Community College, active retirees, and educated workforce. As national and regional economies shift toward knowledge-based industries, skilled and trained workers are essential to compete successfully for new businesses. Providing residents with good jobs depends on helping them prepare themselves with the full range of necessary skills, starting with basic literacy and life skills and extending through college and post-graduate training, as well as retraining for older adults wishing to stay in the workforce. Reducing income inequalities and many associated social issues may be alleviated by the participation of low- and moderate-income residents in the area's growing economy. Job training and job opportunities may address many housing and economic needs for residents and help improve their economic status. Reducing barriers to employment by providing public transit access to job centers is also important.



Key Planning Theme

Economic Opportunity

Fostering opportunities for economic growth and development that enhance the concepts of each of the other themes is critical to future prosperity.

5.4.1

A broad range of employment opportunities should be provided for all residents by supporting a range of business types.

5.4.2

Economic stability and prosperity should be promoted and fostered by supporting partnerships with educational institutions, as they contribute to developing the city's educated and creative workforce. Partnerships with organizations that provide training in "soft skills," vocational skills, and other services should be established and strengthened between local employers, schools, and nonprofit organizations.



Related Policies

7.3.1

5.4.3

Job training, retraining, and related programs should be supported to help Wilmington's workforce transition to the jobs of tomorrow. Training services should be accessible to and located near those with the greatest need.

5.4.4

Collaborations that provide job opportunities for Wilmington's youth should be supported.

5.4.5

Workforce training and retraining options for growing industries such as tourism and hospitality, banking, arts and entertainment, clinical research, and health care, should be expanded.

5.4.6

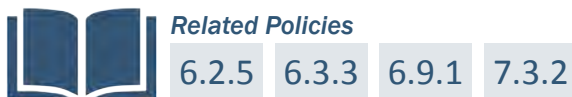
Investments in human capital, including investments in K-12 education, should be emphasized when providing economic development incentives to attract new businesses to Wilmington. Science, technology, engineering, and math (STEM) education and programs should be supported at all levels.

5.5 Economic Development and Land Use

Land use policies shape the city form, creating places and amenities that help Wilmington compete for businesses and residents. Mixed-use environments that allow residents to bike, walk, or use transit to reach their jobs, daily needs such as shops and services, restaurants, and entertainment can help Wilmington attract and retain a skilled workforce. Creating memorable, unique places that differentiate Wilmington from other places can help attract new businesses and employers to the area. Reducing residents' and employees' dependence on single-occupant vehicles will help reduce transportation costs and traffic congestion. Protecting prime sites for industrial and office use from competing demands will help ensure that Wilmington can continue to offer competitive locations for new and expanding businesses. In short, investing in schools, community features, and transportation choices will serve Wilmington well in terms of business recruitment and retention. Growing local investment is Wilmington's best economic development strategy.

5.5.1

Parks, leisure, natural resources, streetscapes, public realm enhancements, and arts and cultural amenities should be leveraged as key economic development assets and part of the city's economic development infrastructure.



5.5.2

Appropriate intensification and retrofitting of existing office and retail clusters with new, interconnected, pedestrian- and bike-friendly residential and retail uses should be encouraged to provide attractive and competitive live-work designations.



5.5.3

Office space in mixed-use and urban centers should be encouraged to create a competitive advantage for Wilmington by providing a product type largely lacking in the regional marketplace.

Transit Mode Choice



Transit mode choice refers to an individual's preference of a particular way to get from place to place. In terms of transit usage, "choice ridership" is used to refer to transit users who have other options for transportation, but use public transportation, such as a bus or train, because they prefer that option over other options available to them.



Related Policies

2



Box Set Cross-Reference

Growth Strategies Report and Maps

5.5.4

High-quality transit service and facilities are basic and necessary components of the region's transportation system and should be provided to help attract employers and choice riders in an increasing competitive arena.



Related Policies

2.5.5

1.2.2

5.5.5

Land use patterns and zoning regulations should support retail, office, and mixed-use infill and should not push retail to edge locations or promote the abandonment of existing retail centers. Emerging and re-emerging retail districts should be identified and encouraged to capitalize on those specific characteristics and niches that make them distinctive and desirable to patronize.



Related Policies

9.4.2

1.9.3

9.6.2

5.6 Tourism and Hospitality

Wilmington has a thriving hospitality and tourism industry. The city recently invested in a new convention center and plans are underway for a new convention center hotel to expand the city's hospitality industry. Wilmington has long benefited from its proximity to the area's beaches and natural resources, the presence of the University of North Carolina Wilmington, well-known film locations, and a vibrant downtown and thriving historic district. Tourism provides important support for local-servicing retail and restaurants, as well as many entry-level jobs. Wilmington's many cultural, historic, open space, and recreation resources offer valuable opportunities to enhance tourism and expand the local economy.



Related Policies

10.3

5.6.1

In partnership with the Wilmington and Beaches Convention and Visitors Bureau and other partners, the city should position itself as a regional destination for conventions, major sporting events, the performing arts, and special events. Programs and services to support and expand the city's hospitality and tourism industry should be provided.



Related Policies

7.3.2

10.3.3

10.3.5

5.6.2

Recreation, events, and attractions that enhance the strengths of Wilmington's tourism sector should be promoted. Strong partnerships with local historic preservation and arts groups should be fostered to identify and promote Wilmington's extensive heritage and cultural resources.



Related Policies

6.9.1

7.2.1

10.3.4

11.1.2

5.6.3

Diverse and accessible lodging and accommodations to support tourism growth should be supported through partnerships with developers, investors, and other local organizations.



Wilmington Convention Center

The Wilmington Convention Center (WCC) is owned by the City of Wilmington and opened for business in November 2010. It is an economic driver that attracts conventions and events, resulting in the creation of new jobs and businesses in and around the city.

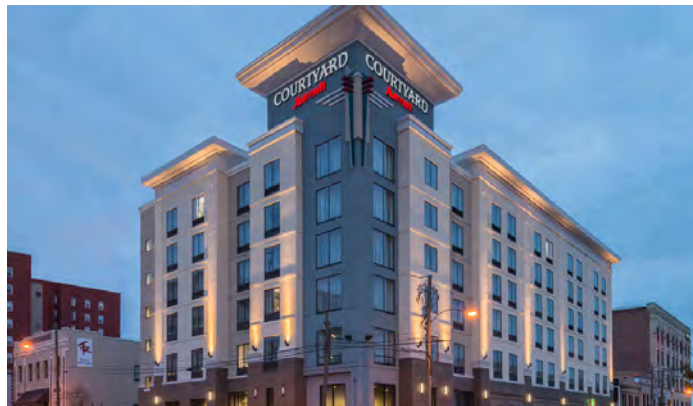
Source: City of Wilmington



Wilmington Hammerheads

Wilmington Hammerheads is a professional American soccer team that competes in the Eastern Conference of the United Soccer League.

Source: Wilmington Hammerheads FC



Downtown Courtyard Marriott Hotel

A new hotel accommodates visitors in the heart of Wilmington's urban center.

Source: Marriot International, Inc.

5.7 Targeted Industries

The “creative class” or “knowledge-based workers” are very broadly defined as that portion of the workforce including creative professionals, researchers, artists, educators, and other similar professions. Research supports the correlation between a strong creative class presence and a region’s economic vitality. Supporting creative class industries is consistent with preferred objectives of clean, non-polluting jobs. As the lines between art and science continue to blur, collaboration across disciplines is increasingly important. Innovation and new discoveries, thriving educational and cultural institutions, and a healthy film industry offer Wilmington an opportunity to expand and enhance its base of creative industries. Creative sector growth should not be pursued to the exclusion of other jobs; rather, the opportunity for growing this sector should be balanced with thriving port industries and travel and tourism.

5.7.1

Job creation and growth in the creative industry sectors should be promoted through economic development programs and incentives and through partnerships with schools nonprofit groups, and other agencies.



Related Policies

10.3.5

5.7.2

Technology-intensive industries such as computer system design, graphic and multi-media design, and broadcasting should be pursued and environments that support these jobs should be created. State-of-the-art technology infrastructure, public utilities, and capital improvements planning that support and enhance the growth of technology industries and should be supported.



Related Policies

1.8.1

5.7.3

Educational opportunities, diverse and affordable neighborhoods, flexible, low-cost commercial space, and the creation of attractive and affordable working environments should be maximized to help facilitate start-up businesses.

5.8 Regional Collaboration

Economic development cuts across disciplines, organizations, and industries. Effective attraction and retention of businesses, workforce development, and neighborhood/corridor redevelopment depend on joint efforts by the city, New Hanover County, state, local and regional economic development organizations, the private sector, and nonprofit groups. Economic development efforts must be as efficient and effective as possible in supporting and expanding the city’s tax base, especially in terms of limited fiscal resources and limited vacant land. Coordinated efforts can leverage the resources of all the players to make a bigger impact.

5.8.1

An equitable approach to economic development efforts, funding, and planning should be taken throughout the city. Revenue and opportunity should be generated in a manner that does not place undue burden on either businesses or residents, or on any single economic sector.

5.8.2

The city and its economic development partners should work closely to maximize all of the region’s resources and leverage opportunities for shaping the city’s and the region’s economic future in the most cost-effective manner. Coordinated efforts should allow Wilmington and the region to better capitalize on local economic development opportunities.



Related Policies

1.11.2

2.2.7

6.9.1



Key Planning Theme

Regional Collaboration

Collaboration with other local governments, including New Hanover County and surrounding towns and counties, is critical to Wilmington’s and the region’s success.



6

Environment and Natural Resources

- 6.1 Watershed Protection and Restoration
- 6.2 Sensitive Natural Areas
- 6.3 Urban Forest
- 6.4 Air Quality
- 6.5 Coastal Resilience
- 6.6 Low-impact Development Practices
- 6.7 Energy Efficiency, Renewable Energy, and Greenhouse Gas Emissions
- 6.8 Sustainable Water Supply
- 6.9 Balanced Economic Development
and Natural Capital

Intracoastal Waterway

Image (opposite) looking
south from Airlie Road.

Source: City of Wilmington



“Keep close to nature’s heart...and
break clear away, once in awhile, and
climb a mountain or spend a week in
the woods. Wash your spirit clean.”

— John Muir

Introduction

Wilmington's favorable location - flanked by the Cape Fear River to the west and the Atlantic Intracoastal Waterway to the east, along with the tidal creeks and nearby beaches - is one of the primary reasons why the Wilmington area has experienced considerable, sustained growth. Along with this growth, however, comes pressure on the very resources that attract tourists and new residents to the region.

As the region continues to urbanize, the area faces a wide range of environmental and public health challenges. Maintaining clean air and water and conserving adequate open space and natural areas are critical. These assets are important to the well-being of all citizens and help define the city as one that values the quality of its environment as much as the health of its economy. A healthy economy does not mean sacrificing public health and environmental quality, but rather, that healthy ecosystems support healthy people, which in turn, promote a healthy economy.

Managing growth in ways that respect ecological systems should be a primary goal for Wilmington and an accurate analysis of the natural and built landscapes is critical. This analysis can be found in the Growth Factors Report, and includes an assessment of not only grey infrastructure (roads, utilities), but also the ecological infrastructure (wetlands, floodplains, water resources).

"Carrying capacity" is a measure of the natural and human-influenced limits to development beyond which significant harm to natural resources will occur. Various community assets determine the carrying capacity, including natural assets such as groundwater supply, wetland function and productivity, and tree canopy, and engineered constraints such as sewage treatment capacity, treated water supply, and roadway capacity. As growth continues, opportunities for conservation and protection may be lost and restoration becomes more costly. Another element of carrying capacity that cannot be overlooked in coastal communities is the ability to respond to or evacuate from natural disasters.

What Citizens Said

- Protect animal habitats, wildlife, native biodiversity, vegetation, including dedicated undeveloped space and parks for nature preserves
- Keep creeks, marshes, and the river clean both in terms of overall water quality and litter/trash
- Preserve the urban forest; tree canopy, green areas, planting, tree-lined streets and better tree maintenance are needed
- Tree reforestation plans for neighborhoods are needed
- Urban forest plan and more trees everywhere are needed
- Better landscaping is needed to improve the filtering of water
- Incentivize rain gardens to help drainage; more pervious surfaces and riparian buffers needed
- Sustainable development would make Wilmington even better; rules on where to build/better buildings would help protect our coastal resources
- Natural resources protection and accessibility are essential to our quality of life and a key asset
- Add more natural areas; active and passive recreation areas
- Preserve/expand green space, stop removal of green spaces and wooded areas
- Protect natural area on west side of river
- No more dirty water, dirty air
- Desired Future: Wilmington is the pioneer for sustainability; sustainable city
- Factors in choosing place to live: high-quality natural environment, clean environment, green spaces and natural areas
- Wilmington should be a green city with reduced energy usage; LEED standards; natural gas usage; sustainable consumption and alternative/renewable energy sources is desirable
- Using alternative fuel for buses, city vehicles, electric vehicle battery exchange, charging stations would improve air quality

Policies

6.1 Watershed Protection and Restoration

Wilmington is located at the juncture of two major watersheds, the Cape Fear River and the Atlantic Intracoastal Waterway. All surface waters in Wilmington drain to one of these two water bodies and are divided into two groups: tidal creeks and Cape Fear River tributaries. Tidal creeks drain directly into the Atlantic Intracoastal Waterway and make up the eastern portion of Wilmington's surface waters. Cape Fear River tributaries drain directly to the Cape Fear River and comprise the western portion of Wilmington's surface waters.



Growth Factors Report

3.1

Stormwater runoff from development is a major contributor to poor surface water quality. Less significant in urbanized New Hanover County, but an important factor coming from upstream, is agricultural land use in the Cape Fear River Basin. Development most often results in increased stormwater runoff, alterations to the natural habitat, and loss of ecosystem services. Stormwater runoff can impact estuarine systems through both input of freshwater, as well as the pollutants the water carries. Coastal watersheds of southeastern North Carolina are characterized by a gently sloping topography and shallow, highly variable ground water tables, conditions that present unique challenges for stormwater management.

The amount of pollutants entering a waterway in runoff from impervious surfaces increases as the impervious surface coverage in a watershed increases. According to the Center for Watershed Protection, water quality in streams, lakes, and wetlands is negatively impacted when impervious surface coverage in a watershed exceeds just 10%. When impervious surface coverage reaches 25%, waterways are typically no longer able to support healthy aquatic systems. Wilmington is currently estimated to have approximately 28% impervious surface coverage, including streets, sidewalks, and residential and nonresidential building footprints and parking lots.

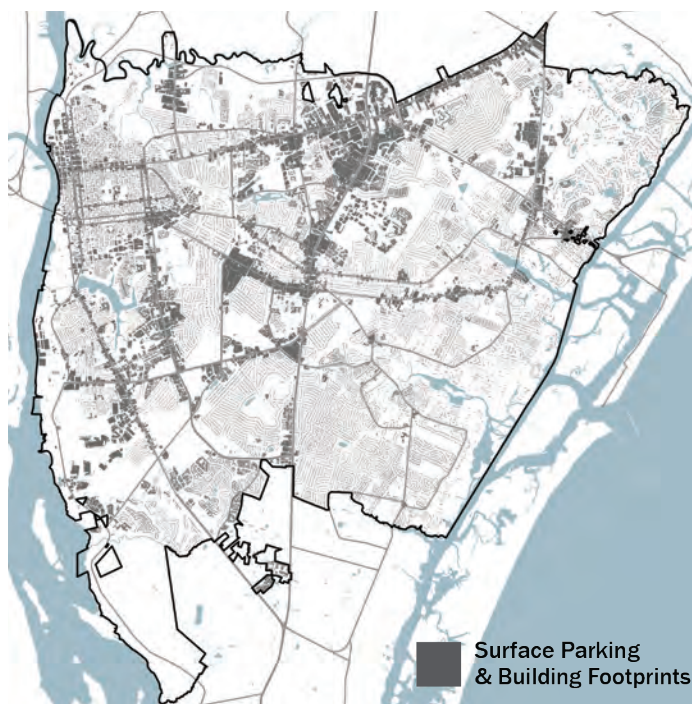
Pollution from urban runoff may include a number of sources and types of contaminants. Urban runoff includes the washing off of petroleum products, animal wastes, and other debris from roads, parking lots, and roofs; lawn pesticides and fertilizer; and large pulses of polluted stormwater, which upset salt water balance and water clarity in estuaries. In coastal locations, marina operations may generate runoff pollution from impervious surfaces, as well as petroleum product leakage, suspension of sediment from boat traffic, and wastewater flushing from boats.



Related Policies

8.1

Impervious Surfaces



Growth Factors Report

4.4

7.5

6.2 Sensitive Natural Areas

Impaired Waters (303 d List)

In North Carolina, all named streams have been classified as to their “best” usage, based upon water chemistry data.

The major causes of “partially supporting” or polluted (impaired) streams, sounds, and estuaries in the Wilmington area are multiple “nonpoint sources” of pollution including stormwater runoff and marinas.

The state’s 303(d) list, so named for Section 303(d) of the federal Clean Water Act, is updated every two years. For each two-year cycle, states must evaluate the health of their waters and list those showing signs of being impaired. While water bodies can be added or removed from the list with each revision, as of 2014, the Cape Fear River, Greenfield Lake, and at least portions of Wilmington’s primary creeks, with the exception of Barnards Creek, are listed as impaired. Impaired waters most often become subject to water pollution restrictions for the affected watershed, which is often a costly requirement.

6.1.1

Restoration, protection, enhancement, and maintenance of watersheds should be a priority. Existing programs and partnerships with the University North Carolina at Wilmington and other partners to address water quality should be continued and expanded.

6.1.2

In already developed areas of the city, voluntary stormwater runoff reduction efforts on private property should be promoted and encouraged in an effort to yield an overall reduction of stormwater volume.

6.1.3

Retrofits to reduce stormwater runoff in public projects should be prioritized in locations where they yield the most cost effective volume reduction.

“Sensitive areas” in Wilmington include a wide range of environmental resources. Environmentally sensitive natural areas such as fish and shellfish nursery areas, Outstanding Resource Waters, estuarine waters, public trust waters, shell fishing waters, significant natural heritage areas, federally regulated wetlands, non-coastal wetlands, wetland vegetation, streams, creeks, and the 100-year floodplain, provide important functions and are key features of the coastal landscape. Identifying and managing lands with special natural resource values and hazards can prevent conflicts and reduce losses from natural hazards. These measures can also serve broader land and water management objectives, protect property values and the city’s tax base, and reduce the cost of public services such as disaster response or stormwater management.

Poorly located and designed development can contribute to natural habitat loss and fragmentation, which negatively impact wildlife abundance and diversity. For many species, fragmentation is equivalent to total habitat destruction, since the isolation and generally small size of the remaining habitat areas render them either inaccessible or unable to support a healthy population.²⁸ Even large patches of habitat may not sustain certain species if they are not connected to other large patches, since many species require very large areas over which young animals can move around in order to avoid competition and prevent inbreeding.²⁹ Fragmentation also makes remaining wildlife populations more vulnerable to natural environmental stresses, such as fire, flooding, and drought, by trapping wildlife in small, isolated pockets.

Habitat Fragmentation

Habitat fragmentation is the breaking up of one patch of habitat into several smaller patches resulting in isolation of some of the resident wildlife.

6.2.1

Environmentally sensitive natural areas should be identified, mapped, protected, enhanced, and maintained.

6.2.2

Opportunities and incentives to mitigate the loss of sensitive areas that occur as part of the development process should be identified. Impact reduction and avoidance measures should be based on criteria that take environmentally sensitive natural areas and habitats into consideration.



Related Policies

1.7.8

Ecosystems

An **ecosystem** is a collection of plant, animal, and microorganism communities and the non-living environment interacting as a functional unit. Humans are an integral part of many ecosystems.

Ecosystem services are the benefits that society realizes from ecosystems. These services include provisioning services (food and water), functional services (such as water filtration, nutrient cycling, and flood control accomplished by wetlands and vegetation) and cultural services (such as spiritual renewal and recreation). These services all have an intrinsic value that is not often factored into decisions that impact these ecosystems, diminishing the value of the services.

6.2.3

Development proposals should employ practices to avoid or minimize impacts of dredging, public access, marinas, and inlet maintenance projects near or within environmentally sensitive areas. Performance standards should be employed to help achieve an ongoing balance between the interests of individual property owners and the need to protect sensitive natural areas.



Related Policies

1.2.6

6.2.4

The design and construction of public facilities such as roads, sewers, or stormwater control, should utilize best management practices to minimize impacts on sensitive natural areas, open space, and conservation areas.



Related Policies

2.1.3

2.2.8

4.2.4

9.4.1

8.1.1

10.1.5

6.2.5

Fishing, shellfishing, and water-related recreation activities occurring in special habitat areas should be supported as important components of Wilmington's quality of life and economy.



Related Policies

5.5.1

5.5.1

Areas of Environmental Concern

Due to the sensitive nature of the coastal region, the 1974 Coastal Areas Management Act (CAMA) directed the Coastal Resources Commission to identify and designate "areas of environmental concern" in order to control land disturbance that might cause irreversible damage to property, public health, and the natural environment.

Significant natural heritage areas, one type of an area of environmental concern, include complex natural areas, areas that sustain rare and endangered species, unique geologic formations, and significant historic architectural structures and archaeological features. These areas of environmental concern are important to the entire state because of their role in maintaining the coastal ecosystem, value for scientific research and education, historic significance, and/or aesthetic value. This class of sensitive area includes important animal breeding areas, important animal and plant species locations, and important community complexes.



Additional Information

NC DENR
Division of Coastal Management



Additional Information

NC DENR
Natural Heritage Program

6.3 Urban Forest

The integration of trees, natural areas, and green space into the Wilmington landscape is important for environmental value, scenic beauty, public enjoyment, and attractiveness for tourism and new business and industry.

The urban forest contributes to the visual and historical integrity of our community, mitigates noise, reduces the heat island effect, reduces stormwater runoff and erosion, reduces air pollution, absorbs carbon from the atmosphere, and improves the quality of life for all citizens. The urban forest of Wilmington has experienced an estimated 20% reduction in canopy coverage over the past 10 years. Investments made in replacing trees today will reap huge rewards for future generations of Wilmingtonians.



Related Policies

9.2

6.3.1

Tree preservation should be a priority in developments where significant clusters of trees can be protected for meaningful impact and appearance. Planting of street trees with frequent spacing should be a priority where the density of buildings, infrastructure, and required grading make the preservation of existing trees unfeasible.

6.3.2

The use of native vegetation and xeriscaping should be encouraged and the use of invasive species discouraged. All municipal projects should set an example with appropriate plant selection.



Related Policies

9.2.6

6.3.3

The city should collaborate with the Wilmington Metropolitan Planning Organization, North Carolina Department of Transportation, and others to enhance streetscapes as identified in adopted corridor plans using appropriate tree species.



Related Policies

5.5.1

2.1.3

6.3.4

Conflicts between utilities and established trees and disturbance to the existing tree canopy should be minimized. Tree selection and placement should take into account overhead and underground utilities.



Related Policies

8.1.4

9.2.5

6.3.5

The city should actively plan to protect and enhance the urban forest for future generations with a program to steward the grand trees of the city. New trees should be planted in ways that provide the type of tree canopy that contribute to the areas over all aesthetic and quality of life.

Urban Forest

The urban forest refers to all publicly- and privately-owned trees within an urbanized area. This includes trees in plazas and medians, in private yards, and any stands of remnant forest, such as the pine forest at Hugh MacRae Park. When defining “urban forest,” it is necessary to consider the entire urbanized area, not just a downtown area. In this sense, urban connotes areas with relatively high numbers of both people and man-made surfaces.

Source (All Images): City of Wilmington



6.4 Air Quality

In terms of air pollution, New Hanover County has a natural advantage over inland areas. Due to the differential cooling and heating rates of land and water, sea breezes blow air offshore in the evenings and onshore during the day. According to the state's Air Quality Division, this sea breeze effect provides ample air movement to limit accumulation of airborne toxic chemicals; however, it should be noted that emissions blowing inland from New Hanover County may be contributing to non-attainment of air quality standards in inland areas.

Sources of air pollutants include two primary categories: stationary and mobile. Stationary sources include power plants, manufacturing facilities, incinerators, etc. Large stationary sources, such as power plants and large manufacturing facilities, must have permits from the state to operate if their emissions exceed certain thresholds. Mobile sources include cars, trucks, buses, planes, trains, boats, motorcycles, and gasoline-powered yard maintenance equipment. Mobile sources may be classified as on-road (e.g., cars and trucks) and off-road (e.g., trains,

lawn mowers, tractors, and construction equipment). In addition to the stationary and mobile sources, air pollutants, may be generated from agricultural activities, construction, or open burning.

Emissions from motor vehicles are major sources of air pollution. "Vehicle miles traveled" is a measure of the number of miles traveled by all motor vehicles within a particular area and can be used as an indicator of the rate of increase in pollutants emitted from vehicle exhausts. Transportation demand management strategies may be employed to increase use of alternate modes of transportation. Management strategies may also include providing the infrastructure necessary to support these alternatives, such as electric vehicle charging stations. Such strategies can help reduce motor vehicle miles traveled and therefore air pollution. The transportation chapter contains more information and policies related to transportation demand management.



Related Policies

2

Air Quality and Public Health

The Clean Air Act establishes standards for a set of pollutants termed "criteria pollutants" (ozone, particulates, carbon monoxide, ammonia, sulfur dioxide, nitrogen oxides). A primary national standard has been set that protects human health. A geographic area that meets or does better than the primary standard is called an attainment area; areas that don't meet the standard are non-attainment areas. Non-attainment areas may be required to take special actions to reduce pollutant emissions, such as implementing vehicle emissions inspections or the use of special gasoline additives.

The North Carolina Department of Environment and Natural Resources (DENR) Division of Air Quality currently operates three air monitoring systems within New Hanover County, and has a total of five within the region. These stations measure levels of particulate matter sulfur dioxide (SO₂), carbon monoxide (CO) and ground-level ozone.

Ground-level ozone forms when *nitrogen oxides* (NO_x), a by-product of combustion, react with *volatile organic compounds* (VOCs) from both human and natural sources in the presence of heat and sunlight. This type of ozone is highest in the late spring and summer when the sun is strongest and the days are longest. Ozone is a strong respiratory irritant and can cause serious health problems, especially for sensitive groups. The other main pollutant, called particulate pollution, consists of a mixture of tiny solids and liquid droplets suspended in the air. These particles come in a wide range of sizes, but those known as fine particles (2.5 micrometers and smaller in diameter) are of particular concern because they can penetrate deep into the lungs.

6.4.1

Walkable and bikeable communities, public transit, and integrated land use and transportation planning should be promoted and encouraged to help reduce motor vehicle emissions.



Related Policies

1.3.4 2.5.8

6.4.2

The city should collaborate with the North Carolina Department of Transportation, Wilmington Metropolitan Planning Organization, and other agencies to track air quality and motor vehicle miles traveled and identify strategies to reduce emissions from mobile sources to meet air quality attainment goals.

6.4.3

State, regional, and local resources should be applied to encourage clean transportation choices through a transportation demand management program.



Related Policies

2.1 2.3.1 2.6.8

10.2.11



Additional Information

Transportation Demand Management Plan



Key Planning Theme

Regional Collaboration

Collaboration with local employers through the Transportation Demand Management Program offers commuters various ways to reduce their environmental impact during their daily commute.

6.5 Coastal Resilience

The City of Wilmington and New Hanover County both have adopted floodplain ordinances regulating development, construction, and use within all areas of special flood hazard. The ordinances have been amended several times since their initial adoption, and the city's ordinance is currently part of the Land Development Code

In 1990, the city and county jointly established a Hazard Mitigation Plan to further establish alternative measures to prevent damage from flooding. The Hazard Mitigation Plan has been updated regularly, and is currently in the process of being updated again. Participation in the Community Rating System (CRS), as established by the Federal Emergency Management Agency (FEMA), requires a number of regulatory, public outreach, and other measures of flood awareness. Favorable CRS ratings can result in reduced flood insurance rates for area property owners. The county participates in the CRS program, but the city currently does not.

Floodplain Maps

Both the city and county floodplain maps have been revised as recently as 2007 (updates anticipated in 2015), with the major change being the reclassification of areas along the sounds from A to V zones.

The **V zone** is the most hazardous zone. It is defined as those areas that would be flooded by a 100-year storm and would be subject to battering and erosive wave action.

The **A zone** encompasses those areas that would be flooded by a 100-year storm but would not be subject to wave action.



Growth Factors Report

3.3

A wide range of potential sea level rise projections have been developed by various authorities. Despite the differences of opinion and possible future scenarios, it would be unwise to ignore the issue. Potential impacts from sea level rise are numerous and diverse. They include inundation of developable land, increased flooding impacts, damage to infrastructure, increased shoreline erosion, migration and loss of wetlands, and saltwater intrusion into fresh groundwater. The impacts would be most significant along the river and tidal creeks. Increased sea level rise would also result in increased extent of storm surges. Developing strategies to anticipate and adapt in the face of rising sea level and increased frequency and intensity of storms will make the city more resilient. The cost of retrofitting, repairing, replacing, or moving vulnerable infrastructure and facilities can be much higher than the cost of incorporating adjustments at the planning and design phases of development.

6.5.1

The city should work to minimize impacts to developed and developable land from flooding, increased shoreline erosion, loss of wetlands, and contamination of ground water by saltwater under scenarios of sea level rise and increased flooding. Consideration should be given to long-term sea level rise scenarios in planning, design, and cost determination for infrastructure, such as roads, water and wastewater systems, and electric utilities.



6.5.2

The joint Hazard Mitigation Plan should address impacts on sensitive habitats, changes in the areas impacted by hazards, repetitive loss properties, and increased erosion under storm and coast line change scenarios.

6.5.3

Future planning should include strategic analysis under scenarios of vulnerability of the critical infrastructure, identifying vulnerable populations, evaluating the city's capacity and readiness to respond, and identifying measures to reduce vulnerabilities.



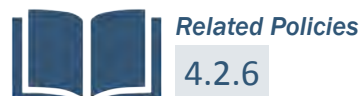
Coastal Resources

The coastal system is complex, dynamic, and susceptible to degradation. The area's fragile coastal resources should be preserved and protected from harm.

Image Source: City of Wilmington

6.5.4

More protective development standards, such as elevation requirements for buildings and prohibiting or compensating for filling in floodplains, should be encouraged where development occurs within the floodplain.



6.5.5

If public facilities are damaged due to hurricanes or coastal storms, they should be relocated, strengthened, elevated, or otherwise rebuilt to minimize the likelihood of damage in a future event.



Key Planning Theme

Nurturing Our Community

Natural resources are a major factor in attracting residents and visitors to the area; balancing accessibility and protection of these resources will be a challenge.

6.6 Low-impact Development Practices

As raw land that is suitable for development becomes more scarce, development costs increase, and issues like water quality and protection of sensitive areas are coming more to the forefront, developers and land planners are looking for cost-effective solutions to these issues that make good sense for the developer and the community alike. Options such as cluster subdivisions, incentivizing infill and redevelopment, and low-impact development may be alternatives that allow the desired development density while protecting floodplains, wetlands, and buffers along waterways. These types of development result in reduced impervious surfaces, thereby minimizing stormwater runoff and impacts. Open spaces created in these projects can serve as infiltration and filtering areas for treating stormwater runoff. An even better approach would be to direct new development to previously developed, but underutilized properties that are ripe for redevelopment. Typically these properties are on higher ground, away from sensitive areas, and already served by a full complement of infrastructure.



Growth Factors Report
Suitability Analysis

6.6.1

The city should incorporate sustainable design in capital projects and should adopt policies and recommendations for low-impact development, energy efficiency, and water conservation features.



Related Policies

4.4.2

6.6.2

Low-impact development and infill and redevelopment projects should be encouraged based on measurable performance criteria and taking advantage of existing infrastructure. Redevelopment should receive incentives that level the playing field relative to economic advantages of “greenfield” development.

6.6.3

The stormwater management program should balance the burden between existing and new development and provide incentives for redevelopment that provides a net improvement to stormwater treatment.

6.6.4

Historic preservation, adaptive reuse, and rehabilitation of buildings should be encouraged to maximize location efficiency and embodied energy.

Adaptive Reuse

Nesbitt Court, originally constructed in 1940 to provide housing for wartime workers and later for publicly-subsidized housing, is one of the best local examples of adaptive reuse. After decades of decline, the Wilmington Housing Authority shut down the site in 2007. Several years later the private development group, Tribute Companies, Inc., purchased the site for redevelopment. Instead of razing the existing buildings, for which federal funding was available, the new owners decided to rehab the existing structures and ultimately received LEED (Leadership in Energy and Environmental Design) Silver Certification and Outstanding Stewardship Award. South Front Apartments is now one of the most popular apartment communities in Wilmington.

The South Front Apartments attract a broad range of tenants from college students to young professionals, families and senior populations.

Before



After



Source (All Images): Tribute Properties, Inc.

Low-impact Development (LID)

Low-impact Development (LID) is an approach to site development and stormwater management that minimizes development impacts to the land, water, and air. The City Council adopted an LID Technical Guidance Manual, developed jointly with New Hanover County in 2008. Examples of LID techniques are demonstrated in the following photos.



Rain Gardens

These are planted depressions in the landscape that collect, store, and filter stormwater runoff from rooftops, driveways, parking areas, and streets.

Source: Mackey Mitchell Architects



Pervious Pavement

This type of pavement allows stormwater to seep into the ground thereby reducing runoff and allowing for groundwater recharge.

Source: Michael Wolcott \ CC-BY-SA-3.0 \ Wikimedia Commons



Rain Barrels or Cisterns

These collect and store stormwater runoff to be used for lawn and garden watering, decreasing the need to use water from a public system or private well.

Source: www.lid-stormwater.net



Green Roofs

These are living roofs that absorb rainwater, provide insulation, create wildlife habitat, and improve aesthetics.

Source: www2.epa.gov



Additional Information

LID Technical Guidance Manual



Key Planning Theme

Nurturing Our Community

Environmental sustainability is at the core of Wilmington's future.

6.7 Energy Efficiency, Renewable Energy, and Greenhouse Gases

Human activity has led to a significant increase in greenhouse gas emissions as by-products of industry, energy production, transportation, waste disposal, and agriculture. Greenhouse gases are an important measure of contributions to changes in the earth's atmosphere and climate. These gases contribute to a process called the "greenhouse effect," which occurs when atmospheric gases trap heat from the sun bouncing back off the earth that would normally radiate back into space. This trapped heat allows the earth to have higher average temperatures. The city conducted an inventory and estimate of greenhouse gas emissions from city operations in 2008 and City Council passed a resolution in 2009 establishing a target of a 58% reduction by the year 2050. The Public Services Department is tracking the city's progress toward this target.

Improvements in energy efficiency, switching to lower carbon emitting fuels, and energy conservation all have the dual benefits of savings in energy costs and reducing the emissions of greenhouse gases.

6.7.1

Energy efficiency measures should be incorporated into municipal project design, construction, and upgrades to reduce resource use, fuel costs, and carbon emissions, and to serve as an example to private development.



Related Policies

8.2.1

6.7.2

New development or redevelopment utilizing energy efficiency techniques should be encouraged.



Related Policies

3.1.6

3.2.8

6.7.3

Efforts to develop renewable energy sources and reduce greenhouse gas emissions should be supported.

Embodied Energy

"Embodied energy" is the total energy required for the extraction, processing, manufacture and delivery of building materials to the building site and is considered an indicator of the overall environmental impact of building materials and systems. Unlike life cycle assessment, which evaluates all of the impacts over the whole life of a building, embodied energy only considers the front-end aspect of the impact of a building material. It does not include the operation or disposal of materials.

Location Efficiency

"Location efficiency," like energy efficiency, describes how efficient a building site is. Compact neighborhoods with an interconnected street network, access to transit, mixed uses, and a concentration of retail and services are highly efficient. When brought together, these elements enable an efficiency of resource use.



Renewable Energy Sources

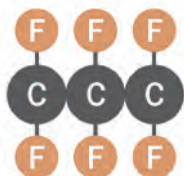
Solar panels and wind powered turbines are examples of renewable energy that is derived from natural resources such as sunlight, wind, tides, biomass, and geothermal heat that replenish themselves continuously. Technological processes convert these resources into electricity and heat that we can use in our homes and businesses.

Source: Armin Kübelbeck \ CC-BY-SA \ Wikimedia Commons
CommonsPublic Domain

Greenhouse Gases

Many greenhouse gases occur naturally in the atmosphere, such as carbon dioxide, methane, water vapor, and nitrous oxide, while others are synthetic. Atmospheric concentrations of both the natural and man-made gases have been rising over the last few centuries due to the industrial revolution. While gases such as carbon dioxide occur naturally in the

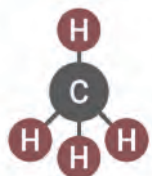
atmosphere, through our interference with the carbon cycle (through burning forest lands, or mining and burning coal), we artificially move carbon from solid storage to its gaseous state, thereby increasing atmospheric concentrations (National Centers for Environmental Information). The most significant greenhouse gas emissions are described as follows:



Fluorocarbons (GWPs):
These are high potency, but they are typically released in smaller volumes. These gases are usually emitted from industrial practices and from coolant and air conditioning systems.



Carbon dioxide:
This gas is emitted from the burning of fossil fuels such as oil, natural gas, coal, etc.



Methane:
Methane is emitted from animal waste, municipal waste, agricultural processes, and the extraction and transport of fossil fuels.



Nitrous oxide (NO₂):
NO₂ is emitted from agricultural and industrial practices. It is also emitted from the combustion of fossil fuels and solid waste.



Private Residence Energy Conservation

Home owners utilize energy efficiency techniques like solar panels and strategic shading with vegetation and canopies to help decrease energy consumption and costs.

Source: Tonu Mauring \ CC-BY-SA \ Wikimedia Commons
CommonsPublic Domain



Electric Vehicle Charging Stations

Numerous cities throughout North Carolina, including Wilmington, provide designated parking spaces for fuel efficient and electric vehicles as well as ridesharing.

Source: San Francisco Public Utilities Commission



Additional Information

LID Technical Guidance Manual



Key Planning Theme

Nurturing Our Community

Environmental sustainability is at the core of Wilmington's future.

6.8 Sustainable Water Supply

To ensure a sustainable water supply, communities need to evaluate long-term drinking water supply sources against anticipated future demands. This is made even more pressing in areas proximate to the coast, facing salt water intrusion into aquifers. Regional sustainable water supply planning can best address the needs into the future.

Available water allocation from the Cape Fear River is shared equally between the Cape Fear Public Utility Authority and the Lower Cape Fear Water and Sewer Authority. To augment the surface water supply, a significant amount of fresh water is pumped from groundwater wells that range in depth from approximately 75 to 200 feet.

In the Wilmington area, wells deeper than 200 feet will usually yield brackish (salty) water. This groundwater is contained in reservoirs or aquifers that slope southeastward from where they approach the surface in the Castle Hayne and Wrightsboro areas and reach a maximum depth of 200 feet along the coast.

According to the Cape Fear Public Utility Authority, demand projections indicate that the region's needs will approach the maximum safe allocation from the river within 30 years. This projection does not account for changes in storage, increased upstream demands, inter-basin transfers, unanticipated regional demand, depletion or degradation of local groundwater resources, prolonged drought, or flow requirements for

sustaining aquatic life. On the other hand, it also does not factor in the potential to improve this projection by altering water demand through increased conservation measures, revised rate structures, fulfilling some of the demand with reclaimed treated wastewater, and eliminating uncontrolled losses from the system.

6.8.1

A sustainable water supply future should include conservation, water reclamation, gray water utilization, stormwater harvesting, and aquifer recharge to extend water supply capacity. The city should collaborate with the Cape Fear Public Utility Authority to reduce water demands and maximize efficiency of water supply and use.



Related Policies

8.1.19

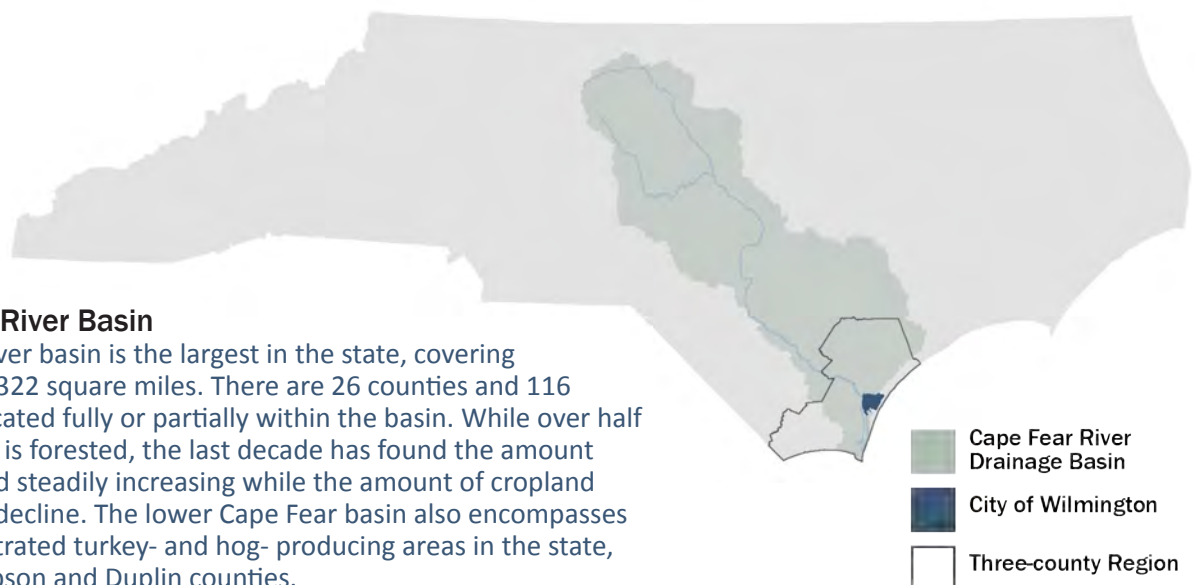
8.1.21

Reclaimed Water

In 2004, the state legislature expanded the ability of municipalities to recycle reclaimed water to supplement potable water supplies. To meet the new law's standards, water systems must treat the combined water to drinking water standards. Reclaimed water is a highly treated wastewater and is safely utilized in other U.S. states and countries to augment existing water supplies; North Carolina has now joined states such as Virginia, Colorado, Texas, Florida, and California in allowing this practice.

The Cape Fear River Basin

The Cape Fear River basin is the largest in the state, covering approximately 9,322 square miles. There are 26 counties and 116 municipalities located fully or partially within the basin. While over half of the river basin is forested, the last decade has found the amount of developed land steadily increasing while the amount of cropland has been on the decline. The lower Cape Fear basin also encompasses the most concentrated turkey- and hog- producing areas in the state, primarily in Sampson and Duplin counties.



6.8.2

The city should collaborate with regional partners to monitor and protect groundwater resources on an ongoing basis, and to continuously examine alternative technologies and sources to better ensure adequate water supply to sustain future growth and economic development.



Related Policies

8.1.7

6.8.3

To protect the water supply from the cumulative impacts of development, the city should collaborate with partners in the region to support improved practices upstream of freshwater intake to reduce nutrient loading, focusing on agricultural, land clearing and development in riparian areas.



Related Policies

8.1.13

8.1.17

Graywater

The North Carolina Plumbing Code defines graywater as “waste discharged from lavatories, bathtubs, showers, clothes washers and laundry sinks.” Graywater has not come in contact with feces, either from the toilet or from washing diapers, but may contain traces of

dirt, food, grease, hair, and certain household cleaning products. While graywater may look “dirty,” it may be a safe and even beneficial source of irrigation water if handled properly.

6.9 Balanced Economic Development and Natural Capital

Balancing the need for economic and job growth in our community with our fragile environment is a critical challenge. It is often these natural attributes that bring businesses and residents to the region to start with and it is these same quality of life attributes that bring people here to live and visit.

There is a natural conflict between the businesses that benefit from the intrinsic value and aesthetic attractiveness of the area’s natural and cultural resources and other businesses and industries that consume or degrade those resources. The economic well-being of the region, brought about largely by the success of the state port and associated industries, maritime-based businesses, the airport, tourism, and other business and industry sectors is dependent upon the ability to successfully address environmental and natural resource issues. In so doing, the business recruitment portfolio can specifically highlight the environmental significance and uniqueness of this area in addition to the infrastructure assets of the region.

6.9.1

The environmental significance and uniqueness of area natural and cultural assets should be highlighted in recruiting businesses and promoting tourism and ecotourism. Economic development strategies for the region should recognize the economic development value of environmental and natural resources.



Related Policies

5.3.3

5.6.2

7.2.1

6.9.2

Brownfield redevelopment, redevelopment of underutilized and blighted properties, and adaptive reuse or repurposing of existing buildings should be encouraged and incentivized.



Related Policies

1.7.4

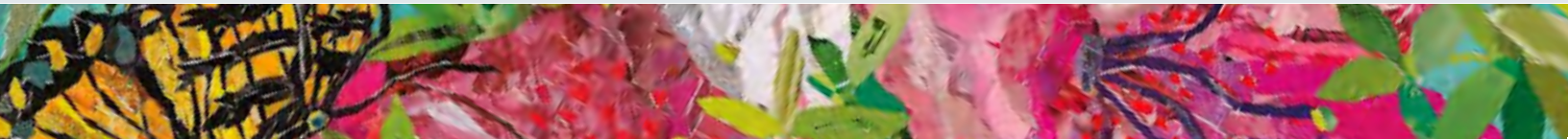
1.10.2

5.2.2

10.1.2

6.9.3

Businesses employing environmental stewardship in their business practices and development projects, including preservation and reclamation of natural resources through innovative design, should be encouraged.



7

Arts and Culture

- 7.1 Public Art
- 7.2 Arts and Cultural Venues
- 7.3 Economic Development Through the Arts
- 7.4 Film, Theater, and Cultural Identity

Thalian Hall

Image (opposite) of Thalian Hall, one of the most significant theatres in the U.S., has been in almost continuous use since it first opened in 1858.

Source: Thalian Hall Center for the Performing Arts

A wide-angle photograph of a grand theater interior. The foreground is filled with rows of plush red seats with dark wood armrests, arranged in a semi-circle. Above the seating area are two ornate balconies with decorative railings featuring red and gold patterns. A large, multi-tiered crystal chandelier hangs from the ceiling, casting a warm glow. The ceiling is painted a deep blue with gold trim and recessed lighting. The walls are dark green with gold accents. In the background, there are white doors and a small window. The overall atmosphere is one of classic elegance and grandeur.

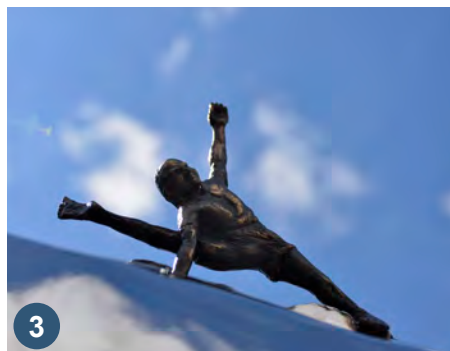
“The arts are the best insurance
policy a city can take on itself.”

— Woody Dumas

Introduction

Arts and culture are at the heart of the city's spirit and vitality. Wilmington features thriving art galleries, museums, a major independent film festival, and an active arts council. In today's global economy, a thriving cultural environment can set Wilmington apart from its peer cities, making the city a more attractive place to live, work, visit, and do business. By nurturing the arts, Wilmington not only enriches the daily lives of residents, but also fosters innovation, creativity, and a social framework of collaboration that promotes a healthy, diverse community and a vibrant business environment.

In 2008, several local arts organizations joined forces to create an arts council in Wilmington. The Arts Council of Wilmington and New Hanover County has six primary functions, including establishing the region as an arts destination, promoting arts-driven economic development, contributing to the quality of life of the region, providing a stream of funding to support the sustainability of artists and arts organizations, facilitating communication and collaboration within the arts community in Wilmington and beyond, and advocating for the arts at the local, state, and national levels. In addition, Cape Fear Community College is currently developing a Fine Arts Center downtown, which will provide nearly 160,000 square feet of space for the college's fine arts and humanities programs, including classrooms, studio space, and a 1,500-seat auditorium.



Source (All Other Images): artscouncilofwilmington.org



Source: City of Wilmington

1. Transformation Revisited, artist Andy Denton, Wilmington
2. Immigration Gate, artist Jim Gallucci, Wilmington
3. Floating Showoff Yogi, artist Andy Denton, Wilmington
4. Beacon, artist Jeff Kiefer, Wilmington
5. Era Gallery Mural, Wilmington

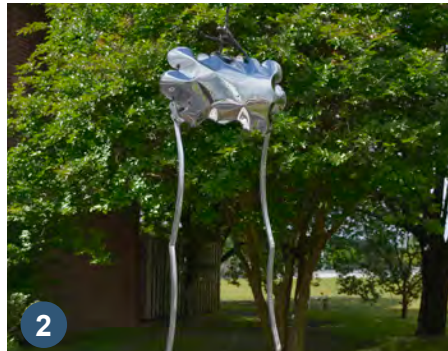
More than 200,000 people attend the North Carolina Azalea Festival each year. A 2011 study produced by the University of North Carolina Wilmington reported that the 2011 Azalea Festival had a total local economic impact of more than \$50 million.³⁰ During fiscal year 2010, in New Hanover County, arts and culture organizations and their audiences supported nearly 800 full-time equivalent jobs and contributed more than \$1 million to local governments and total arts and

culture-related expenditures in New Hanover County were estimated at over \$20 million.³¹ Promoting arts and cultural, public art, film festivals, local artists, local events, restaurant weeks, performing arts, and cultural festivals will strengthen Wilmington's economy. Increasing opportunities for art in public spaces will bring art into the daily lives of all citizens, regardless of race, nationality, and economic boundaries.

Wilmington boasts a Children's Museum, the Cameron Art Museum, the Cape Fear Museum, numerous local theater companies, Thalian Hall, one of the largest National Register Historic Districts in the country, one of the oldest synagogues in the state, a riverwalk, many festivals and events, a thriving public art program, fine arts and performing arts programs in the university and community college, and a convention center.



Source (All Images): artscouncilofwilmington.org



1. Comet: Ice and Iron, artist Carl Billingsley, Wilmington
2. Floating Showoff Yogi, artist Andy Denton, Wilmington
3. Linear Form, artist Matt Amante, Wilmington

What Citizens Said

- Quality of life factors are key to attracting new jobs
- Keep the historic districts and historic architecture
- More family friendly events needed
- Like the museums and cultural facilities
- Large event venue is needed
- Like the festivals and events
- Wilmington needs an African-American history museum
- Like the downtown "scene"
- Cultural amenities were a factor in choosing Wilmington as a place to live
- More music venues needed
- More fountains and public art

Policies

7.1 Public Art

Public art is art in any medium that has been staged in the public domain, usually outdoors, and accessible to all. Though the city has no formal public arts program, the Pedestrian Art program (PedART), supported by the city, has been active in Wilmington for several years, providing rotating sculptural exhibits in public spaces. Artists participating in the PedART program install temporary art exhibits on a rotating basis, intended to serve as an economic, cultural, and visual stimulus for the region. Public art can add aesthetic and cultural value to public and private developments.

7.1.1

Public art should help create and foster community and neighborhood identity and should be part of public projects, community facilities, greenspace, and along greenways. Public art should be part of the planning process for all municipal projects.



Related Policies

9.2.7



Key Planning Theme

Unique Places, Captivating Spaces

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

7.1.2

Wilmington's potential to showcase and fund public art and provide a coordinated vision through partnerships, coordinated leadership, and planning should be maximized and standards, tools, and best practices that encourage public art should be considered.

7.1.3

An arts component commensurate with the magnitude of a development project should be included in all requests for proposals/qualifications as city-owned properties are developed and redeveloped.



Motion, artist Jeff Kiefer



Humpty-Dumpty, artist Eric Isbanioly

Source (All Images): artscouncilofwilmington.org

7.2 Arts and Cultural Venues

Although Wilmington boasts interesting galleries, an amphitheater, a vibrant local theater community, and some smaller performance venues, the city is lacking a large performance venue. With the city's population ever-growing, and quality of life measures ranking high as factors to attract businesses and the creative class, Wilmington must continue to evaluate and expand our cultural and entertainment venues for the benefit of all residents.

There is a concentration of arts and cultural resources and opportunities in the Downtown Core, particularly along North Front Street. The Southside community is emerging as a center of smaller-scale film and production studios and home to an outdoor performance venue, Hugh Morton Amphitheater at Greenfield Lake. Away from downtown, there is a performance venue at the University North Carolina at Wilmington, and a few entertainment venues are scattered throughout the city.

Arts and Cultural Venues

Resource Type	Number
Cinemas	3
Museums	4
Performance and Event Venues	15
Studios and Galleries	34



Hugh Morton Amphitheater at Greenfield Lake
Source: City of Wilmington

7.2.1

Existing arts and cultural facilities, programs, and resources should be supported and maintained and the city should work in partnership with New Hanover County and the arts community to develop a range of venues and resources.



Related Policies

5.6.2

6.9.1

7.2.2

Nonprofit, education, and local government partners should work together to broaden the range of cultural facilities available to all citizens. Nontraditional venues, such as galleries, clubs, and public spaces for performance venues, should be evaluated for use where appropriate, and where neighborhood impacts are considered.

7.2.3

Facilities in proximity to each other, with bicycle and pedestrian connections enhance not only the arts/culture venues themselves, but also surrounding retail and dining establishments and should be encouraged. Connections between arts/culture venues and clusters should facilitate their use and usability.



Thalian Hall
Source: City of Wilmington

7.3 Economic Development Through the Arts

A flourishing arts and entertainment industry in Wilmington not only supports a high quality of life, but it creates and supports jobs. Beyond the direct jobs created, jobs in retail and dining are supported, as is arts and culture-based tourist revenue. Further, a high quality of life with diverse arts and cultural offerings helps attract new businesses, especially creative industries, to our area, which, in turn, attracts knowledge-workers to our area.

The creation of arts and entertainment districts in areas where the arts are already concentrated may help revitalize areas and spur the reuse of underutilized properties, and encourage artists to establish their studios and performance venues there. Such districts can also attract public and private developments and investments in those neighborhoods. These districts function as a capacity-building tool for the city to fund and promote the arts.



Street Musicians Perform during an “Art Walk”

Source: City of Wilmington

7.3.1

Vocational training in arts-related areas such as graphic and web design, set design, and nonprofit management, should be cultivated through partnerships with Cape Fear Community College and the University of North Carolina Wilmington.



Related Policies

5.3.9

7.3.1

7.3.2

Adequate funding of programs and facilities should be ensured through collaborative partnerships. Direct financial support and in-kind support from both public and private sources is necessary to support and grow a healthy arts community.

7.3.3

Emerging, organic arts districts should be fostered and encouraged. Arts and entertainment districts should be promoted and sustained, establishing districts where existing and emerging clusters are identified. Designation of arts and entertainment districts should be used as an economic development tool for the city, New Hanover County, and the region.

North Davidson (NoDa) Arts District

NoDa (short of North Davidson) is Charlotte’s Historic Arts District located around the intersection of North Davidson and 36th streets in the neighborhood of North Charlotte. The neighborhood, which began in 1903 as a self-contained industrial district for textile manufacturing, began to decline in the 1950s when the textile mills were sold and declined further with the closing of the mills in the 1960s and 1970s. The revitalization and transformation of the area began in the early 1990s as artists, recognizing the unique character of the area, began renovating the old mill village into a community for the arts. NoDa quickly gained a desirable reputation and has seen a boom in home ownership and new residential construction. The district is now serves as a major success story for neighborhood revitalization.



Source: www.noda.org

7.4 Film, Theater, and Cultural Identity

Wilmington is a leader in film and television production and has a rich culture associated with the film and television industry. Film and television production have been a major part of Wilmington's cultural scene since the 1980s. An active motion picture studio has brought top talent and production business to the area and has supported the nationally-recognized Cucalorus Film Foundation, the longest-running independent film festival in North Carolina. The local film industry is an economic development incubator and brings many jobs to the area.

Wilmington is home to the North Carolina Azalea Festival and a National Register Historic District that spans more than 230 blocks. National Register of Historic Places listed Thalian Hall, constructed in 1855-1858 when Wilmington was the largest city in the state, has the unique distinction of serving as both the city's political and cultural center. The Thalian Association is the oldest community theater association in the state.³² Hugh Morton Amphitheater at Greenfield Lake hosts the Cape Fear Shakespeare Festival every summer, and the University of North Carolina Wilmington boasts a strong theater program. These events and resources are tourism generators that can bring visitors to the city from the across the state, the country, and internationally.

Both Cape Fear Community College and the University of North Carolina Wilmington serve important cultural functions for the city, including not only events venues, but also performing arts education, arts-related vocational training, and performances, concerts, shows, and other events.

7.4.1

Wilmington's reputation, film industry, and other cultural assets should be capitalized upon to market Wilmington as the arts and culture capital of Southeastern North Carolina. New theater and film opportunities should be fostered through the support of projects and local partnerships under the umbrella of the Arts Council.



Related Policies

5.3.9

7.4.2

Events and festivals that enhance our artistic and cultural identity, along with the local film and television culture, should be promoted and encouraged.

7.4.3

The local arts community should be engaged in the planning process to better understand and affect how planning and the arts can collaborate to achieve mutual goals.

7.4.4

Cultural and heritage trails and special districts, including the expansion of historic districts, should be promoted to help reinforce Wilmington's cultural identity.



Related Policies

9.5.3

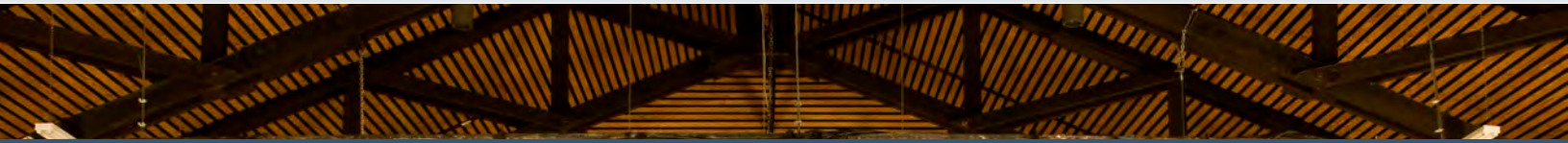
11.1.2

Fayetteville Cultural Heritage Trails

The City of Fayetteville and Cumberland County (NC) are home to a variety of cultural heritage trails that highlight the cultural, historical, and natural significance of the area. There are 17 trails that cover 750 miles and 250 years of cultural heritage.



Source (All Images) : www.VisitFayettevilleNC.com



8

Community Facilities and Services

- 8.1 Infrastructure
- 8.2 Municipal Operations and Service Delivery
- 8.3 Public Safety
- 8.4 Education

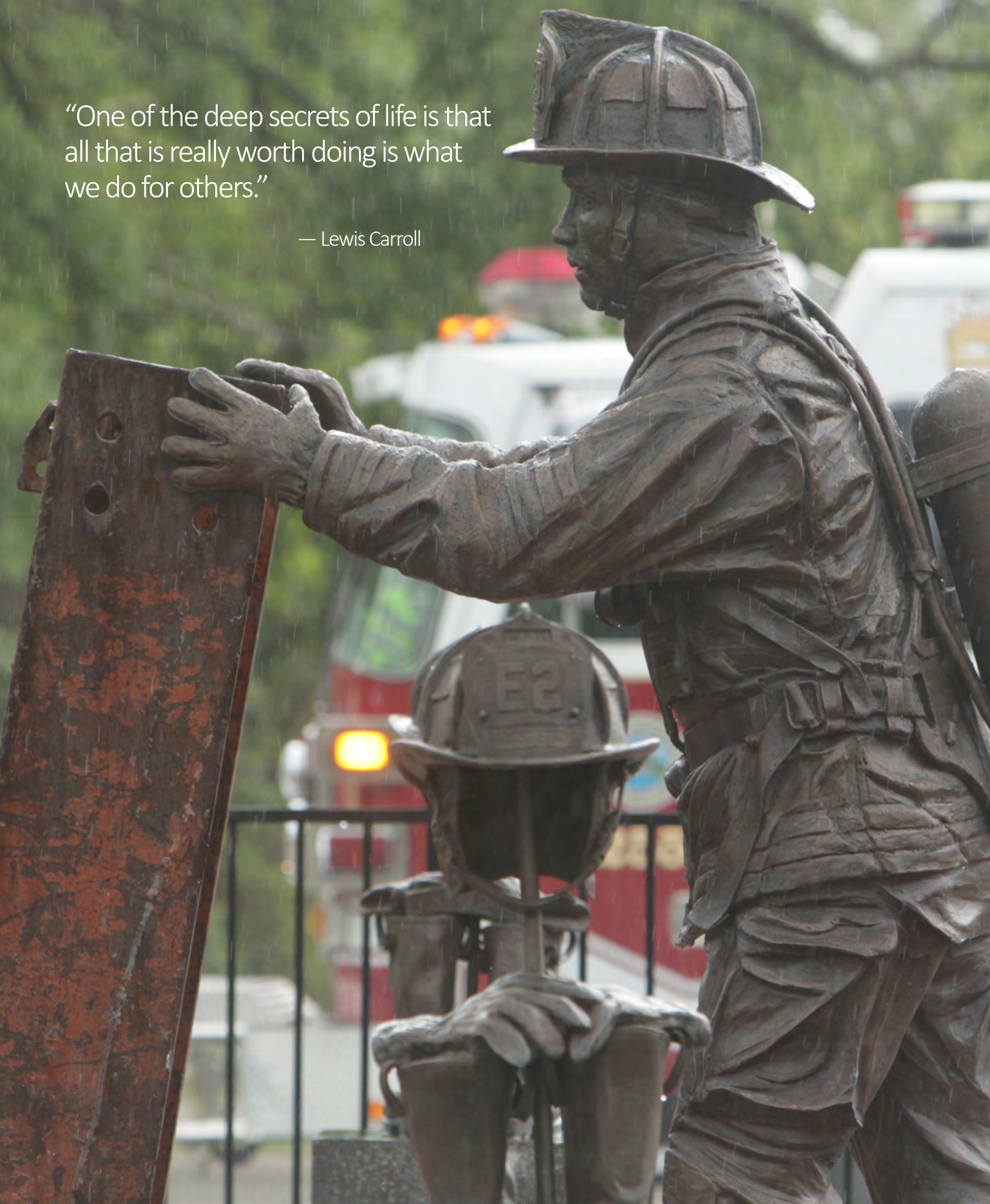
Wilmington Firefighters' Memorial

Image (opposite) of the memorial dedicated on September 11, 2013 in memory and honor of Wilmington Firefighters' lives lost in the line of duty.

Source: City of Wilmington

“One of the deep secrets of life is that
all that is really worth doing is what
we do for others.”

— Lewis Carroll



Introduction

Community facilities are established for the benefit and service of those within the community. This chapter focuses on policies to help future decisions about the location, funding, operation, programming, and design of community facilities and services. These community facilities include municipal office buildings, solid waste services, stormwater services and facilities, police and fire stations, schools, streets and sidewalks, and community services. While the city does not maintain or provide education, water and sewer, or health services, these factors are critical to the well-being of our region and its citizens. High-quality and reliable basic public services, like clean water, safe sewer systems, and stormwater management services are essential to Wilmington's future success. Businesses of all sizes rely on high-quality public services to operate. Well-built and well-maintained facilities also help the city recover from natural events such as hurricanes.

There are several major services that are provided by New Hanover County, including libraries, public education, social services. While these are critical community facilities and services, the city does not have direct responsibility or influence over these. Neither the city nor the county has direct control over water and sewer utilities, as these are under the control of the Cape Fear Public Utility Authority. As such, the city's role in ensuring that citizens receive these services is one of collaboration, support, and coordination with the county and the authority. Policies in this chapter address the array of city facilities and services, as well as the city's preferred policies related to education and public utilities. Although the city collects refuse, the city's collected solid waste and recyclable materials are not processed by the city, so policies related to the disposal of waste may also be limited and dependent on regional collaboration.

Public agencies aim to provide services to all citizens; however, due to past decisions and annexations of land developed under older regulations, services are not distributed evenly across the city. Agencies charged with managing public facilities must balance the need to maintain existing services and infrastructure with the need to bring new or improved services to underserved communities and new residents and businesses.

Given the likelihood of environmental, economic, and technological changes in the future, agencies that deliver, build, and manage services and facilities must reinvent systems and facilities to satisfy multiple uses, withstand environmental stress, and adapt to changing circumstances. The policies in this chapter support the equitable, efficient, and adaptive management approaches that are needed to provide high-quality facilities and services to current and future citizens. (Specific policies for parks and recreation are included in Chapter 4, for transportation in Chapter 2, and additional maps are located in the Growth Factors Report)



Related Policies

2

4

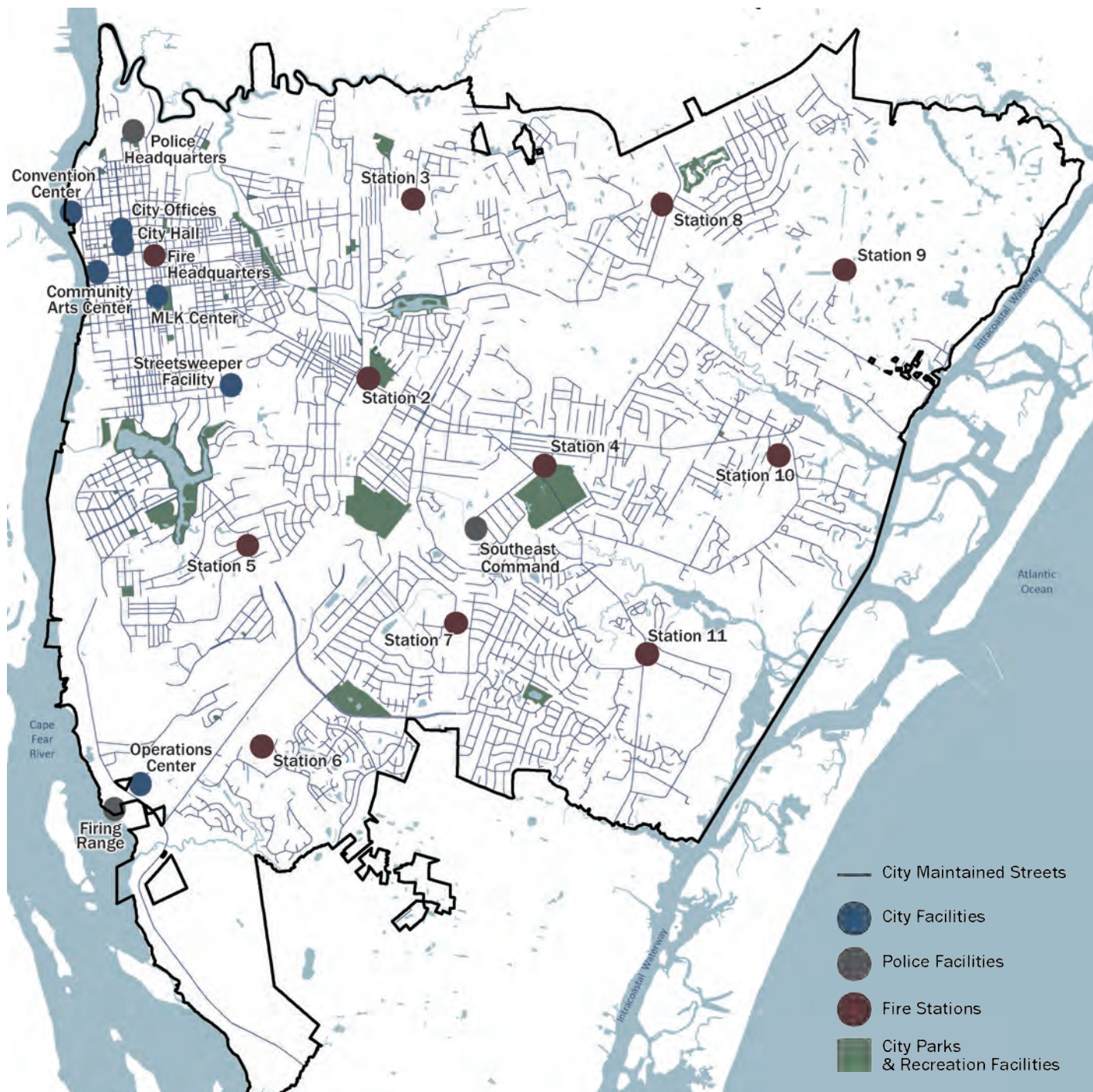


Growth Factors Report

5

What Citizens Said

- More public trash receptacles are needed
- Stricter and more proactive code enforcement needed
- Increase police presence/patrols
- Increase street lights
- Additional sidewalks and connections between existing sidewalks needed
- Improve waste collection, including facilitated bulky item collections
- Address criminal activity concentrated in and around public housing developments
- Improve public schools
- Police force is using its resources very well, but violence problem needs to be addressed
- Crime prevention is economic development
- Police officers are underpaid
- Regional collaboration on utilities is critical
- Biggest challenge for CFPUA will be repairing older lines, mostly in and around downtown Wilmington



City Maintained Facilities

The city currently maintains the following community facilities:

- 11 fire stations and a fire training facility
- Police headquarters, substation (Southeast Patrol), and shooting range
- Stormwater garage and streetsweeper facility
- City Hall (Thalian Hall), Operations Center, and six other office facilities
- 408 miles of streets and 370 miles of sidewalks
- Parking facilities, including parking decks, on-street parking, and surface parking lots
- Convention center
- Two performing arts facilities (Hannah Block Community Arts Center and Thalian Hall)
- 743.5 acres of parks, recreation areas, and open space, and 22 miles of trails

Policies

8.1 Infrastructure

Streets and Sidewalks

The city currently maintains 408 miles of streets and approximately 370 miles of sidewalks. It is important to note that not all streets and sidewalks within the city limits are publicly maintained. Many developments have installed and maintain private streets and sidewalks, among other amenities. There are approximately 119 miles of privately maintained streets in the city. The North Carolina Department of Transportation owns and maintains approximately 100 miles of streets within the city limits, and the policies outlined in this chapter represent preferred policies for these streets as well. Public rights-of-way serve multiple functions, including stormwater management and conveyance, water distribution, utilities locations, civic spaces, and pedestrian facilities. This plan conceives of public streets as places that continue to serve these multiple functions in a coordinated way. The city's streets program should not focus solely on the movement of vehicular traffic. The integration of transportation planning, streets and sidewalks maintenance, and parks and recreation will serve to support a comprehensive and coordinated view of the role and function of rights-of-way in providing public services in a manner that maximizes public benefit, public safety, recreation, and community beautification. (Maps showing existing streets and sidewalks can be found in the Growth Factors Report)



Growth Factors Report

7

8.1.1

Public streets and rights-of-way should reflect current and ongoing integration of these facilities as multiuse facilities through coordinated maintenance and management. Flexible street designs and standards should be supported to appropriately accommodate local physical and environmental context as well as community needs.



Related Policies

2.1.3 6.2.4 10.2.7

8.1.2

Maintenance, repair, and enhancements of streets and sidewalks should be undertaken in an equitable manner as well as an objective evaluation of condition and need. Funding and physical maintenance should be distributed equally throughout the city and in a way that benefits all neighborhoods and parts of town and all residents and visitors.



Related Policies

5.2.2

8.1.3

An interconnected network of rights-of-way that provides infrastructure services throughout the city should be encouraged. Surrender of rights-of-way should be minimized and rights-of-way should not be closed or abandoned unless there is no existing or future need for them, the established street patterns would not be significantly interrupted, the function and purpose of nearby streets would be maintained, non-vehicular connections would not be interrupted, and public viewsheds would not be compromised.



Related Policies

2.2.5 2.1.2 5.2.5

8.1.4

Coordination with utilities and infrastructure partners to ensure that construction, design, and improvements to streets and sidewalks are carried out in an efficient and coordinated manner should be maintained.



Related Policies

6.3.4 6.1.3

8.1.5

The preservation of existing historic brick streets in Wilmington should be prioritized.



Related Policies

11.1.1

Stormwater

The city provides comprehensive stormwater services for the management of drainage to protect the public health, water quality, and the environment. The drainage system is maintained within the public right of way or officially accepted easements. The system itself consists of hundreds of miles of drainage pipes, ditches, creeks, thousands of inlets and manholes, retention ponds, and Greenfield Lake. Primary maintenance activities include inspection, repair, maintenance, and construction of various parts of the system. Stormwater Services also provides street sweeping as a means to keep debris from clogging the system.

The city holds a National Pollutant Discharge Elimination System permit from the state, which largely governs activities around the protection of “receiving waters,” those bodies of water that receive stormwater discharge. This permit requires outreach and education, public involvement and participation, illicit discharge detection and elimination, good housekeeping and post-construction stormwater controls. In addition, the city is required to make certain that runoff from city facilities has a minimal impact on the environment.

Property owners in the city pay a stormwater service fee normally collected on a joint utility bill. The fee is a flat rate for single-family homeowners, while commercial property owners pay the same rate for each equivalent residential unit of 2,500 square feet of impervious area.



Related Policies

6.1



Additional Information

LID Technical Guidance Manual

8.1.6

Interconnections through the watershed system, interconnectivity through the hydrologic cycle, and the protection of existing creeks and streams should be recognized in new stormwater policies. Watershed-based approaches to water supply planning and stormwater management, including the design of public rights-of-way, to promote a holistic view of the entire water system should be considered.

8.1.7

Comprehensive policies and solutions that promote healthy watersheds while addressing other infrastructure objectives and needs should be developed. Stormwater best management practices, considering anticipated demographics changes, redevelopment priorities, and technological improvements should be evaluated and employed.



Related Policies

6.1.1

6.8.2

8.1.8

The impacts on the stormwater system from major sources of stormwater runoff, including buildings, roads, and parking lots should be considered. Sustainable infrastructure techniques that use soils and vegetation to capture, clean, and reuse stormwater runoff to reduce runoff velocity and improve water quality should be implemented.



Related Policies

4.4.2

6.1.3

9.4.3

8.1.9

Discharge control methods that control both peak flow and volume of stormwater that are economically, aesthetically, and environmentally acceptable, as well as effective in stormwater management, should be utilized.

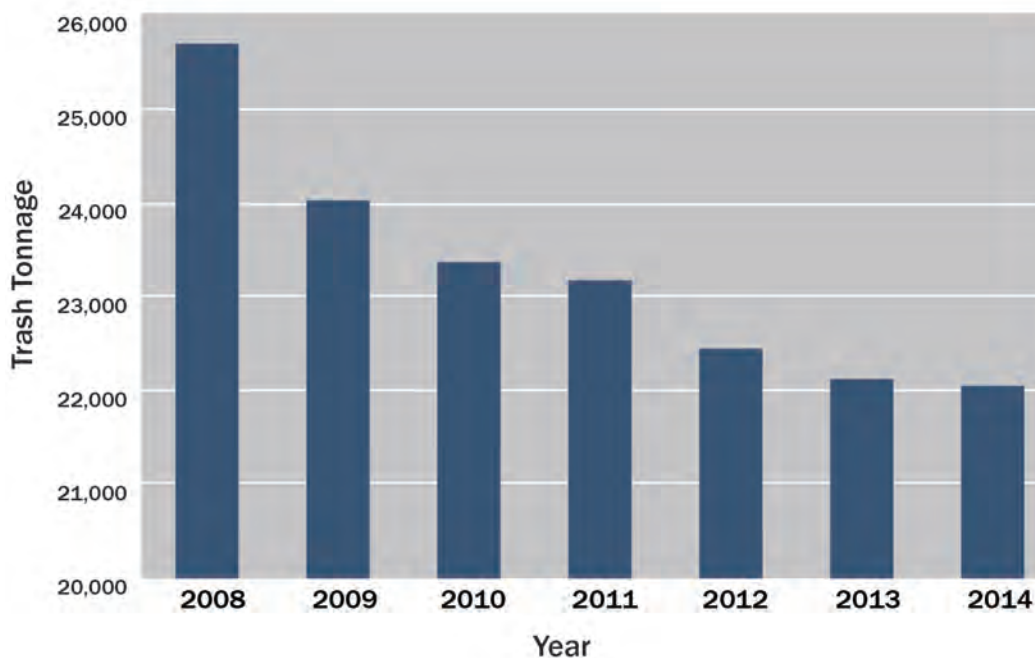
Solid Waste

Wilmington's solid waste stream includes household and commercial waste destined for the landfill and household recyclable materials, some of which are not allowed in the landfill. Storm debris is often collected by the city and outside contractors. Household waste, recycling, white goods (large electrical appliances such as refrigerators and washing machines), and yard debris are collected curbside within the city limits from city trash customers. Household hazardous waste is not collected by the city; rather, citizens take such waste directly to New Hanover County's Environmental Management Facility. The city does not collect commercial construction and demolition debris; construction debris must be disposed of by the property owner. The solid waste program currently operates as an enterprise fund, meaning that it is self-supporting outside of the city's general fund. It is important to note that although city solid waste services are available to all households, approximately 33% of the households within the city utilize private solid waste collection services. The city's current policy is that homes on public streets must utilize city solid

waste services, unless a desired service is not provided by the city (such as dumpsters or back yard collection). Homeowners on private streets may choose to utilize city services or private collection services. With the exception of some homes and businesses within the Central Business District, the city does not collect solid waste from commercial or multifamily properties.

Municipal solid waste is sorted and deposited at the New Hanover County landfill, where the current tipping fee is \$55 per ton. Yard debris is sent to a private processor, where the current fee is \$8.40 per ton of waste. Recyclable materials are sent to a transfer station then a material recovery facility (MRF) in Raleigh, where the city currently pays \$20 per ton. With the future of New Hanover County's landfill services uncertain, collaboration, education, and waste alternatives are critical. Policies in this section are aimed at diverting the city's overall stream from landfills.

Tons of Trash per Year Generated by Wilmington



Source: City of Wilmington

8.1.10

An efficient, clean solid waste collection and disposal program that includes recycling, land reclamation, and reuse of waste materials for all solid waste generators, including multifamily and commercial developments, should be utilized.

8.1.11

The extent to which materials are reused and recycled and beneficial end products are recovered should be maximized. Opportunities to turn solid waste into an energy source and adding new types of materials to the recycling program should be prioritized. Development of a local materials recovery facility, mandatory recycling, food waste recycling (composting), and turning recycling into a revenue-generating program should be explored.

8.1.12

Options for electronics materials and hazardous materials recycling and disposal, including the disposal of computers, ink and toner cartridges, and other related items should be explored.

8.1.13

Land clearing and construction/demolition debris should be minimized and sorted at the source for recycling, as appropriate.



Related Policies

6.8.3

8.1.14

Cross-departmental and cross-agency collaboration should be encouraged to ensure maximum efficiency and environmental stewardship.

Parking

Within the Downtown Core, the city owns and operates three parking decks and seven surface parking lots, operates two surface parking lots on leased land, and maintains 760 on-street parking meters and 45 pay station meters. In some of the residential areas within the Greater Downtown, the city maintains a residential parking permit program for on-street parking. Outside of these areas, the city does not provide or maintain parking facilities.



Related Policies

2 10



Growth Factors Report

7.5

8.1.15

Partnerships should be coordinated to ensure maximum use and efficiency of the city's parking resources. New parking decks should be located in the areas of greatest need so as to provide maximum service. The use and development of new surface parking lots should be minimized.



Related Policies

2.7.1 9.6.5 10.1.2 10.2.9
10.2.12

8.1.16

The city's parking program should support alternative means of transportation, encouraging alternative energy sources, promoting downtown as a regional destination, and maximizing transportation demand management. The pedestrian experience should be considered in parking planning, siting, and design and new and existing parking decks should provide for adequate pedestrian access the parking areas.



Related Policies

2.3.1 2.7 6.7.3 9.3.8
10.2.12

Water and Sewer

In 2008, the Cape Fear Public Utility Authority (CFPUA), a quasi-governmental agency, began providing consolidated water and wastewater services to the citizens and businesses of Wilmington and New Hanover County, and both the city and the county ceased to provide these services. The utility authority also acts as the billing agent for the city's stormwater and trash services. The CFPUA is a self-supporting public agency that relies on revenue generated through the provision of services (consumer rates) to maintain operations.

Although the city no longer has direct control over water and sewer utilities, this chapter spells out the city's policy preferences related to these critical pieces of public infrastructure. Population growth will continue to drive demand for water and sewer infrastructure, and the placement of these utilities, along with roads, are the greatest indicators of where future growth and redevelopment will occur. Water and sewer treatment facilities, which are regional in nature, must be sized for peak demand. Peak monthly average daily sewer treatment flows are currently approximately 19 million gallons per day. Based on projected population growth, the peak monthly average daily sewer treatment flows

will increase by approximately 67% to 32 million gallons per day by 2040. CFPUA currently has sewer treatment capacity of 28 million gallons per day with a future upgrade to 40 million gallons per day treatment capacity designed and permitted for future expansion. Current water treatment capacity is 41 million gallons per day, which should be sufficient for growth projections with nominal upgrades.

Capital investments in water and sewer infrastructure represent a major expenditure on behalf of rate payers. Beyond the daily maintenance and operation of these facilities, the utility system requires ongoing investment to keep pace with demand, prepare for growth, replace aging facilities, and generally keep the systems in a state of good repair.

Utility infrastructure is critical to the city's continued growth and development, and their proper functioning has major environmental implications. Water, wastewater, and stormwater systems are embedded in the region's hydrology, and the quality of our rivers, creeks, and waterways is heavily influenced by the operation of these systems.

Cape Fear Public Utility Authority (CFPUA) Facilities

The CFPUA currently maintains and operates the following facilities:

- Two water treatment plants
- Three wastewater treatment plants
- 11 elevated water tanks
- 54 well sites
- More than 800 miles of sewer lines
- More than 1,100 miles of water lines and more than 25 miles of raw water lines
- 7,672 fire hydrants
- 14,867 valves
- 141 pump stations



Growth Factors Report

5.7



Key Planning Theme

Nurturing Our Community

Natural resources are a major factor in attracting residents and visitors to the area; balancing accessibility and protection of these resources will be a challenge.

8.1.17

Growth and redevelopment should be encouraged in areas already served by adequate utility infrastructure. Utilities extension policies that maximize environmental sensitivity, encourage greater infill and redevelopment in already urbanized areas, and protect rural and undeveloped areas should be utilized.



Related Policies

6.2.4

6.8.3

8.1.18

Standards and programs that relate development to the adequate provision of infrastructure and public services and sizing water and sewer lines with capacity to adequately serve projected future growth will help ensure orderly and cost-efficient administration of public utilities and should be prioritized.



Related Policies

1.2.5

8.1.19

Efficiencies should be maximized by using all forms of water in its most appropriate use. Reuse of bio-solids (organic matter recycled from sewage) and methane gas production from wastewater treatment facilities should be evaluated.



Related Policies

6.8.1



City of Wilmington Water Management

Water supply is closely monitored and managed to account for growth, development and redevelopment.

Source: City of Wilmington

8.1.20

Water and wastewater system planning should take changes in climate and precipitation patterns into account when projecting future demands and availability.

8.1.21

The water and wastewater systems should serve new development in a manner consistent with both city of Wilmington and New Hanover County adopted policies related to growth, development, and redevelopment. Water conservation should be encouraged and rates structured to appropriately capture a conservation-based approach.



Related Policies

6.8.1

8.1.22

Environmental soundness and operational efficiency in the use, maintenance, and development of pump stations and force mains should be prioritized. Gravity sewers should be utilized to the greatest extent possible.

8.1.23

Water and sewer connection fees should be calibrated according to the life cycle costs of different forms of development. Compact urban development should not subsidize less efficient, sprawling development forms.



Public Utility Services

The operations and maintenance of City infrastructure and public services is a continuous effort.

Source (All Images): City of Wilmington

8.2 Municipal Operations and Service Delivery

Greater Downtown was long the center of city services; however, by the 1990s, the city reached capacity within its downtown operational facilities. In 2006, the city expanded to the Operations Center on River Road. The city will face obstacles in expanding within the current downtown facilities to meet the demands of growth in the future. Service delivery will continue to be a challenge, especially as fuel, water, and energy costs continue to rise. Land acquisition, construction, and maintenance costs will also continue to rise. Given the city's continued projected population growth and predominant low-density residential development patterns, it is expected that demand for dispersed services will continue.

As the city's population grows, the need for facilities and services is expected to grow proportionately. To maintain a high quality of life, Wilmington will need to invest in new and existing facilities. The city needs to be able to maintain a high level of service while at the same time keeping operational and maintenance costs down. Clustering and co-locating services is one way to help keep costs low. Aligning the Capital Improvement Plan with the Growth Strategies Maps, growth and demographic projections, and level of service evaluations will enable the city to more effectively address service needs and capital projects spending. There are currently just over 990 acres of city-owned land, of which an estimated 98 acres are vacant or underutilized. This vacant and underutilized land is neither contributing to the city's tax base, nor supporting necessary city services/citizen needs.

The city currently maintains a fleet of 636 vehicles across all departments. It is estimated that the overall fuel consumption for the entire fleet was approximately 537,280 gallons for the 2013-14 fiscal year. Better coordination between transportation, land use, and facilities planning will help reduce fuel and transportation costs in the delivery of municipal services. The protection and wise use of resources, along with the provision of energy efficient systems in new facilities construction, and alternative service delivery options, will help achieve the goals of nurturing our environment, and saving tax dollars.

In order to continue to provide a high level of service, reduce costs, and secure the capacity to attract and accommodate future growth and prosperity, city departments will need to maximize sustainability and flexibility in considering plans for development and redevelopment of city-owned property and provision of service delivery. The concept of sustainable planning considers whether the Earth's resources will be able to meet the demands of a growing human population while maintaining the rich diversity of natural environment. Primarily, as a city, there are four components of sustainability for which to plan. The first component is sustaining our community as a good place to live that offers economic development and other opportunities to our residents. The values of the community, like individual liberty and democracy, should be sustained. The biodiversity of Wilmington's natural environment improves the human quality of life and has its own inherent value. And finally, the ability of our natural systems to provide the life-supporting "services" that are not necessarily accountable in terms of dollars and cents, but which are worth a great deal, should be sustained.³³

All city departments are responsible for sustainable planning and practices and services will need to incorporate sustainable planning efforts into future plans for growth. The idea of abundant vacant land is no longer a part of planning for the city's facility needs.

City Residents are County Residents

In North Carolina, all city residents are also county residents. City residents utilize county services, pay county taxes, and vote for elected county officials.



Key Planning Theme

Nurturing our Community

The natural environment, from parks, water, and open spaces, to locally-grown agriculture, to protecting water quality will be critical to Wilmington's future success.



City of Wilmington Operations Center

City services such as trash, debris removal and fleet maintenance are located at 245 Operations Center Drive.



City of Wilmington Downtown Office

Main city offices are located at 305 Chestnut Street. Here employees provide administrative services to the public.

Source (All Images): City of Wilmington

8.2.1

Best practices for all city facilities and capital projects should be considered, including practices that optimize long-term viability, versatility, energy efficiency, neighborhood compatibility, and minimize maintenance costs and environmental impacts. The capital improvements plan, long-range construction plans, and planned growth in services should be aligned with the Comprehensive Plan, projected growth, and demographics changes.



Related Policies

5.2.2

6.7.1

8.2.2

Regional collaboration and partnership efforts, including sharing facilities and resources, mutual aid agreements, and use of school, parks, and other facilities should be enhanced. Community facilities should be utilized to strengthen neighborhoods and neighborhood centers.



Related Policies

4

8.2.3

During public and private development and redevelopment, adequate land should be allocated for community facilities, including, but not limited to schools, fire stations, police stations, emergency medical services (EMS) stations, parks, greenspace, public spaces, and/or other community priorities.



Related Policies

1.2.3

8.2.4

Community facilities and programs should be distributed equitably for those in need of assisted access and adaptive services. Community facilities that adequately meet the needs of citizens in terms of programming, recreation, accesses, and services should be planned for to maintain a high quality of life.



Related Policies

2.6.5

8.2.5

Shared location of community facilities and services should be considered, where possible, to maximize citizen and business access and reduce costs while encouraging efficient use of land and resources.



Related Policies

4.3.3

8.3 Public Safety

Police

The Wilmington Police Department works with other city departments, other governmental agencies, and community groups and members to reduce crime and improve the public safety and livability of Wilmington. Department strategies include community policing, geographic-based policing, and intelligence-led policing. As a result, law enforcement resources are used more effectively and are consistent with community needs. By working with all of our community partners and stakeholders the department is able to address underlying causes of crime, and consequently, crime has been steadily declining for many years.

8.3.1

Police services and presence should be planned for to protect the health and safety of Wilmington's population, including flexible office space for use of officers in the field and neighborhood and community outreach.

8.3.2

Level of service evaluations with the Police, Fire, and New Hanover County Emergency Management, New Hanover County Sheriff, and New Hanover Regional Emergency Medical Services departments should be coordinated. Shared locations with police, public safety facilities, and training facilities, including partnerships and co-locating with non-city agencies, where possible, should be considered to maximize levels of service, sustainability, and public health and safety.

8.3.4

Crime Prevention through Environmental Design (CPTED) techniques, including increased use of surveillance cameras, where appropriate, should be encouraged as a way to maximize crime prevention and community safety.



Related Policies

1.2.1

10.2.14

Fire

Wilmington's Fire Department protects the health, safety, and welfare of citizens by providing fire suppression and prevention, life safety, hazardous materials response, rescue, and emergency medical services for all citizens. The location of fire stations is designed to provide maximum coverage in the shortest length of time. The department currently maintains an Insurance Services Office (ISO) Class II Fire Protection Rating and is accredited by the Center for Public Safety Excellence. The department is a National Accredited Fire Department.

8.3.5

Planning for the provision of fire and life safety facilities that meet the current and future needs of the city should be considered.

8.3.6

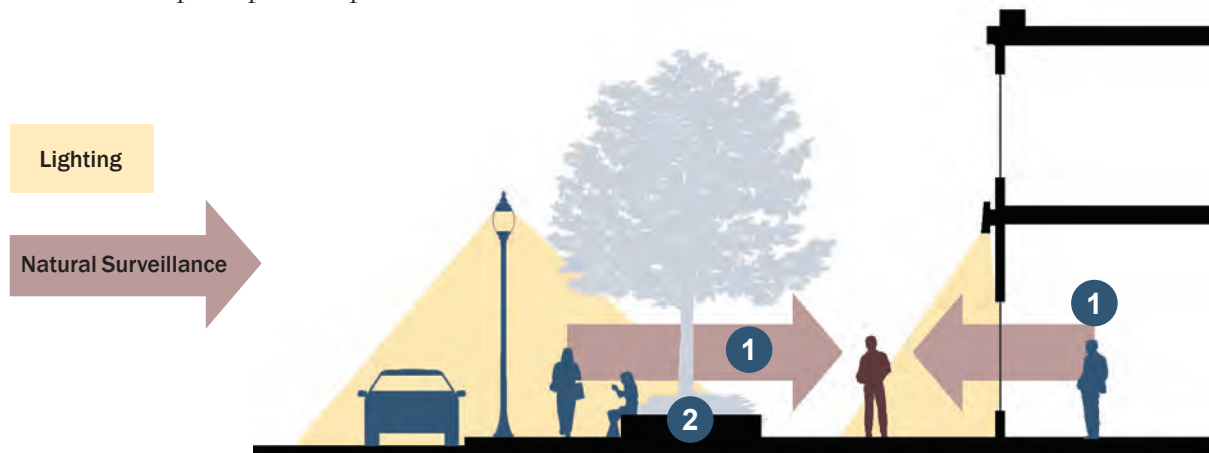
A collaborative relationship with the Police Department, New Hanover County, and New Hanover Regional Medical Center should be maintained to ensure the highest levels of service are provided to citizens and businesses of Wilmington.

Community Policing

"Community policing," or "geographic-based policing," is a policing approach that focuses on building relationships with the community. Officers are assigned to an area of the city which allows them to become part of the community. Community policing allows officers to be proactive in the community, instead of reactive, to solve neighborhood problems and address public safety concerns before crimes occur.

Crime Prevention Through Environmental Design (CPTED)

Crime Prevention Through Environmental Design (CPTED) is a multi-disciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely on the ability to influence offender decisions that precede criminal acts by affecting the built, social, and administrative environment. CPTED allows law enforcement officers, architects, city planners, designers, and residents to work together to create a climate of safety within a community. There are four guiding principles for this crime prevention approach and include natural surveillance, natural access control, territorial reinforcement, and maintenance. Details about these four principles are provided below.



1

Natural Surveillance

Natural surveillance increases the threat of apprehension by increasing the perception that people can be seen. A person is less likely to commit a crime if they think someone will see them do it. Designing the placement of physical features, such as lighting and landscaping, and increasing social activities increase and visibility and potential offenders feel greater scrutiny.

3

Territorial Reinforcement

Territorial reinforcement promotes social control through clearly defined private spaces. These spaces create a sense of ownership and an environment where strangers or intruders stand out. The use of buildings, fences, pavement, signs, lighting, and landscaping to express ownership can clearly define public and private spaces and deter criminals. Territorial reinforcement makes the normal user feel safe and makes the potential offender aware of a substantial risk of apprehension.

2

Natural Access Control

Natural access control limits the opportunity for crime by taking steps to clearly differentiate public and private spaces. The goal of this principle is to direct the flow of people while decreasing the opportunity for crime. This can be achieved by selectively placing entrances and exits, walkways, fences, lighting, signage, and landscaping to limit access and control flow.

4

Maintenance

Property maintenance, while not a physical design element, is an expression of property ownership and a critical CPTED component. Deterioration indicates less control by the intended users and a greater tolerance of disorder. Neglected and poorly maintained properties can be breeding grounds for criminal activity. The Broken Window Theory suggest that if a nuisance, such as a broken window, is allowed to persist it will lead to other nuisances and ultimately to the decline of the neighborhood.

8.4 Education

Primary and Secondary

The quality and location of public schools has a great impact on the overall well-being of the entire community. Not only do schools serve to educate future generations, but the facilities also serve important community functions. Schools have even been a key component in enhancing anti-gang and anti-delinquency initiatives. The location and design of schools have a major impact on housing, community development, traffic, and access to recreation opportunities for nearby residents. While the city has no direct authority over public schools, the following policies reflect the city's preferences.



Growth Factors Report

2.8

8.4.1

The continued use of urban schools and the development of new urban schools should be encouraged. Improvements to schools within Greater Downtown should be prioritized; renovating existing facilities should be considered before building new, especially where historic facilities are in question.

8.4.2

Meaningful, coordinated planning for schools should be ensured through a strong partnership between the city, county, and school board. Joint city-county planning for new and existing schools should be utilized and should be based on data such as projected student enrollment, demographics, residential density of children, and student transportation costs.

8.4.3

When planning for schools, all costs and benefits to all impacted should be considered including not only the cost of construction and land acquisition, and also the cost of required street and utility infrastructure, transportation to the site, and disposal of closed facilities. Costs and benefits not only for the school district, but also for students, families, staff, local jurisdictions, and the entire community should be assessed.

8.4.4

Equity in school facilities should be considered when making determinations about school construction, closures, and rehabilitation with the goal of providing all students with a learning environment that is of a consistently high quality.

8.4.5

Shared locations and shared use of facilities should be considered. Shared resources, such as libraries, gymnasiums, natatoriums, parks, and ball fields, should be encouraged.



Related Policies

4.1.2

8.4.6

School siting and assignment policies that work to achieve diverse, walkable schools should be developed. All health impacts should be taken into account, including a health impact assessment or another methodical analysis of health impacts, when considering new locations and rehabilitation of existing school facilities.



Related Policies

2.6.9

8.4.7

Programs to maximize opportunities for schools that are an integral part of the surrounding neighborhood and that promote walking and biking to school should be supported. Safety and convenience of travel by foot, bike, and public transportation to and near schools should be improved by providing safe infrastructure.



Related Policies

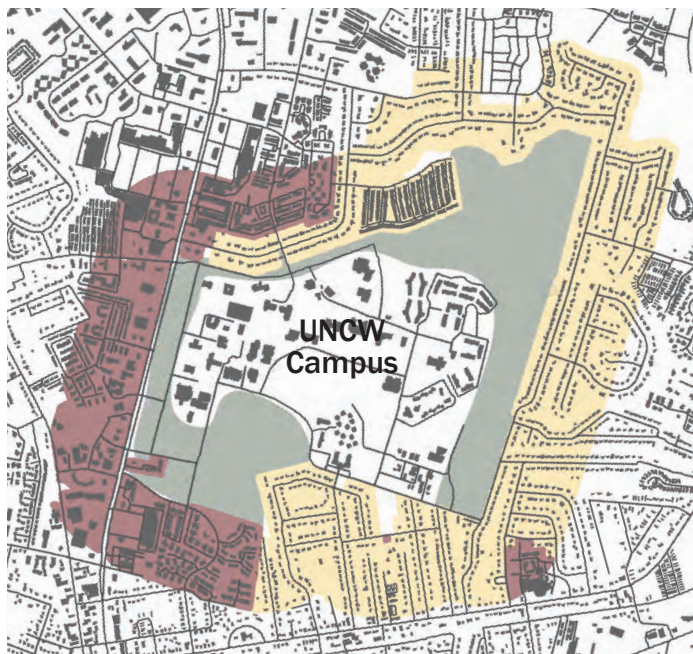
2.6.9

4.2.3

Post-secondary

Wilmington is home to the University of North Carolina Wilmington (UNCW) and Cape Fear Community College (CFCC). UNCW's main campus occupies approximately 650 acres in the center of Wilmington and has a current enrollment of nearly 14,000 students. CFCC's Wilmington Campus occupies approximately 26 acres over several blocks in the northern portion of the Downtown Core and has a total enrollment of more than 9,500 students.

These institutions have positive economic development impacts in Wilmington, directly and indirectly, and are a great asset to the city and the region; however, there are inevitably conflicts between the needs of the student (and student-oriented) population and the non-student population. Intrusion of students into single-family neighborhoods, typically in homes in multiple occupation, or HMOs, can stress neighborhoods. Parking and code enforcement concerns, over-occupation, alcohol, and littering are often listed as top “town and gown” issues.



UNCW Campus

Opportunities exist for better integration of the UNCW campus with surrounding multi-family and commercial areas, especially for bicyclists and pedestrians.



Colleges and universities have an increasingly significant role in promoting a just and sustainable society. Given the scope of activities and impacts, the higher education sector is uniquely positioned to lead in addressing an array of social, environmental, and economic challenges at the local and regional level. Many of these place-based challenges are inherently shared by colleges/universities and the city.

8.4.8

Redevelopment for purpose-built student housing in appropriate locations should be considered to help alleviate pressures on existing single-family neighborhoods as housing options for students.



Related Policies

1.7.11

8.4.9

Strong planning partnerships between the schools and the city should be ongoing and formalized. Collaborative relationships between the city, the University of North Carolina Wilmington and Cape Fear Community College should be supported for maximum collective impact and a broad range of solutions that address the challenges faced by all organizations.



Franklin Street

Franklin Street, adjacent to the University of North Carolina at Chapel Hill, is a good example of the physical connection a university can have with mixed-use walkable areas.

Source: Fundrise, LLC



Cross-Reference

Redevelopment Concept - Pg. 26



9

Urban Design and Placemaking

- 9.1 Unique Wilmington
- 9.2 Public Space Network
- 9.3 Pedestrian-oriented Placemaking
- 9.4 Corridors and Main Streets
- 9.5 Neighborhoods
- 9.6 Mixed-use Centers and Places

Public Space

Great public spaces are active and serve as gathering places for everyone (image opposite).

Image Source: Courtesy of Gehl Architects. Project: Shared street space design, New Road, Brighton, UK.

“Creating socially viable cities for everyone necessitates staying options for all ages.”

— Jan Gehl



Introduction

Urban design and placemaking involve both the process and outcome of creating desirable places where people live, work, engage with each other, and experience the built and natural environments. Urban design deals with the arrangement, coordination, appearance, and function of development in Wilmington, across urban, suburban, and rural character areas. Urban design operates at all scales, from the micro scale of street furniture and lighting to the macro scale of planning, zoning, transportation, and infrastructure. When urban design principles are fully integrated into the city's policy systems, they can be used to enhance land use, infrastructure, and even economic development outcomes. It is also common for successful placemaking and development projects to employ site-specific urban design principles.

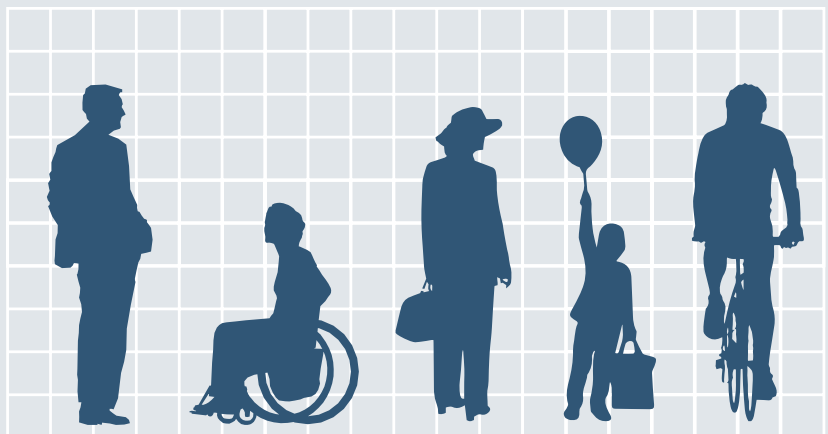
The term *place* implies a strong emotional tie between a person and a particular physical location. Places have features that people want to use, to be in, to enjoy, and/or to remember, usually because it is interesting or pleasurable. Placemaking is the process of creating a unique place, where the public realm features desirable patterns of cultural, economic, and social activities. Community engagement in creating a place is very important. Placemaking is not the same as simply constructing a building, designing a plaza, or developing a commercial zone; rather, it encourages the

involvement and influence of people in the decision-making process about the space in question so that it can be enjoyed for its special social and physical attributes.

Well-coordinated, high-quality development ensures an attractive, usable, resilient, and adaptable city and is a key element in achieving sustainable development. Good design is inseparable from good planning. Urban design influences not only the physical form of public space such as streets, parks, and plazas, but also shapes the possibilities for human interaction, physical health, and reduced crime. Both the policies and actions of the city and the market-driven motivations of private developers determine the physical form of Wilmington. Along with community stakeholders, these parties are partners in the city-building process. While individual buildings may be attractive in and of themselves, there are many other design factors that contribute to the organization and success of a city and its places. These factors include site-to-site coordination, pedestrian connectivity, architectural elements, open spaces, historic preservation, and the placement, height, scale, and frontage of individual buildings. All of these elements work together to define a public realm that supports healthy social interactions among the people that use it.

The Human Scale

Good urban design establishes the human as the primary “design vehicle” for which urban environments are planned and developed. This means creating safe, walkable streets and providing good building fronts along those streets. It means considering how people will move from place to place and the quality of environment they experience along the way. High quality places are those where humans feel comfortable and their diverse needs are met.



Key Issues for Urban Design

This chapter provides broad recommendations to address the fundamental principles of placemaking and urban design for a livable Wilmington.

Promote Good Urbanism

- Quality architecture to define the public realm and road network
- Appropriate mix of uses within individual buildings and development projects
- High quality, diverse housing options, including workforce and affordable housing
- Connected, safe, and usable pedestrian circulation throughout the city
- Connectivity between and within individual private development sites for all transportation modes (vehicular, transit, bicycle and pedestrian)
- Transit accommodations, including bus shelters, benches, trash receptacle, and landscaping

Address Challenges

- Visual clutter and the lack of identity along major thoroughfares, including portions of Market Street, Oleander Drive, College Road, Carolina Beach Road, and others
- Commercial site design with large, disconnected parking lots separating business uses from the street and from each other
- Lack of a coordinated and standardized style for public space elements, including street lights, traffic signals, street signs, trash receptacles, street trees, benches, crosswalks, and sidewalks, to help create a unique brand and identity for the city
- Obsolete, suburban-style zoning provisions in the Land Development Code and Technical Standards and Specifications Manual, including site design and strict separation of uses
- Design guidelines that do not meet the requirements or provide adequate direction for higher-density, mixed-use, and pedestrian-oriented urban development



Mixed-Use Development, North Hills, Raleigh

This multi-family residential development contains vertical mixed-use with ground floor retail and a restaurant on the second floor.

Source: City of Wilmington

Benefits of Urban Design in Wilmington

In the context of this plan, urban design and placemaking policies are aimed at achieving four primary goals: economic development, environmental sustainability, inclusiveness, and healthy communities. Urban design decisions influence the economic success of Wilmington. An orderly, high-quality built environment will help make Wilmington a place that encourages local businesses and entrepreneurship, attracts people to live here, satisfies a creative workforce, offers quality and affordable housing options, provides job opportunities, and embraces equitable access to facilities and services. Urban design determines the physical scale and layout of a place, which establishes how the built and natural environments interact, and where buildings and infrastructure are sited. These factors influence the balance between the natural landscape and the built environment and encourage sustainable development outcomes. Finally, urban design policies can influence public health and social equity in Wilmington – how people interact with each other, how they move around, and how they use and experience each place.

Transit-oriented and Transit-ready Development

Some areas of Wilmington have many of the physical components that contribute to a vibrant place. The roadway network developed before the advent of the automobile still lends itself to walkable, vibrant built environments; however, much of the city developed after 1945 lacks walkability and distinct identity. Lack of coordination between transportation and land use has resulted in a built environment that often does not promote walkability, vibrancy, and uniqueness. Outside of Greater Downtown, over-dependence on the automobile has led to disconnected, uncoordinated development patterns, traffic congestion, lack of safe pedestrian mobility, and a general lack of community identity.

Future coordination of transportation, transit services, public spaces and land use will have a great impact on the livability and economic success of Wilmington. High-density mixed-use development patterns intentionally planned around express bus lines, the planned multimodal transportation center downtown, and any future transit stations can help reduce traffic congestion, increase housing options, and have positive environmental impacts. This approach is known as transit-oriented development (TOD); it has been tremendously successful in hundreds of American cities and should be a part of Wilmington's future if we hope to have a sustainable community.

With the transit stop as the focal point, development density and mix of uses are typically highest close to the transit stop and gradually decrease moving away from the stop. Walkability and connectivity are encouraged through the design of development, especially in the centers of such developments, including small block lengths, wide sidewalks, mid-block crossings, buildings lined with retail and other active ground-floor uses, and parking garages. Development will be "transit-ready" as the provision of transit services meets the increase in demand. (See Chapter 2 for more information on transit-oriented development.)



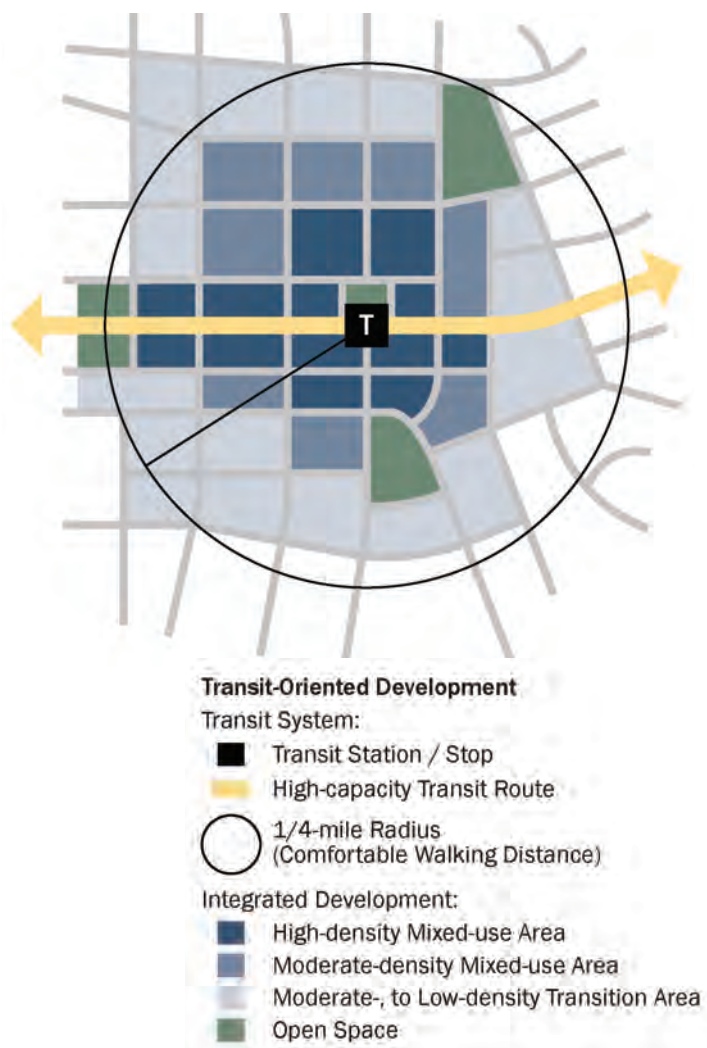
Related Policies

2



Capital Area Transit Bus and Shelter, Raleigh

Source: City of Wilmington



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.



Infill Development on Dorthea Street, Raleigh



Glenwood Avenue Mixed-use Neighborhood, Raleigh

Source (All Images): City of Wilmington

Urban Design Appreciates Context

Wilmington will always be both urban and suburban. Many residents enjoy quiet, lower-density neighborhoods, and want to use their private automobiles on a daily basis. Others seek higher density urban environments, which are not appropriate in many locations. Good urban design appreciates the qualities of a place that make it desirable. It is vital that planning and development policies respect and protect the city's unique neighborhoods. While some of Wilmington's neighborhoods will experience only moderate changes in the future, others may experience a great deal of change and redevelopment. The Growth Strategies Maps includes more information about future development in and around neighborhoods.



Box Set Cross Reference

Growth Strategies Report and Maps

What Citizens Said

- Additional bike and pedestrian connections are needed and existing trails, paths, and sidewalks should be connected from neighborhoods to commercial centers
- Traffic and congestion need to be improved
- The atmosphere of downtown, with street trees, mix of uses, and lots of activity should be encouraged
- Transit usage should be encouraged
- Keep and protect the existing tree canopy, street trees, and urban forest
- The northern riverfront area should be redeveloped into a vital center with a mix of commercial and residential uses
- Protect and enhance existing neighborhoods
- More efficient, denser development patterns should be allowed
- Efficient, interconnected, and dense development patterns are needed to improve traffic and transit issues
- Make the entrances and gateways into the city more attractive
- Additional parks, greenspaces, and public gathering spaces are needed
- Redevelopment of major corridors is needed, including reuse of some buildings, improved land uses, streetscape enhancements, and improved pedestrian amenities
- More use of undeveloped lots and buildings needed
- Focus on reuse and redevelopment
- Smart growth should be encouraged; no more sprawl
- Each community should be more walkable to encourage less traffic congestion
- New homes should be developed in clusters to protect green/open space
- Public transportation should be improved for seniors, young people, and the mobility impaired; public transportation should be safer, more comfortable, more accessible
- Pedestrian and bicycle safety should be improved

Wilmington is More than “Urban” and “Suburban”

The lines between urban and suburban have changed over time, and these terms are no longer suitable to describe the city’s development patterns. For example, when streetcars first enabled city workers to move away from downtown, new housing developments, known as streetcar suburbs, were built along the streetcar lines. These now long-established neighborhoods, such as Carolina Place, Carolina Heights, and Ardmore, may be considered urban by today’s standards.

According to the US Census, an urbanized area is one consisting of 50,000 or more people (recall that Wilmington’s current population is over 106,000). Upon hearing “urban,” some think exclusively of a downtown or city center. For many, the term “suburban” conjures images of sprawling lawns, large residential lots, cul-de-sacs, and strip commercial development with expansive parking lots.

To describe today’s urban-to-rural conditions, planners often use what is called an urban transect diagram. This expresses the range of development patterns found in cities. Three variations of this diagram are shown here.

In the 1960s, first generation suburbanites fled urban areas for less crowded single-use landscapes (shown in the T1, T2, and T3 zones in Traditional Urbanism transect diagram on the following page, and S1-S3 in the “Sprawl” transect diagram) (Source: Sprawl Repair Manual). With the proliferation of auto-dependent suburbs, cities found new problems like traffic congestion, dangerous walking environments, confusing commercial strips, and even social isolation.

Many existing conditions in Wilmington can be found in the “Sprawl” transect diagram on the following page (S1-S6). Many of these patterns will need to be improved, while some should be discouraged to continue in key areas. More “urban” places, such as those illustrated in the T6, T5, and T4 zones are making a comeback in today’s real estate marketplace. Main streets are seeing revitalization as new “town centers” like Mayfaire strive to recreate the desirable aspects of city living.

INTRACOASTAL
TIDEWATER



CONTEMPORARY
SUBURBAN



TRADITIONAL
URBAN



SEMI-URBAN
MULTI-FAMILY



MEDICAL OFFICE
ASSORTED



HISTORIC
URBAN CENTER



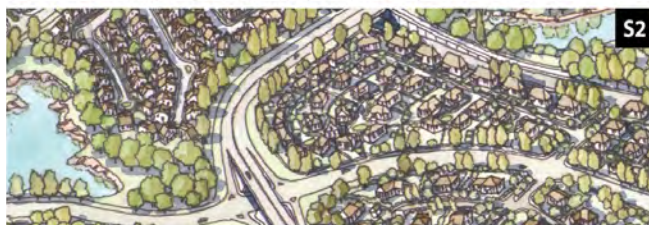
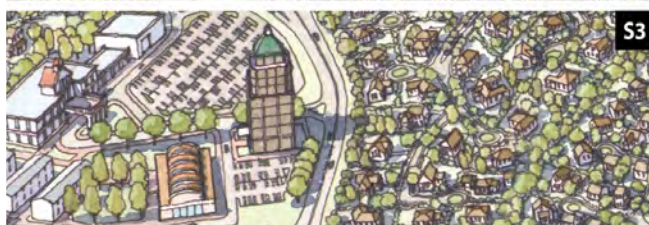
Wilmington Development Patterns

These are just a few of the many development patterns found throughout Wilmington. The Community Pattern Areas chapter in the Growth Factors Report provides an analysis of Wilmington’s unique development patterns.



Growth Factors Report

8

RURAL
FARMLANDSINGLE FAMILY
PODSCOMMERCIAL
STRIPAPARTMENT
COMPLEXBUSINESS PARK /
SHOPPING MALL

EDGE CITY



NATURAL



RURAL



SUB-URBAN



GENERAL URBAN



URBAN CENTER



URBAN CORE



The “Sprawl” Transect

This model is used to clarify and acknowledge existing development patterns of the city. Each of these are found in Wilmington today. These patterns may be acceptable where they already exist, but may no longer be appropriate for new development and redevelopment. These patterns lack cohesion, walkability and a sense of place; they have been shown to rapidly decrease in value.

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

The Traditional Urbanism Transect

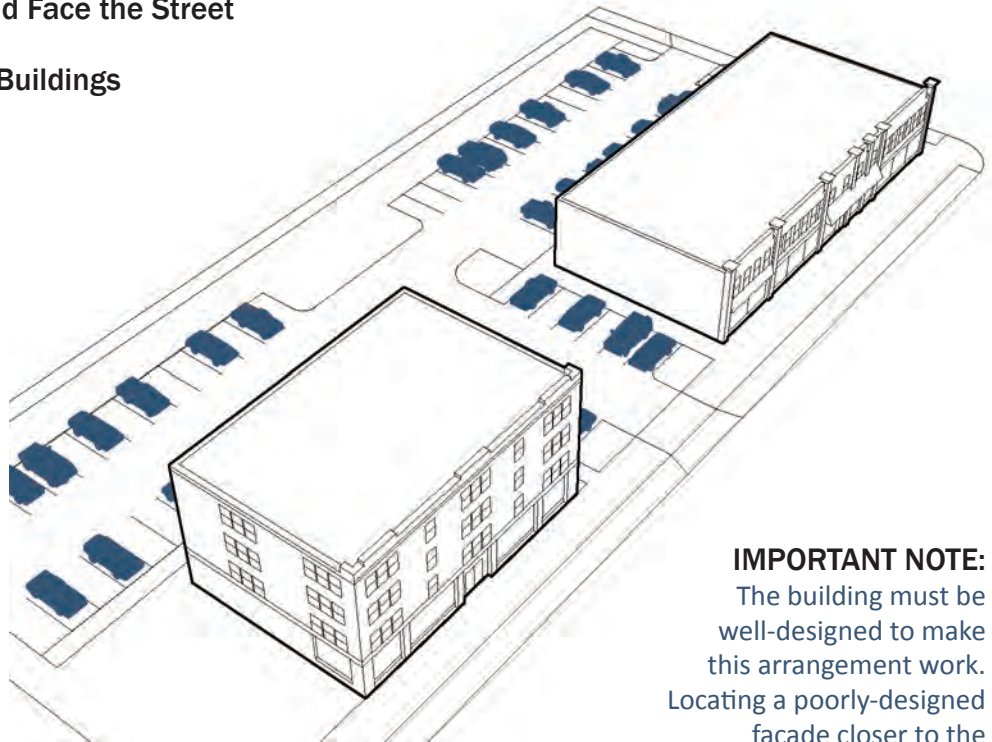
This model describes aspirational development patterns for Wilmington where such development patterns are appropriate. The urban form is cohesive and comfortable for people using all modes of transportation. This return to basic city-building principles is also called “neo-traditional”.

A Few Fundamentals of Good Urban Design

1 Build to the Sidewalk and Face the Street

2 Put Parking Behind the Buildings

Locating a building front close to the sidewalk helps to create a comfortable pedestrian environment. The building is made accessible from the sidewalk and navigating through parking areas is avoided. The site also has a better appearance from the street.



IMPORTANT NOTE:

The building must be well-designed to make this arrangement work. Locating a poorly-designed facade closer to the sidewalk is undesirable.

3 Make the Building Front “Permeable”

Doors and windows allow a building to be seen into and out of and adds visual interest to the building. Large blank walls without such features are boring, unattractive, and sometimes dangerous places to be.

4 Activate the Ground Floor

Provide space for retail, lobbies, studios or other active uses that can generate vibrancy along the street.



Numerous Doors and Windows (Permeable)
Active Ground Floor Use (Generates Street Activity)

Few Doors and Windows (Blank Walls)
Inactive Ground Floor Use (No Street Activity)

5 Articulate the Building Facade

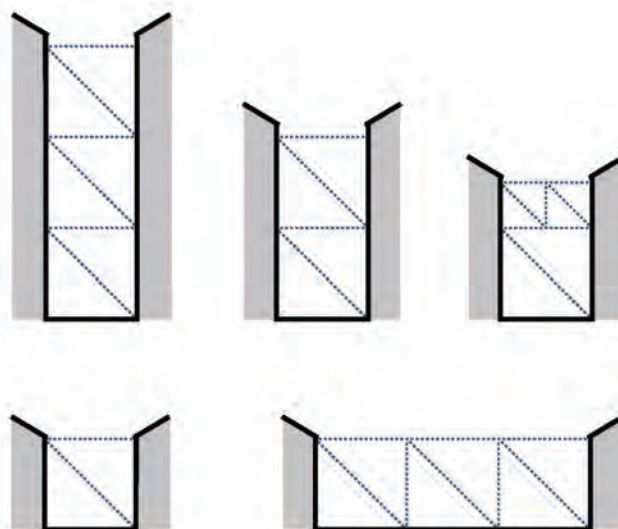
The front of buildings should be designed to have a distinct base, middle and top (A, B, and C) and be divided into a series of vertical bays (D) along its length. This gives the building a human scale and avoids large, blank walls.



Building Facade with a Distinct Base, Middle, Top and Vertical Bays

6 Define the Street with Good Enclosure

Use the buildings along a street to define the spaces between them in correct proportions of space. A ratio of 1:3 is most ideal, with higher ratios providing too much “openness”.



Proportions of Space Used to Properly Define a Street

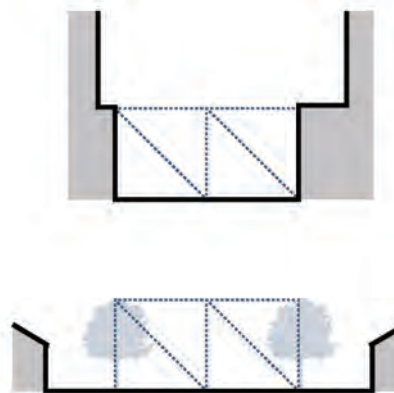
7 Create Continuous Places

Don't interrupt the vitality of a location by placing parking areas, blank walls, barriers to movement, false storefronts, trash areas and other undesirable elements along the public space network. Conversely, use infill development opportunities to “bridge the gap” in otherwise continuous places.



More Information

This is further illustrated using a downtown urban space example on page 184.



Methods Used in Addition to Building Placement



Street with Too Much Space Between Buildings

Policies

9.1 Unique Wilmington

The natural and built environments shape the impression people have of Wilmington. As the city continues to grow and redevelop, enhancing the aesthetic qualities of the built-environment becomes increasingly important. Commercial corridors and gateways can be augmented and greenway networks can be created. The uniqueness of Wilmington differentiates it from other cities and makes the City attractive to current and future residents, employers, and visitors.

There are many established residential neighborhoods with sidewalks, streetscape plantings, and homes and buildings oriented toward the public space of the street. This space is known as the public realm, defined as any streets, pathways, rights-of-way, parks, open spaces, and public and civic buildings and facilities.

Early suburbs such as Forest Hills, Ardmore, and Carolina Heights have distinctive characteristics that are worth preserving and that help reinforce Wilmington's identity. Suburban residential development makes up a majority of Wilmington's land area, and the form and character of these neighborhoods distinguish them as unique Wilmington neighborhoods.

What is Quality Architecture?

The Roman architect Vitruvius suggested that the principal qualities of well-designed buildings are "commodity, firmness, and delight."

- **Commodity:** buildings should work – they should be fit for the purpose for which they are designed
- **Firmness:** buildings should be soundly built and durable
- **Delight:** buildings should be good looking – the design should please the eye and the mind

These three criteria remain as sound a basis for judging architecture now as when they were conceived. Taste is subjective, and quality design and good public spaces are often best understood through experience and context.

9.1.1

The public realm should be anchored by quality architecture with human-scale elements that are conducive to pedestrian comfort and mobility.



Related Policies

10.6.2

9.1.2

Visual interest should be created with well-designed building facades, storefront windows, and attractive signage and lighting. Poorly articulated, monolithic or box-like facades should be avoided, especially those placing large, blank walls adjoining public spaces.



Related Policies

10.6.3



Key Planning Theme

**Unique Places,
Captivating Spaces**

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

Facade Articulation

A building's "façade" is the exterior face of the building that is the architectural front, sometimes distinguished from the other faces by elaboration of details or ornamentation.

"Articulation" refers to the division of a building façade into distinct sections; the materials, patterns, textures, and colors that add visual interest to a building. Higher levels of articulation are often more inviting at the pedestrian level and contribute to an enhanced public realm.

9.1.3

The established façade lines and rhythm of buildings along city streets should be maintained by aligning the front walls of new construction with the prevailing facades of adjacent buildings. Where expansive parking lots adjoin public rights-of-way, consideration should be given to locating buildings appropriately to the street, with most parking located to the side and rear of buildings.



Related Policies

1.4.2 10.6.3

9.1.4

A unified system of vehicular and pedestrian wayfinding signs, kiosks, and other environmental graphics should be created to provide directions for bicyclists, pedestrians, and vehicular travelers. Wayfinding systems should link physical and digital elements.



Related Policies

10.6.6

9.1.5

Memorable and distinctive gateway entrances to the city should be created, along with the points of entry into individual neighborhoods and neighborhood centers. Views of the downtown skyline from gateway corridors should be preserved.



Related Policies

5.1.3 10.6.5

9.1.6

Visual and natural assets, including public viewsheds, boulevard medians, tree-lined streets, wetlands, the river and creeks, and scenic corridors should be retained and enhanced.



Related Policies

2.2.8 11.2.4 10.6.5

11.1.1

9.1.7

Wilmington's image as a riverfront city should be enhanced by protecting, restoring, and improving river views, public access to the river, and riverfront recreation.

9.1.8

New development should reflect the context within which it is constructed, both in terms of architectural style and urban form. The adaptive reuse of unique buildings and landscape elements should be encouraged.



Related Policies

2.1.3 6.6.4 11.3.3 11.2.3

9.1.9

Signage, including signs on private property, should be designed and placed to enhance the overall built environment, reinforce the identity of a district, and balance aesthetic, economic, and safety needs.

What is Wayfinding?

Wayfinding is the organization and communication of our relationship to space and the environment. Successful wayfinding allows people to determine their location within the city, identify their destination, and find a way to get from where they are to where they want to go. Wayfinding systems employ both architectural elements, digital technologies, and environmental



Source (All Images): City of Wilmington

Gateway Redevelopment - Cape Fear Memorial Bridge Landing

Motorists entering the city from the Cape Fear Memorial Bridge are greeted by approximately 4-5 blocks of vacant and under-developed land. This is not a suitable representation of a thriving city at this gateway location. This centrally-located area is ideal for an urban mixed-use center, where major retailers can benefit from regional automobile as a well as neighborhood pedestrian customers. The concept is imagined as a vibrant destination that closes the “gap” currently dividing Greater Downtown’s Southside neighborhoods.

- A** Mixed-use development with various building types (including existing apartment building).
- B** Interior “main street” for shopping and other pedestrian activity; pocket park.
- C** Garden apartments arranged in an “urban” configuration with robust pedestrian network.
- D** Offices and townhomes use shared parking and parking deck to reduce surface parking areas.
- E** Parking deck lined with habitable building space; well-designed facade along all sides.
- F** Major intersections are made pedestrian-friendly with crossings, medians and landscaping to protect pedestrians from traffic. Driveways are removed from South Third Street.
- G** Sculpture park with pathway creates safe, usable open space at the bridgehead area.



Existing Condition
Source: Google, 2015



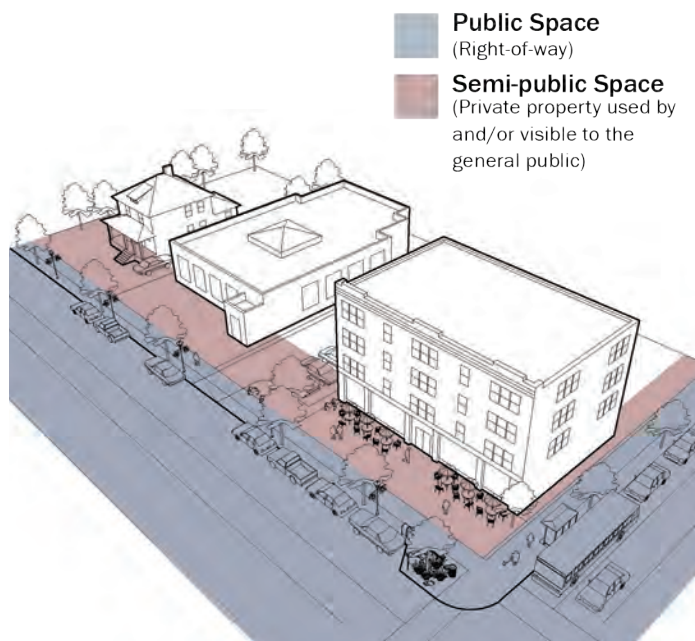
Urban Redevelopment Concept for Various Sites at Dawson, Wooster, and South 3rd Streets

Source: City of Wilmington

9.2 Public Space Network

Public spaces are the streets, parks, plazas, trails, alleys, sidewalks, and other features that people use to move through and gather within. These are part of a network, connected to one another and to private developments, allowing residents and visitors to meet some of their daily needs. Well-designed public spaces can enrich the lives of people by fostering meaningful experiences, social activity and public safety. Successful public spaces nurture and define the city's identity and encourage diverse populations to use them at all times of the day.

Wilmington's pedestrian network is strongest within the Greater Downtown and within some newer mixed-use developments. In many parts of the city, pedestrian connections are frequently missing or incomplete. While sidewalks, open space, tree conservation, and connectivity are addressed to a moderate extent in the existing development regulations, these issues are addressed site-by-site, rather than as a comprehensive, network-based approach. In some cases, it is possible that the city's current development regulations impede connectivity by requiring separation of land uses, deep setbacks, and buffers.



Public and Semi-public Space

Public space includes land that is publically-owned, such as streets, alleys, parks and plazas. Semi-public spaces are transitional areas that extends from the edge of the building to the public sidewalk.

9.2.1

The strategic transformation of public and private spaces into meaningful places through placemaking should be encouraged. Wilmington should have a robust, well-connected network of public and semi-public spaces.



Related Policies

1.2.1

9.2.2

Parks, plazas, and other gathering spaces should be designed to be attractive, accessible, and usable through the orientation and design of adjacent buildings, connections to nearby areas, and should allow for informal and programmed events.

9.2.3

The appearance, identity, and safety of streets should be prioritized through the appropriate use of pedestrian elements such as sidewalks, crosswalks, street lights, landscaped areas, street furnishings, signage, and traffic signals and signals management.



Related Policies

1.6.1

9.2.4

Bus shelters, seating, and related elements should be provided at transit stop locations, where appropriate.



Related Policies

2.5.6



Box Set Cross Reference

Growth Strategies Maps

9.2.5

Along pedestrian priority streets, sidewalks should be designed and managed in a way that promotes pedestrian safety, efficiency, and comfort, providing adequate space for street trees, pedestrian traffic, and social activities such as sidewalk cafes.



Related Policies

10.6.2 10.6.4 6.3.4



Box Set Cross Reference

Growth Strategies Maps

9.2.6

Streets should be designed as public spaces that are scaled for pedestrians, especially along corridors designated as special character streets and pedestrian priority streets in the Growth Strategies Maps.



Related Policies

2.4.1



Box Set Cross Reference

Growth Strategies Maps

9.2.7

Reclaimed materials, public art, heritage trees, stormwater infrastructure, and other features should be used in the design of public spaces whenever possible.



Related Policies

6.3.2 7.1



Key Planning Theme

Changing Places and Revitalizing Spaces

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.

9.2.8

The design of alleys should reflect their best potential use, whether service-oriented, pedestrian pathways, or gathering places and venues. Alleys used as pathways should provide pedestrian elements, such as street lights, quality paving materials, and street furnishings (trash bins, bollards, signs, etc.).



Related Policies

10.2.6 10.6.7

9.2.9

Appropriate street tree plantings should be chosen for the function of the street and distinctive parts of the city. Trees in high pedestrian traffic areas and the Greater Downtown should be planted in tree wells with grates to protect the roots and allow safe pedestrian passage. Xeriscaping and native plants should be used where appropriate.



Related Policies

2.4.1 6.3.2 10.6

Vacant Lots

Activating vacant lots with temporary uses such as community gardens and public spaces, like the photo below in Winston-Salem, NC, can breathe life into unused spaces, reinvigorating streets and neighborhoods.



Source: City of Wilmington

9.3 Pedestrian-oriented Placemaking

Pedestrian-friendly building and site design help encourage social engagement, active public spaces, and safe transportation options. Obesity and obesity-related diseases such as hypertension and diabetes are a national concern; pedestrian-friendly environments are associated with reduced obesity rates and can promote the health and well-being of residents.³⁴ Ensuring that future development in Wilmington is pedestrian-friendly will help support public health and urban design goals. This will also help reduce the overall motor vehicle miles traveled, reduce traffic congestion and air pollution, and enable all citizens, regardless of age or ability, to be more mobile. It is not enough that sidewalks are provided for walking along city streets, but the adjacent development must be conducive to pedestrian mobility as well.

Pedestrian-friendly Facade Design

Building design elements that are conducive to pedestrian-friendly design include, but are not limited to, the following:

- Horizontal articulation, where the building has a distinct base, middle, and top
- Vertical articulation, where a building is divided into distinct bays along its length
- Roof lines that highlight entrances
- Primary entrances on the front façade
- Transparent storefront windows and activated uses on the ground floor
- Awnings that protect from rain and sun
- Corner buildings with heightened, accentuated corners

9.3.1

Mixed-use buildings and multi-use development sites should be encouraged where appropriate. Infill development that creates a destination for existing land uses should include opportunities for cross-site pedestrian connections, shared parking arrangements and other strategies to enhance mixed-use environments.



Related Policies

[1.3.4](#)[1.5](#)[2.2.2](#)[10.1.1](#)[10.4.2](#)

9.3.2

Comfortable, safe, and convenient pedestrian places should be promoted through buildings that face the street, avoidance of deep front setbacks, and providing direct pedestrian connections and entries along the public space network.



Related Policies

[10.6.1](#)

9.3.3

New development should promote pedestrian-oriented uses, especially those within Mixed-use Centers delineated in the Growth Strategies Maps. Automobile-oriented uses and designs such as drive-through windows should be discouraged in these areas.



Box Set Cross Reference

[Growth Strategies Report and Maps](#)

9.3.4

Attractive and interesting commercial streetscapes should be created by promoting active ground-floor uses, creating desirable street activities, minimizing curb cuts and driveways, and avoiding windowless facades and large gaps in the street wall.



Related Policies

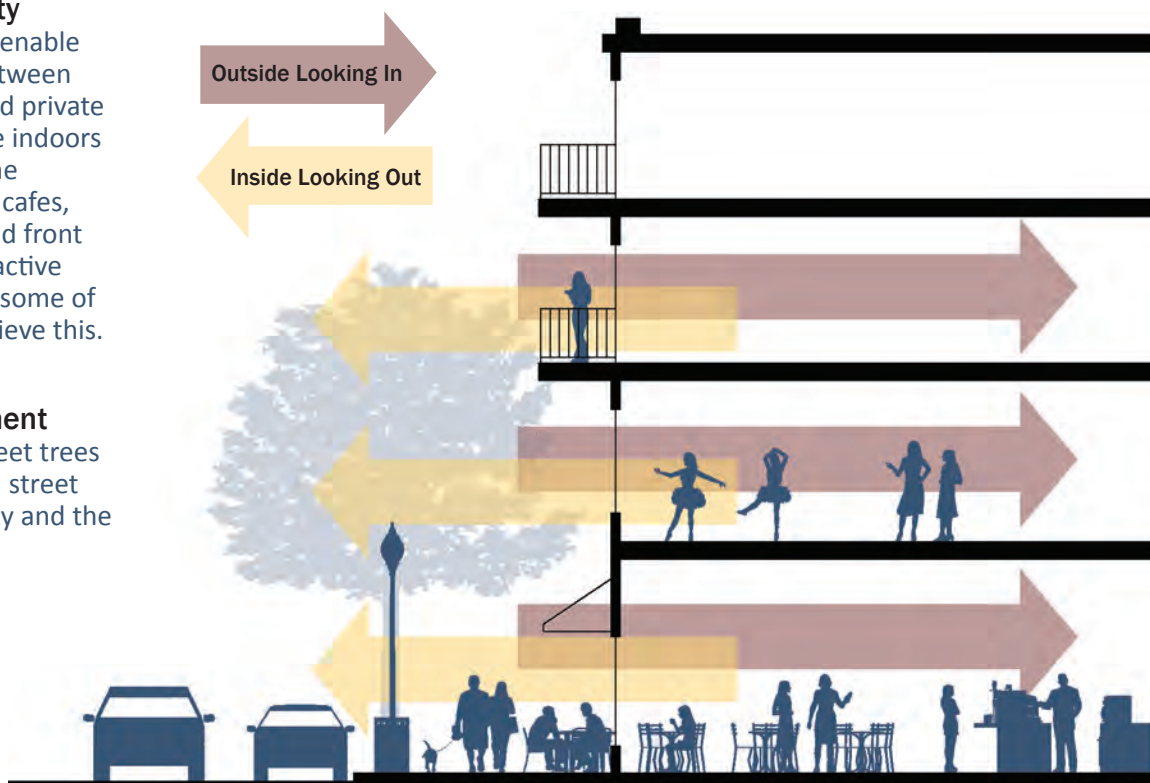
[2.2.4](#)[10.6.2](#)

Facade Permeability

A building facade can enable vibrant interaction between public, semi-public and private spaces by bringing the indoors out and by bringing the outdoors in. Sidewalk cafes, adequate windows and front doors, balconies and active ground floor uses are some of the many ways to achieve this.

Street Edge Treatment

On-street parking, street trees and pedestrian-scaled street lighting enhance safety and the human experience.



9.3.5

Where appropriate, indoor uses moved outdoors, such as dining areas and small merchandise displays on walkways and plazas, should be employed to activate the streetscape, while outdoor spaces moved indoors, such as atriums and courtyards, may also be used to improve views, exposure to light, and encourage social interaction.

9.3.6

Pedestrian-scaled lighting should be provided to encourage a safe walking environment while providing unified character elements for pedestrian oriented streets, centers, and neighborhoods.



Related Policies

10.6.3

9.3.7

On-street parking should be provided along pedestrian-oriented streets to act as a buffer from vehicular traffic. Surface parking should be confined to the rear or side of buildings.



Related Policies

2.7.4

9.3.8

Parking decks should be encouraged in Urban Centers as identified on the Growth Strategies Maps and, where feasible, should be wrapped with active uses for the entire frontage along public streets, especially on pedestrian-priority streets. Where wrapped parking is not feasible, decks should be screened and should not be visibly distinct from the building(s) they serve.



Related Policies

8.1.16 10.2.13



Box Set Cross Reference

Growth Strategies Maps

9.4 Corridors and Main Streets

In terms of appearance and function, Wilmington's major commercial corridors, especially Market Street, College Road, Oleander Drive, and Carolina Beach Road, should enhance the city's image. Much of the land along these corridors is developed with older commercial strip centers. Although once seen as a desirable development pattern, many units or entire buildings within these commercial strips are vacant, obsolete, or underperforming in the real estate market. This development pattern is characterized by a lack of coordination in site design, resulting in excessive curb cuts, confusing driveway and parking lot patterns, redundant parking, and landscapes that are dangerous for pedestrians. Cluttered signage, auto-oriented building types, and deep front setbacks filled with surface parking lots currently dominate the built environment along significant portions of major roadways.

Components of a Corridor

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

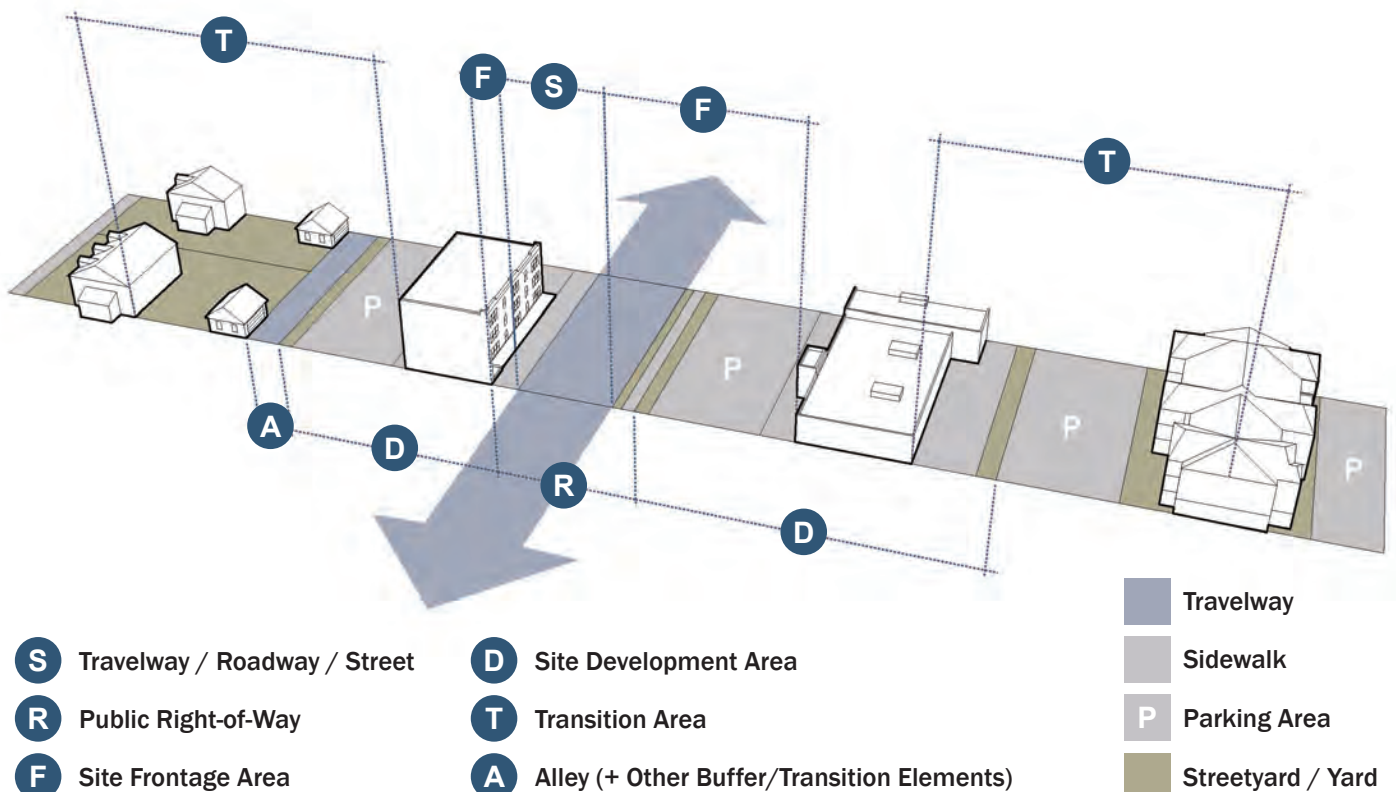
As primary corridors for visitors into and through the city, it is essential that these roadways convey a positive impression of Wilmington instead of a negative one. The creation of boulevards with landscaped medians, the use of street trees and sidewalks, and higher standards for building frontages will greatly improve the appearance of Wilmington's corridors, mitigate noise and air pollution, and address the needs of pedestrians, cyclists, motorists, and transit users of all ages and abilities. A better urban form is possible as these areas redevelop.

"Main streets" are small-scale, pedestrian-friendly streets that are lined by buildings of mixed uses. Buildings along main streets are usually spaced closely together, have active ground-floor uses and serve as small commercial centers for surrounding neighborhoods. Elements of main streets can be found within existing neighborhoods and some corridors; some require revitalization, redevelopment, and infill development. New main streets can be created anew as part of a mixed-use development plan.



Box Set Cross Reference

Growth Strategies Report and Maps



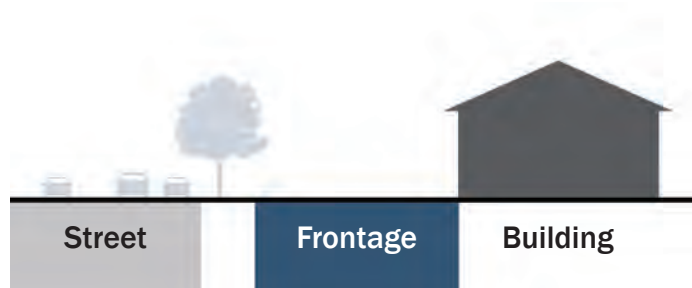
Frontage

The design of streets and the relationship of buildings along them are key components of city-building and placemaking, as this relationship creates the “container” within which social and economic activity can occur, as well as the walkability, character,

and perceived quality of a place. The approach that a commercial, mixed-use, or multifamily development takes toward the street is known as “frontage.” Frontage includes the placement and orientation of the buildings on a site, the location of primary

entrances, landscaping around the front of the property and along the street, and the location of parking. Frontage is a fundamental urban design attribute, as it governs the relationship between the private and public realms.

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 of good city design.



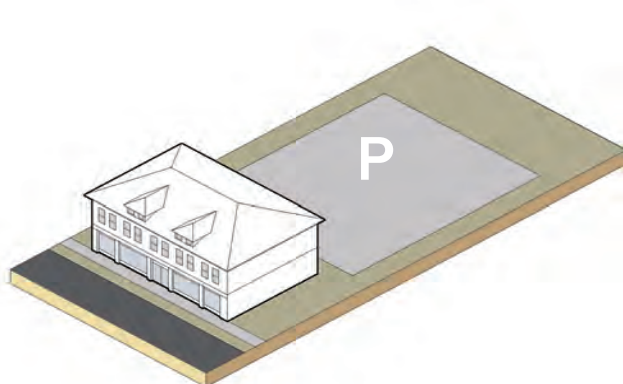
Frontage of Mixed-use Development, Raleigh

Source: City of Wilmington

1

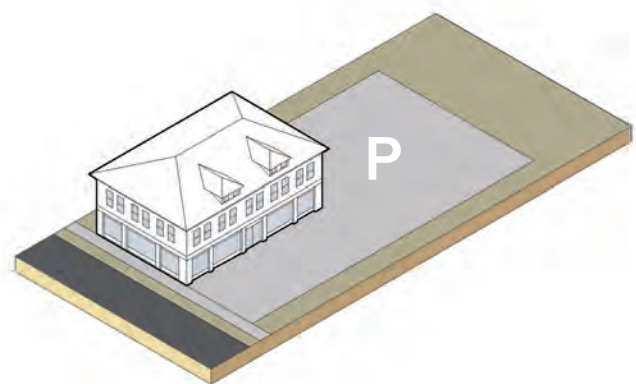
Urban Frontages

Generally, urban frontage should be used in both traditional urban areas and new urban areas, including downtown, pedestrian business districts, and transit-oriented development areas. Urban frontages should be used to create streetwalls and a pedestrian-oriented environment. In this setting, vehicular access and front door parking are accommodated on-street. Off-street parking is located to the side, rear, or under buildings, but never between the buildings and the street.



Civic

Main entries and windows up to the sidewalk.



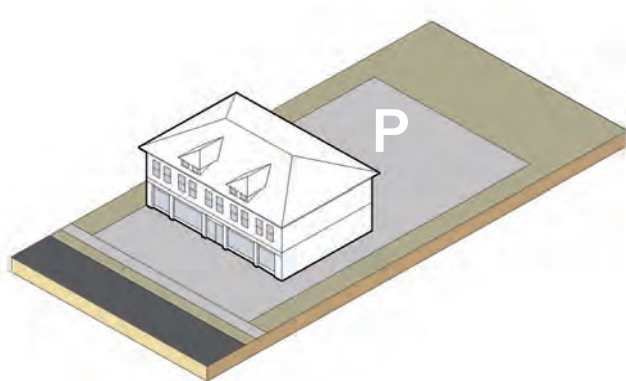
Side

Main entries and windows towards side parking.

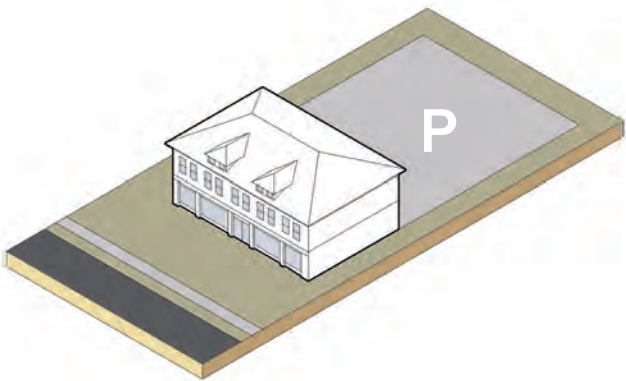
2

Mixed/Semi-Urban Frontages

A mixed, or semi-urban, frontage may be used in intensifying suburban areas, particularly where multimodal investments are planned and where on-street parking is not a feasible option for front door access. In such areas, urban frontages may be used and would likely be confined to side or interior streets where on-street parking could be accommodated. Elsewhere, off-street front door parking would be available, but limited in depth so that pedestrian connections remain convenient and direct.



Semi-urban
Limited front parking.

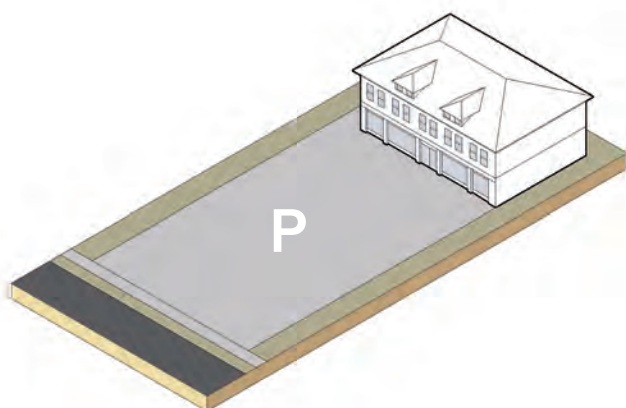


Semi-urban Parkway
Frontage has some green space or front yard.

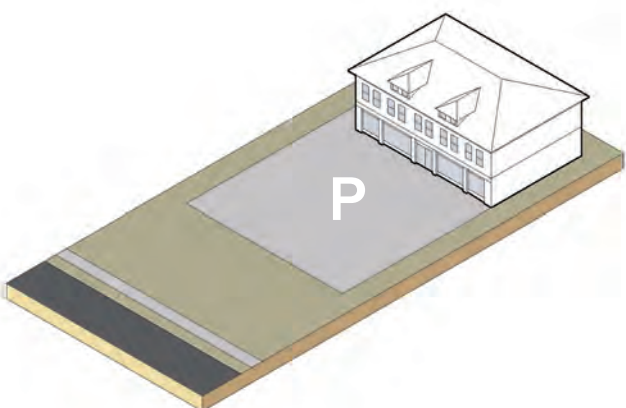
3

Suburban Frontages

Suburban frontage is a feasible solution where existing densities are low and multimodal transportation access is not anticipated to be significant within the horizon of this plan, or where the urban or hybrid approaches are not practical or feasible. While pedestrian access and circulation should still be accommodated, standards for building location would not necessarily be required, and front door parking is an acceptable design solution.



Parking Field
Parking lots placed between the building and the street.



Parkway
Parking is screened from the roadway by a landscaped front yard area.

9.4.1

Strip commercial development and auto-oriented building and site designs should be discouraged along certain corridors as shown on the Growth Strategies Maps. Efficient site design, shared parking between complementary uses, and strategic use of landscaped areas to collect stormwater should be encouraged.



Related Policies

1.6.1 6.2.4

9.4.2

Visually cohesive streetscapes should be created. Visual character should be enhanced and preserved through landscaping, underground utilities, street furniture, signage, and median plantings.



Related Policies

5.5.1 10.6.2

9.4.3

Parking lot landscaping and planting should be utilized to provide effective shade canopy, to help screen the view of parking, improve stormwater infiltration and reduce stormwater runoff, and reduce the heat island effect.



Related Policies

8.1.8

9.4.4

Where heritage and/or champion trees are located adjacent to major thoroughfares, building setbacks and design that support these trees should be encouraged and the removal or destruction of these trees should be discouraged.



Key Planning Theme

Nurturing our Community

The natural environment, from parks, water, and open spaces, to locally-grown agriculture, to protecting water quality will be critical to Wilmington's future success.

9.4.5

The preservation, revitalization, and development of buildings that compose a "Main Street" should be encouraged to provide walkable destinations for neighborhoods.



Box Set Cross Reference

Growth Strategies Report and Maps

Wilmington Heritage Trees

Wilmington's Heritage Tree Program is dedicated to the identification and preservation of heritage trees within the city. Heritage trees are those, which because of their age, rarity, grouping, overall beauty or historical significance represent an important aspect of the city's history or natural landscape.

North Carolina's Champion Big Trees program recognizes trees based on their great size, age, or historical significance.



Related Policies

6.3



Source: City of Wilmington

9.5 Neighborhoods

Wilmington's neighborhoods count among the city's greatest assets. Auto-oriented subdivisions without sidewalks, street lights, or access to transportation choices are patterns the city must discourage in new developments, focusing instead on housing choices that promote sustainability, affordability, walkability, and traffic congestion relief. Many of Wilmington's older neighborhoods, developed before easy access to the automobile, showcase urban design features that are sustainable, including street trees, wide sidewalks, smaller buildings, and shared public spaces.

9.5.1

As population growth leads to new housing and development patterns, new development within established neighborhoods should address the existing distinctive character of the surrounding area, while allowing transitional changes.



Related Policies

1.6.4

9.5.2

Clear and safe pedestrian networks within, through, and between neighborhoods should be enhanced. Opportunities to connect existing neighborhoods to adjacent commercial centers and community facilities and services should be explored.



Related Policies

2.6.2

2.8.2

4.2.2



Neighborhood Type - Historic, Single Family

These neighborhoods should include historic as well as appropriately designed new homes, increasing housing density without changing the neighborhood character.

Source: City of Wilmington

9.5.3

Architectural continuity and design integrity should be preserved and strengthened in historic districts and other areas of strong architectural character and cohesion. New development in these areas should not replicate existing buildings, but should be complementary in form, height, and materials.



Related Policies

1.7.3

7.4.4

11.1.1

9.5.4

Infill and redevelopment should respect and improve the integrity of neighborhood open spaces and public areas. Buildings should be designed to avoid the loss of sunlight or vistas and enhance the usability of neighborhood parks, plazas, and buffers.



Related Policies

1.4.1

9.5.5

Buffers and gradual building height changes should be used to transition between established neighborhoods and higher-density development, though this should not disrupt or prevent connections between compatible and complementary land uses.



Related Policies

1.4.4



Neighborhood Type - Suburban, Multi-Family

These types of neighborhoods should allow for open spaces, especially green, common areas outside for residents of the development to utilize and share.

Source: City of Wilmington

9.6 Mixed-use Centers and Places

Mixed-use centers provide housing, employment, commercial, and cultural amenities in a compact form. These centers support transit, walking, and biking and are focal points of vibrant city life and activity. They are also strategic locations for accommodating a significant share of future population and employment growth. Concentrating growth in these centers can help prevent sprawl and facilitates efficient use of public services and infrastructure. The key to successful mixed-use centers is locating both housing and nonresidential uses within the center.

In Wilmington, some densely developed areas occur outside the downtown, but they often lack the desirable qualities of a well-designed mixed-use place. As the city continues to redevelop, mixed-use and neighborhood centers will occur as nodes – clusters of compact, walkable, and mixed-use locations connected to one another by a range of transportation options. Such places will not be appropriate for all parts of the city, but where they are, they will enable the clustering of development and activities in specific areas.

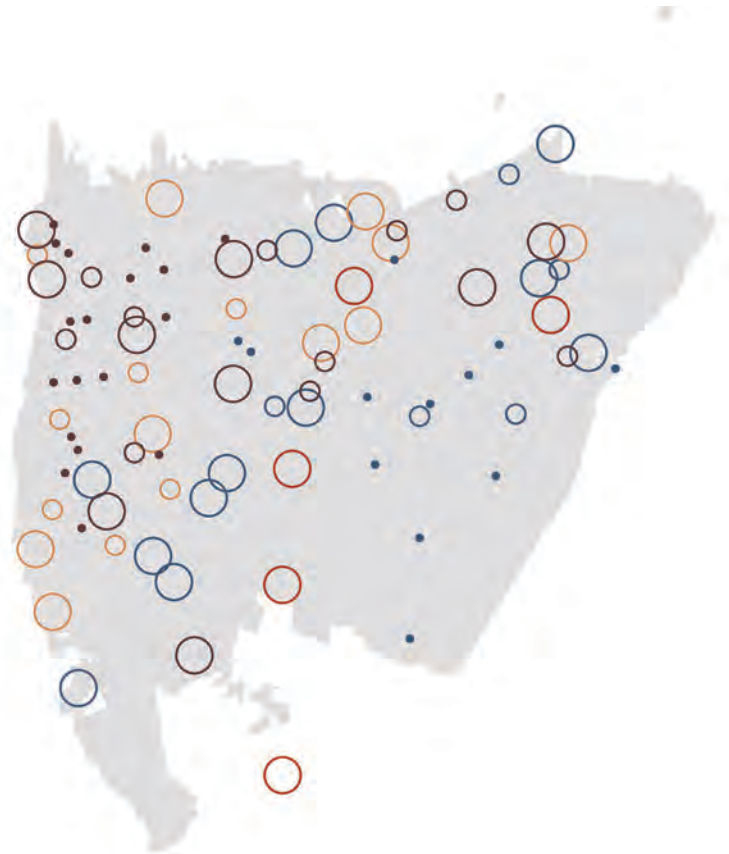
By directing population and employment growth to mixed-use and neighborhood centers, the city and the region can more efficiently prioritize the provision of capital improvements and public services. Promoting residential development in these areas can also facilitate appropriate higher-density development that can help diversify housing options and make public transit a viable choice for residents. Workforce and affordable housing options in mixed use and neighborhood centers help people live near their jobs, reducing transportation costs and increasing access to employment, amenities, and services, which are often barriers to affordability for many households. Housing options in areas rich with amenities are also appealing to empty-nesters and Millennial households. Focused growth can also offer reductions in traffic congestion while enhancing environmental benefits, and opportunities for affordable housing.



Related Policies

1.4.4

1.5



Box Set Cross Reference

Growth Strategies Report and Maps



Mixed-Use Places

These types of places should include diverse uses, allowing residents, retailers and shoppers to interact regularly, fostering economic activity within the center.

Source: City of Wilmington

9.6.1

New housing of mixed types and prices should be encouraged in proximity to and within employment areas, Mixed-use Centers, and Neighborhood Nodes, as identified on the Growth Strategies Maps.



Related Policies

1.7.1 3.1.3 5.2.1

9.6.2

Redevelopment, infill, and mixed uses should be facilitated in areas designated as Mixed-use Centers and Neighborhood Nodes, with a centrally-located signature public space or destination as a focal point, such as an urban plaza or commercial street lined with active building frontages.



Related Policies

1.3.4 1.5 5.5.5

9.6.3

Infill and redevelopment should enhance the desirable characteristics that make each part of Wilmington unique. New neighborhood centers and mixed-use developments should use one or more “main streets” and public gathering spaces as a central focal point.



Related Policies

1.2.1 1.4.1 1.7 10.1.2
10.1.3

9.6.4

Within Mixed-use Centers, the use of parking decks, wrapped with active uses, should be encouraged to facilitate higher development densities and reduce the abundance of surface parking lots.



Related Policies

10.2.13

9.6.5

Creative parking solutions, including shared parking arrangements, the use of structured parking facilities, and technological parking management programs, should be encouraged.



Related Policies

8.1.15

9.6.6

Building, site, and landscape design should be integrated with transit stops to enhance the comfort of transit riders, create commercial opportunities, and reduce the distance between transit stop locations and rider destinations.



Related Policies

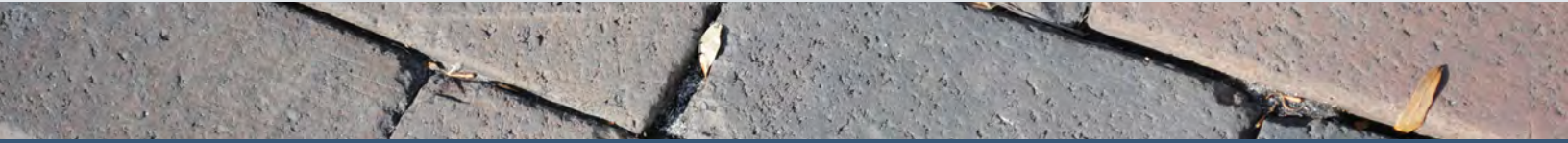
2.1.2 2.5.6



Mixed-Use Buildings

These types of buildings should include residential, commercial and retail within a context sensitive design, focusing on pedestrian interactions at the ground floor.

Source: City of Wilmington



10

Downtown Wilmington

- 10.1** Land Use
- 10.2** Transportation
- 10.3** Economic Development
- 10.4** Housing and Amenities
- 10.5** Community Facilities, Parks, Recreation, and Open Space
- 10.6** Urban Design

Downtown at Night

Image (opposite) of downtown core, no longer a sleepy collection of old buildings. Vibrant streets are illuminated with street lights and activities.

Source: City of Wilmington

An aerial night photograph of a city, likely Pittsburgh, showing a dense urban landscape with numerous illuminated buildings and streets. A river flows through the scene, and the city lights reflect on its surface. The sky is dark with some light clouds. The text is overlaid on the left side of the image.

“The tendency to become denser is
a fundamental quality of downtown
and it persists for good and sensible
reasons.”

— Jane Jacobs

Introduction

Downtown is the heart of both Wilmington and the Cape Fear region. As the city's primary mixed-use urban center, downtown has a large concentration of offices, including the city's administrative center. Many cultural venues and attractions are located downtown, and like many cities, Wilmington's downtown has become a fast-growing mixed-use

neighborhood. The downtown skyline and Cape Fear River are iconic images of Wilmington, often used in public information and marketing materials. Downtown serves as the western gateway into Wilmington and is a major transportation hub, with several major state and federal highways converging there.

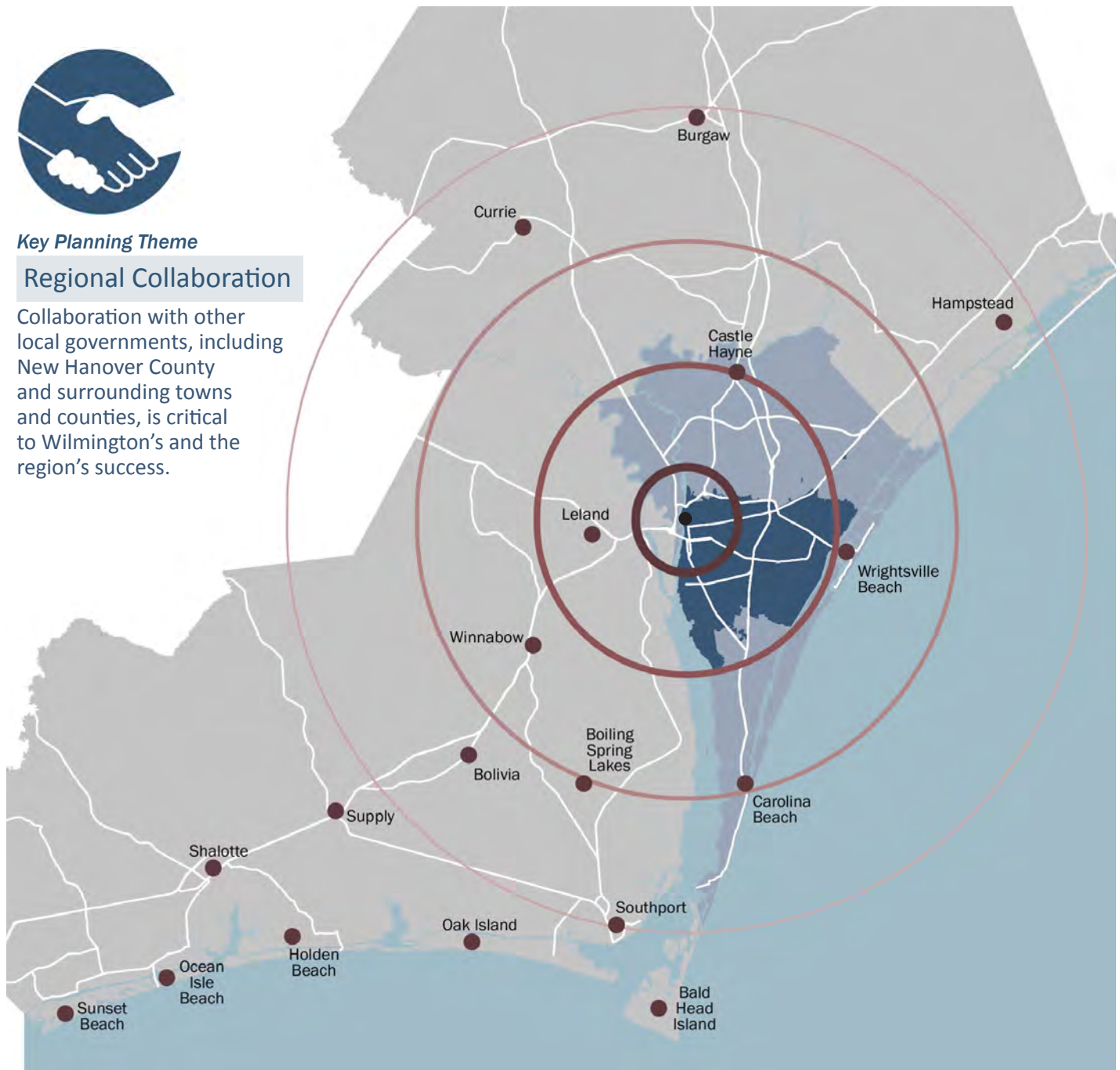
The Greater Downtown contains the largest historic district in the state. Downtown is a source of community pride and identity; a vital, healthy, and growing downtown is essential to Wilmington's sustainability, quality of life, and future economic competitiveness.



Key Planning Theme

Regional Collaboration

Collaboration with other local governments, including New Hanover County and surrounding towns and counties, is critical to Wilmington's and the region's success.

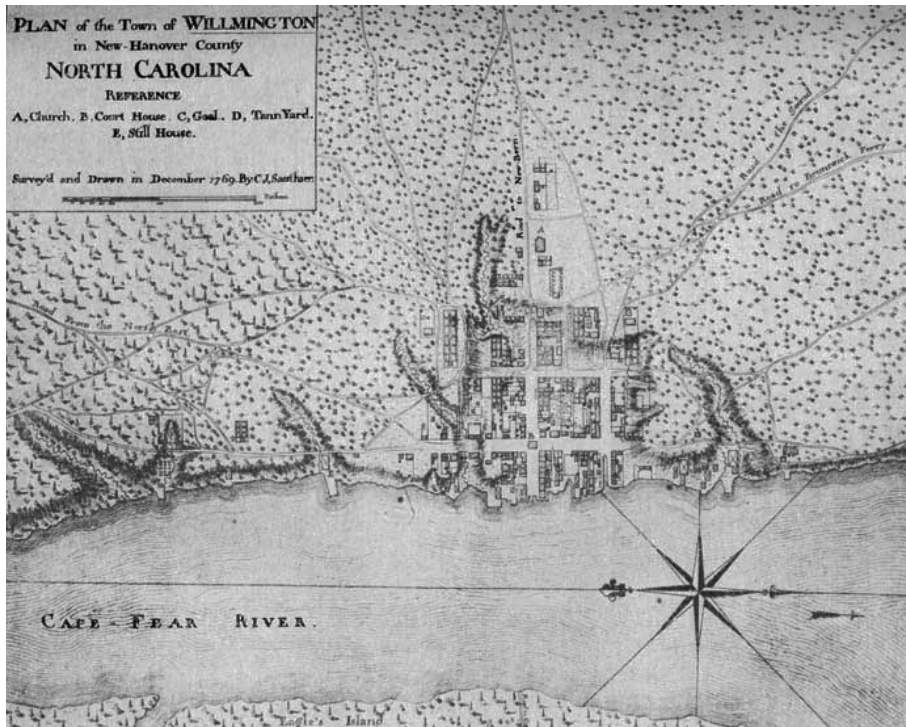


Early History of Downtown

Wilmington was first established along the east bank of the Cape Fear River, approximately 16 nautical miles from the convergence of the river and the Atlantic Ocean, and just below the confluence of the Northeast Cape Fear River and the main branch of the Cape Fear River. Not yet a town, the area was surveyed and laid out in

1733 by William Grey and in 1737 a new plan for “Newtown” was approved. The center of Newtown was the intersection of Front and Market (“Road to New Bern”) streets, which is still the heart of downtown today.³⁵ The original 1737 plan included a simple urban design hierarchy with a basic street grid pattern emanating from the

Cape Fear River. The plan shows a church, courthouse, gaol (jail), tann yard (tannery), still house, and the road to New Bern, then the British colonial capital. Although Wilmington has grown and changed significantly, downtown still maintains the defining urban design features established in the city’s earliest years.



1769 Sauthier Plan of Wilmington

Source: North Carolina Maps, North Carolina State Archives, North Carolina Collection at UNC-Chapel Hill



Wilmington Ship Building Yard

Source: New Hanover County Public Library



Atlantic Coast Line Railroad Yard, Wilmington

Source: New Hanover County Public Library



Parade on Front Street, Wilmington

Source: Historical Society of the Lower Cape Fear

Downtown Today

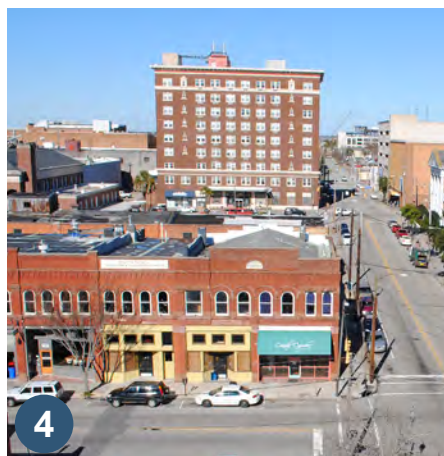
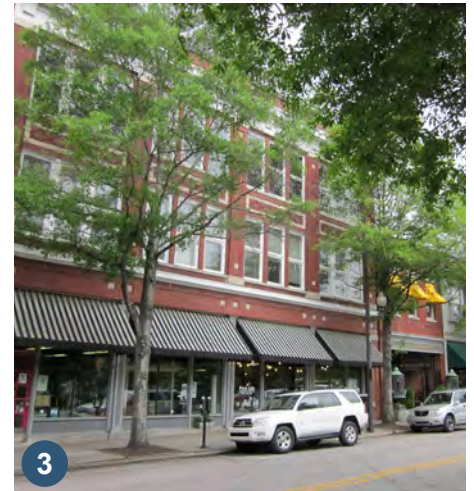
Today, the area considered “Greater Downtown,” extending roughly from Smith Creek to Greenfield Lake and the Cape Fear River to Burnt Mill Creek, includes central downtown and the city’s locally-designated historic districts, as well as the area known as the 1945 Corporate Limits, and several sub-districts. Greater Downtown is slightly more than 5.2 square miles (3,343 acres) and constitutes nearly 10% of Wilmington’s incorporated area (see the Growth Factors Report for more information).



Growth Factors Report

9

Greater Downtown is the cultural and economic center of the region. Expected population growth in Brunswick, Pender, and New Hanover counties will put greater downtown in the middle of urbanized area with a projected 2040 population of 600,000 people. Significant infrastructure investments downtown, including improvements made by both the city and the Cape Fear Public Utility Authority (CFPUA), a new cultural arts facility at Cape Fear Community College, the nearby Port of Wilmington, and the proposed multimodal transportation center render downtown the destination point for thousands of commuters originating from all over the three-county region and beyond.



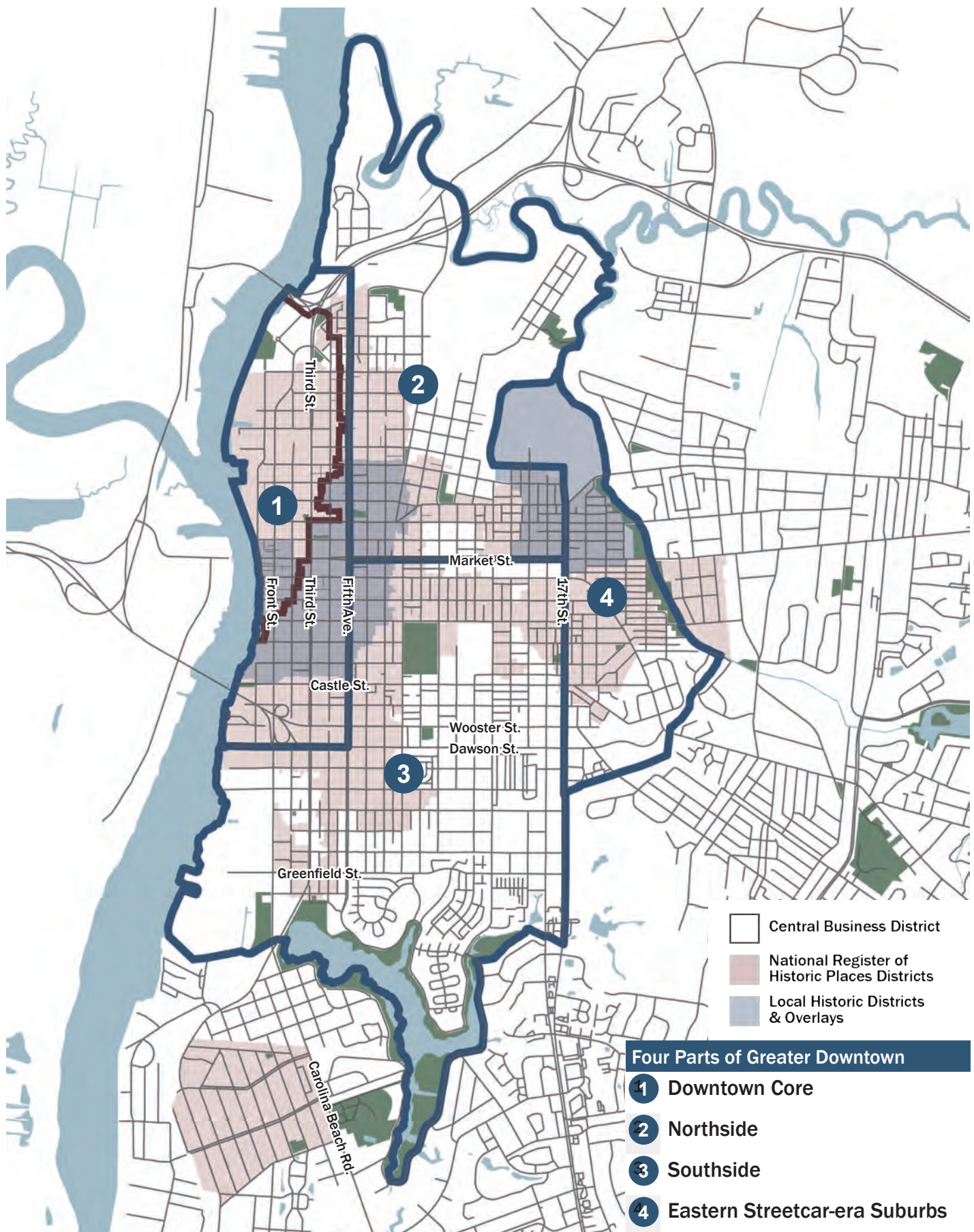
1. Riverfront Park and US Coast Guard dock.
2. “Al fresco” dining on Front Street sidewalk.
3. Historic buildings at the Cotton Exchange on Front Street.
4. Downtown has a variety of building masses, most of which front onto the sidewalk.

Source (All Images): City of Wilmington

Downtown is an employment center within the region, with more than 16,000 jobs in the greater downtown, more than 10,500 of which are concentrated in the downtown core. With approximately 75,500 jobs in Wilmington, a full 21% of these jobs are in Greater Downtown (approximately 12% of all the jobs in three-county region are in Greater Downtown).

The greatest density of private-sector jobs with an annual salary of more than \$40,000 occurs downtown; 53% of downtown employees earn \$40,000 per year or more.³⁶ Major concentrations of office space include the PPD complex on N. Front Street and the banking and government corridor along N. 3rd Street.

Four Parts of Greater Downtown



Along with jobs and office space, Greater Downtown also has a significant residential base. Housing types in Greater Downtown range from luxury condominiums to historic mansions to student apartments and many others in between, accommodating a wide variety of people. To meet the anticipated demand for more walkable, compact neighborhoods, Wilmington must continue to provide the sort of diverse housing options and vibrant mix of uses found in greater downtown. An increase in downtown housing may help Wilmington become a more competitive location for segments of the population, such as Millennials and Baby Boomers, who tend to want a more urban lifestyle, with easy access to amenities, and the businesses and industries that may employ them.

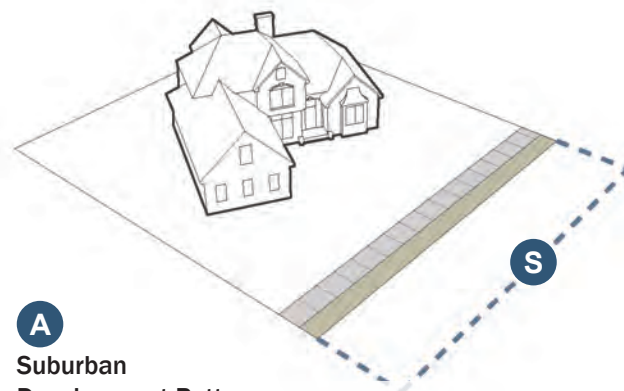
Greater Downtown boasts some of the oldest homes and buildings in Wilmington, and in recent years, has witnessed a significant surge in new residential development. Even so, there is still a great deal of opportunity for infill and redevelopment in the area. Surface parking lots, which detract from the aesthetic quality of downtown, are highly under-performing land uses in terms of tax revenue generation, the provision of active ground-floor uses, and the enrichment of the pedestrian experience. Within the Downtown Core, it is estimated that approximately 46% of the total land area is vacant or underused. This represents a remarkable opportunity to accommodate population and job growth in an area flush with infrastructure, arts and culture, and jobs.

Greater Downtown Infill and Redevelopment Opportunities

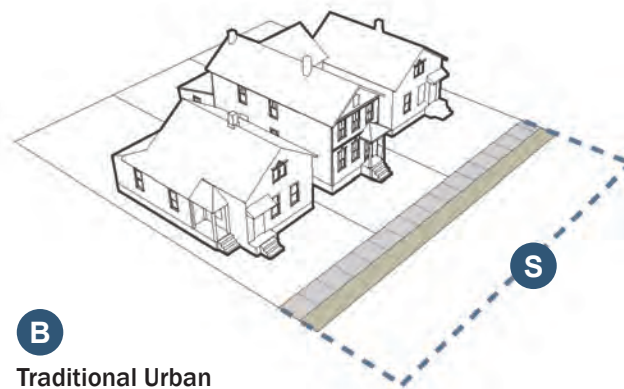
Land Use	Area*
Surface parking	11%
Developed but underutilized	17%
Vacant land (no use at all)	18%

* As a percentage of the total downtown core land area.

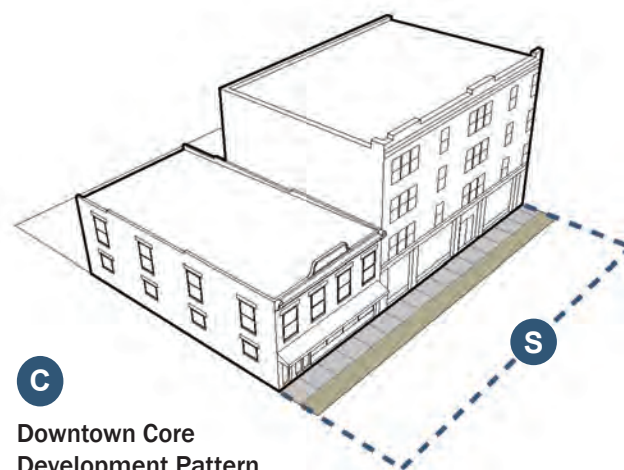
Source: City of Wilmington GIS



A
**Suburban
Development Pattern**
One unit served by 50 feet of sidewalk.



B
**Traditional Urban
Neighborhood Development Pattern**
Three units served by 50 feet of sidewalk.



C
**Downtown Core
Development Pattern**
Fifteen units plus commercial served by 50 feet of sidewalk.

Density Pays: Sidewalk Investment per Unit Served

The return on investment from a given segment of sidewalk (S) varies between urban, semi-urban and suburban development patterns (shown as A, B, and C, above). In mixed-use urban centers like downtown, a sidewalk serves more households per distance of infrastructure along the street.

Comparative Value

Despite its relatively small size and concentration of tax-exempt parcels (nearly 21% of the total land area of the downtown core), the density of jobs, housing, and other uses makes the downtown core among the most valuable portions not only of the city, but all of New Hanover County, in terms of property tax value per acre. *Downtown Counts*, a 2013 study published by Urban3 and Wilmington Downtown, Inc., states that, in terms of property

tax values, “downtown is achieving a relative productivity consistent with the beachfront communities.” The compact, pedestrian-oriented development pattern means that downtown is not only people-oriented, but provides urban services at a low cost per person. For example, a mile of sidewalk costs the same regardless of the number of people it serves; the more units of development that are connected to that mile of sidewalk, the more tax revenue is

generated to pay for the overall cost. This is evident by comparing downtown and Independence Mall. The historic core of the Central Business zoning district consists of 52.8 acres, about 38 of which are taxable, and yields a tax value of \$194 million, or \$5.1 million per taxable acre. Independence Mall is 76.4 acres, nearly 59% of which is surface parking, and has a tax value of \$84 million, yielding a value of just \$1.1 million per taxable acre.

Downtown Core

\$5.1 Million per acre taxable

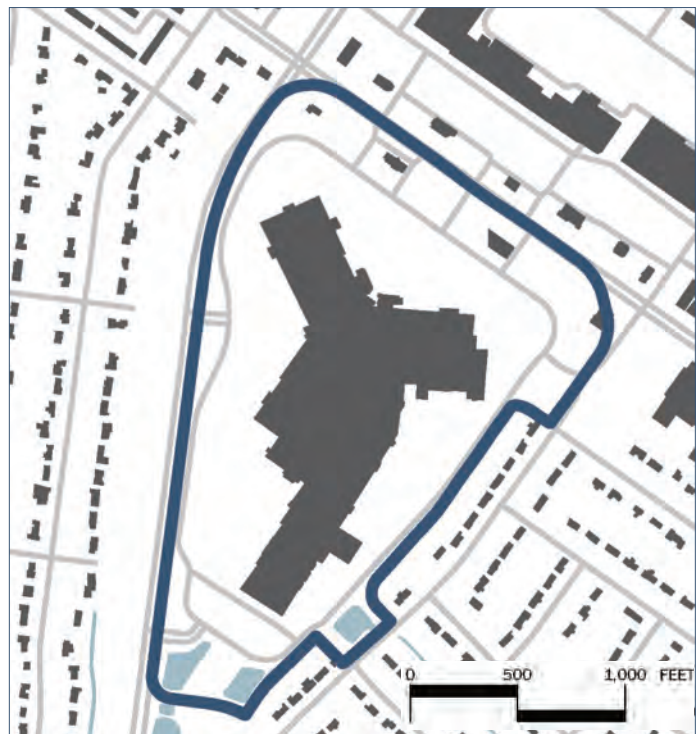


Downtown Core

- 71.3 Total Acres (52.8 acres without streets)
- 38 Taxable Acres
- \$194 Million Total Value

Independence Mall

\$1.1 Million per acre taxable



Independence Mall

- 76.4 Total Acres
- 76.4 Taxable Acres
- \$84 Million Total Value

Development Trends



1. Courtyard Marriott under construction downtown.
2. Multi-family residential infill development in historic Hayes-Barton, Raleigh
3. Mixed-use office building under construction downtown.

Source (All Images): City of Wilmington

Recent development in the Greater Downtown has been especially focused around the northern riverfront area and near Cape Fear Community College. There has been a moderate level of redevelopment activity in the historic portions of the Downtown Core. Many historic one-, two- and three-story buildings have been adapted or renovated to accommodate active ground-floor uses, primarily retail, restaurants, and bars, with some office and residential uses on the upper floors. These projects indicate a market confidence that Greater Downtown Wilmington will continue to grow stronger as a destination for dining, living, working, retail, and entertainment.

During the recent post-recession rebound in the local economy, the downtown residential base has increased as interest in walkable, less auto-dependent environments has grown. Wilmington's downtown National Register Historic District contains almost 3,000 buildings and is one of the largest National Register districts in the country. It is this historic district and the unique character of Wilmington that attracts many residents, visitors, and businesses to downtown. As such, Wilmington must continue to balance historic preservation with development and

change. There have been over 75 major projects within the locally-designated historic districts over the past five years, including private sector redevelopment and rehabilitation and public sector access and streetscape projects.

The prevailing development trend in the downtown core is an integrated mix of uses within individual buildings, typically with a mix of rental or for-sale residential units and/or office space on the upper floors, and retail or entertainment uses on the ground floor. As more ground-floor area is dedicated to active uses, and more residents begin to make downtown their home, the outlook for retail uses improves, including the potential for a full-service grocery store. It is estimated that there are currently more than 6,400 residential units in the Greater Downtown, 1,034 of which are within the Downtown Core (331 within the existing Central Business zoning district). With more than 800 residential units either under construction, permitted, or approved, the number of residents is expected to continue to rise.

Revitalization is Working

The uptick in revitalization in greater downtown has encouraged economic, fiscal, civic, and cultural gains. Job growth, commercial and residential development, and significant public projects are helping downtown establish a competitive edge and become a net revenue generator for Wilmington and New Hanover County. The growth and revitalization of downtown in recent years is due in large part to successful public-private partnerships, strong leadership in the private sector, and a commitment by the city to invest in downtown's future through strategic projects intended to leverage private sector investments.

Several new zoning classifications have been developed to help facilitate reuse and redevelopment in the greater downtown, including the Main Street Mixed Use district, in place along portions of Castle Street, and the Urban Mixed-use District, in place primarily throughout the Southside and the Riverfront Mixed-use District. Improvements have also been made to the Central Business zoning district regulations. These efforts, while valuable, do not go far enough in improving the Land Development Code, which was developed in an

era of extensive suburban growth and development. While there are code-related concerns throughout the city, Greater Downtown presents a particularly complex mix of use, scale, activities, and physical constraints, which requires a finer level of specificity than can be achieved using only broad citywide policies and regulations. This chapter of the plan outlines a collection of values and strategic initiatives that address vibrancy, walkability, place making, and other methods designed to create a treasured urban center for Wilmington and the region and a model of sustainability. While many of the citywide policies in this plan are applicable to downtown, this chapter includes elements specific to greater downtown, which are designed to encourage appropriate downtown development to help ensure a healthy, vibrant, thriving economic, cultural, and entertainment heart of the city and the region. As a follow-up to the comprehensive plan, a detailed small-area plan specific to downtown will be necessary to develop specific actions and policies for this dynamic and unique part of the city.

What Citizens Said

- The image of downtown needs to be improved; downtown should be a vibrant, clean place with more activities, attractions, retail, and a movie theater
- A large event venue on the riverfront is needed
- Community gardens and rooftop gardens are needed and should be supported
- Additional restrooms are needed downtown
- Improve crime/perception of crime downtown
- The streetcar line from downtown to Wrightsville Beach should be restored
- A bigger, permanent farmers market is needed
- The northern riverfront is a prime location for redevelopment, to support commerce, and to make water based connections
- An additional river crossing and improvements to the existing Cape Fear Memorial Bridge are needed
- Redevelopment of underutilized buildings should be prioritized
- Downtown, Riverwalk, and historic districts are favorite places to walk, bring visitors, and to experience Wilmington
- A downtown grocery store is needed
- Structured parking is preferred over surface parking downtown
- Redevelop parking lots and encourage mixed-use development downtown
- Improve downtown gateways
- The Riverwalk should be extended from bridge to bridge
- Redevelopment of the Southside should be encouraged; active retail uses should line the major streets
- There should be more family friendly activities downtown; not so much nightlife

Policies

10.1 Land Use

The greatest permissible densities and buildings heights in the city are found in Greater Downtown, particularly within the Downtown Core. This level of intensity influences downtown's physical form. Within the grid of the Greater Downtown, which includes the area between the Cape Fear River and 5th Avenue from Castle Street to the Martin Luther King Parkway, there are uses that range from government offices to single-family homes, from bars and nightclubs to regional banking headquarters and a major community college campus. This mix of uses contributes to downtown's vibrancy and economic well-being.

There are approximately 7,631 people living within a one-mile radius of Front and Market streets, and 33,847 people living within a three-mile radius. If recent development trends and assumptions about greater densities come to be, the Greater Downtown could potentially accommodate an additional 20,200 residents.

These land use policies are intended to help reduce conflicts between incompatible uses, provide opportunity for a variety of complementary uses, and encourage the development of the uses needed for downtown to become an even stronger regional economic and cultural hub. There is great potential for infill and redevelopment in the northern part of the Central Business District, an area previously developed



Voids in the Built Environment

While often used for parking areas, voids between buildings are prime areas for infill development.

Source (All Images): City of Wilmington



Vacant Lots

These areas are prime for mixed-use, infill development, bridging the gap between new and existing development.

with low-density, low-intensity industrial uses. This land is now ripe for infill with a vibrant mix of retail, residential, office, and recreational uses, including a new city park on the riverfront. There is also a great deal of redevelopment potential within the Southside area, and along portions of Market Street between 10th and 17th streets.

The process of building a successful downtown requires close coordination between private and public development interests. Sites selected for redevelopment are chosen for multiple factors, including proximity to prominent civic and commercial uses, accessibility to transportation, infrastructure, favorable zoning, and real estate economics. Catalyst projects, those which spur additional investments and improvements on parcels around them, are not always major redevelopment or infill projects; rather, they may be a series of smaller projects that gradually help an area thrive.



Box Set Cross Reference

Growth Strategies Report and Maps

10.1.1

Vertical mixed-use buildings a compatible mix of uses, including diverse housing options, community-serving institutional uses, and a variety of retail uses should be encouraged in appropriate locations throughout Greater Downtown. Auto-oriented development should not be developed downtown.



Related Policies

9.3.1

10.1.2

The redevelopment of underutilized sites, including surface parking lots, infill sites, and brownfields sites, should be prioritized and supported through the city's development code and technical standards.



Related Policies

1.7.4

2.7.1

6.9.2

8.1.15

9.6.3

10.1.3

Development of a scale and intensity necessary to strengthen downtown's capacity to support a vibrant retail and office environment and increasing residential population should be encouraged and should be compatible with historic and residential areas.



Related Policies

9.6.3



Under-utilized Land

As sites become obsolete, demolition and redevelopment may be required for more appropriate uses.

Source (All Images): City of Wilmington



Public Buildings

These building should be considered for mixed-uses that engage the public instead of prohibit interactions.

10.1.4

City-owned properties not needed for public use should be made available for redevelopment to help advance downtown as a vibrant employment and cultural center, including the integration of open space, greenways, trails, and transit.



Related Policies

4.3.4

10.1.5

Public facilities, including schools and government office buildings, should be designed in such as way so as to enhance and integrate into the built environment.



Related Policies

6.2.4



Key Planning Theme

Unique Places, Captivating Spaces

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

Infill Development - Downtown Core

Despite ongoing revitalization in the core of downtown, many infill development and redevelopment opportunities remain. Surface parking lots are particularly high priority sites for development. The corner of Market Street and Second Street is occupied by several surface parking lots, yet it is the primary gateway into the historic downtown and to the Cape Fear River. This concept demonstrates how infill development would complete this important area. A continuous wall of well-designed building fronts and street trees line the sidewalk to provide a comfortable and active street life.



Existing Condition

Source: Google, 2015

- A** Replace surface parking with parking deck; “wrap” it with mixed-use buildings along the street.
- B** Continue the historic development pattern around the block; make the corner a prominent gateway feature.
- C** New development connects to and uses the existing Market Street Parking Deck.
- D** North Second Street restored as standard city street (after relocation of bus transfer station).
- E** Bank drive-thru and enclosed fountain area converted to usable open space; hotel or other significant infill building activates the space.
- F** Median and crosswalks are expanded; excessive driveways to surface parking lots are closed.



Urban Redevelopment Concept for Second Street and Market Street Intersection

Source: City of Wilmington

10.2 Transportation

Downtown is a major trip generator in the city and, within the life of this plan, may be the largest trip generator in the region. Great downtowns accommodate multiple modes of transportation and public realm improvements that promote and balance traffic, transit, walking, and cycling. As downtown continues to redevelop into a compact, mixed-use center, new transportation connections will be needed to enhance mobility options. The compact and connected grid street pattern has been and remains a great asset, as the grid efficiently disperses traffic, providing multiple routes to a single destination. Because of the grid system, a high level of service can be continuously provided to the highest density and most intense land uses and development in the city. Street closures, intersection closures, one-way streets, and “super streets” all degrade the grid and should be generally avoided.³⁷ As density and growth continue to increase downtown, the grid will ensure that traffic continues to move effectively, while still giving credence to people and places.

The city’s greenway system plays a significant role in providing recreational opportunities as well as non-motorized transportation opportunities. The Ann Street Bicycle Boulevard, starting at the foot of Market Street, is the start of the River to Sea Bikeway and closely follows the historic beach car line to Wrightsville Beach. The River to Sea Bikeway meets the Cross-city Trail at Empie Park. There is an extensive sidewalk network existing downtown and 1.24 miles of on-road bike lanes. Because the downtown development pattern is a more urban form compared to other parts of the city, an urban greenway should be incorporated into downtown, consistent with the recommendations of the *Wilmington-New Hanover County Comprehensive Greenway Plan*. Detailed maps of existing bike lanes, trails, and greenways can be found in the Growth Factors Report.



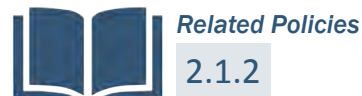
10.2.1

Downtown should be well served by the broadest range of transportation options, including bikeways, sidewalks, greenways, roadways, streetcars, and buses. Enhanced transit service, including circulators, which may be buses, rubber-tire trolleys, or modern streetcars, and car and bike sharing programs should be encouraged.



10.2.2

The construction of a mixed-use, multimodal transit center downtown, with bike and pedestrian connections, should be encouraged to provide a transit hub accommodating service for passenger rail, public transit, and private transit providers.



Urban Greenways

While “greenway” may connote an open, unpaved trail that follows a creek or natural feature, urban greenways may be on paved surfaces with very minimal landscaping.

10.2.3

Non-automotive circulation among downtown activities and employment centers should be encouraged and pedestrian safety should be promoted.



10.2.4

The street grid pattern, including alleys, of Greater Downtown should be preserved, protected, and enhanced. New connections should be explored and missing pieces of the grid should be reconstructed, where possible.



10.2.5

To maintain circulation, the conversion of additional streets to one-way traffic should be discouraged and the return to two-way traffic of previously converted streets should be considered.

10.2.6

The revitalization of underutilized alleys and the creation of new alleys should be encouraged.



Related Policies

9.2.8

10.2.7

As redevelopment occurs throughout downtown, sidewalks should be widened, where appropriate, to enhance the downtown pedestrian experience. Along identified priority pedestrian streets, new development and infrastructure projects should enhance pedestrian and bicycle safety and such elements should be given equal priority to vehicular traffic flow.



Related Policies

2.4.2

8.1.1

9.2



Box Set Cross Reference

Growth Strategies Maps

10.2.8

Opportunities to extend the urban greenway system should be examined and implemented concurrent with infill and redevelopment.



Related Policies

2.6.7

10.2.9

Short-term on-street parking downtown should be maximized and managed so that spaces are available for visitors, errand-runners, and shoppers. The use of parking decks for long-term parking should be encouraged.



Related Policies

8.1.5

10.2.10

Curb cuts should be minimized.

10.2.11

Transportation demand management strategies, such as carpooling, park and ride services, and staggered work hours, should especially be encouraged and supported to downtown locations.



Related Policies

2.3.1

2.6.8

2.7.1

6.4.3

10.2.12

Municipally-managed parking should be utilized to support and promote economic development, including using parking arrangements and public-private partnerships as a means to catalyze development.



Related Policies

8.1.15

8.1.16

10.2.13

Where feasible, parking decks should be “wrapped” with active uses for the entire frontage along public streets, especially on pedestrian-priority streets. Where wrapped parking is not feasible, decks should be screened and should not be visibly distinct from the building(s) they serve.



Related Policies

9.3.8

9.6.4

10.2.14

Internally and externally, the design of parking decks should address safe pedestrian movements and include Crime Prevention Through Environmental Design (CPTED) principles.

Transportation Demand Management

Transportation Demand Management (TDM) is a tool used to reduce traffic congestion by encouraging travel either by means other than by single-occupancy vehicle or by changing the time or location of vehicular travel. Common TDM tools include employer-provided showers and bike parking to encourage employees to bike to work and allowing employees to work non-traditional work hours and/or telecommute so that they are not commuting during peak travel hours. See Chapter 2 for more information and policies on TDM.

10.3 Economic Development

A strong and diversified downtown economy is important for residents of Wilmington and the entire region. The unique character of downtown, the Riverwalk and historic neighborhoods, and compact, pedestrian-oriented development patterns give downtown a competitive advantage. The trade area of the downtown core is a bit skewed by the presence of the Cape Fear River; however, there is still great potential for downtown to continue to evolve into a thriving economic center. Both now and into the future, Wilmington's ability to attract a diverse and talented workforce, foster ideas and innovation, display Wilmington's greatest arts, cultural, and historic treasures, and make strategic infrastructure investments are key components of downtown's success.

Relative to Southeastern North Carolina, downtown Wilmington boasts some of the tallest buildings around. Relative to other downtowns across the state, however, downtown Wilmington's skyline is not that tall. Regardless of building heights, a city's downtown success is dependent on the street level, the realm of the pedestrian. Downtown Charleston, for example, lacks tall buildings, but is a very lively and active

destination. Likewise, downtown Charlotte has many tall buildings, but much of the central city is pedestrian-friendly and has many ground-floor active uses. The convenience and vibrancy of a successful street-level retail corridor in a unique area is a downtown's key competitive advantage.

Economic development is closely tied to the design of downtown. Street-level space designed and constructed for active uses plays a critical part in shaping a pedestrian-oriented built environment and in creating a value for upper-floor uses. As the retail development market matures, the city should proactively guide the placement of active uses at the street level throughout the downtown core.

As a regional destination for travel, conferences and conventions, cultural events, and jobs, downtown is well positioned to capture ancillary spending at restaurants, bars, lodging, and retail establishments. This spending potential cannot be fully captured if there are not restaurants and shops conveniently located near destinations.

Interim Public Plazas

Interim public plazas transform underutilized areas of roadway into public spaces for surrounding residents and businesses. Using low-cost materials, such as epoxied gravel, movable planters, and flexible seating, interim public plazas reconfigure and revitalize spaces that might otherwise be unsafe or underutilized.

Like parklets, interim public plazas are the result of a successful partnership between the city and a neighborhood group or business association. Partners maintain, oversee, and program the space. While many public plazas proceed from an interim phase to final reconstruction, the intermediate application allows the community to build support for and benefit from the public space in the near term before major capital construction.



Additional Information
NACTO Urban Street
Design Guide



Design Elements

Heavy planters, granite blocks, moveable seating, and other street furniture elements may be incorporated into the interim design.

Source: NACTO.org



Downtown Mixed-use Development

The city should proactively guide the placement of active uses at the street level with vertical mixed uses throughout the downtown core.

Source: City of Wilmington

10.3.1

New development, especially along priority retail streets should be designed to accommodate one or more active retail uses, including consumer goods, shops, dining establishments, convenience goods, museums, arts and entertainment uses, and hotel lobbies along street-level facades.



Box Set Cross Reference

Growth Strategies Maps

10.3.2

Opportunities for public-private partnerships should be explored to market available downtown properties, attract and retain businesses downtown, and redevelop underutilized sites for better uses.

10.3.3

New investments and development that position Greater Downtown as the center of the region for headquarters, jobs, urban housing, arts and cultural opportunities, and transit options should be encouraged.



Related Policies

5.6.1

10.3.4

Economic development groups should promote downtown Wilmington as part of a coordinated business recruitment and retention program serving Wilmington, New Hanover County, and Southeastern North Carolina.



Related Policies

5.6.2

10.3.5

Business sectors that have been targeted as important to downtown's success should also be encouraged through grants, loans, zoning incentives, and other programs. Downtown's creative and heritage businesses should also be supported and strengthened.



Related Policies

5.6.1

5.7.1

10.3.6

Downtown economic development efforts, as with citywide economic development efforts, should be coordinated and consolidated for efficiency and effectiveness.



Related Policies

5.5.4

5.3.9

10.3.7

As arts and culture are a major economic driver, and central to the city's identity, downtown should be the priority location for major cultural and arts institutions.



Related Policies

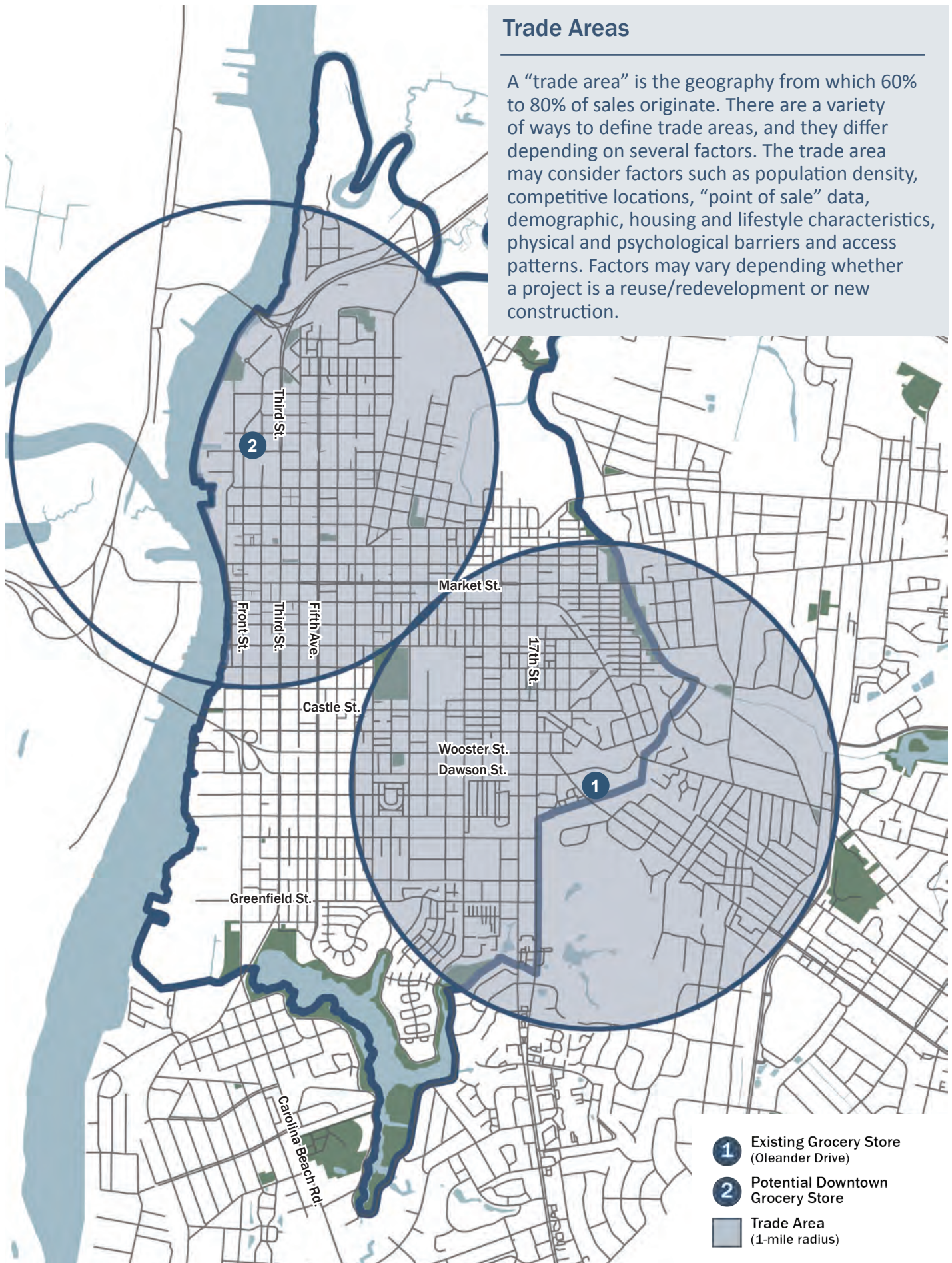
7.4.1

10.3.8

The development of additional family-friendly tourist attractions and visitor-supportive uses, activity generators, and events downtown should be promoted and encouraged, especially within public spaces.

Trade Areas

A “trade area” is the geography from which 60% to 80% of sales originate. There are a variety of ways to define trade areas, and they differ depending on several factors. The trade area may consider factors such as population density, competitive locations, “point of sale” data, demographic, housing and lifestyle characteristics, physical and psychological barriers and access patterns. Factors may vary depending whether a project is a reuse/redevelopment or new construction.



10.4 Housing and Amenities

A strong and diverse residential base makes downtown an asset to the entire city, as this base will complement employment, hospitality, and education sectors. The concentration of existing infrastructure and amenities and dense development pattern make downtown an ideal location to meet the market demand for diverse housing options for Wilmington's growing population. Downtown is the optimal location for the highest residential densities in the city and also presents unique opportunities for adaptive reuse of historic buildings.

Across the country, people are choosing to relocate to more urban environments where amenities are within a close distance of their homes; downtown Wilmington is the perfect place for those seeking this lifestyle. To meet the demand, downtown must have a diversity of both housing choices and price points. Like the rest of Wilmington, downtown should reflect the age, racial, and income diversity of the overall population and provide housing choices that satisfy all types of choices and users. Like any neighborhood, a collection of market-rate, workforce, affordable, and mixed-income housing units are critical elements of a successful, diverse, and stable residential environment. The provision of housing downtown will go hand in hand with the provision of additional amenities, such as grocery, drug, and hardware stores.



Riverfront Park

Amenities such as parks and public spaces for residents and visitors to enjoy the sights and sounds of downtown, help foster a vibrant urban neighborhood.

10.4.1

High-density, compatible residential development in appropriate locations downtown should be encouraged through infill construction, redevelopment, and the adaptive reuse of buildings.

10.4.2

New development in established residential areas should reinforce and enhance the character of the area.



Related Policies

9.3.1



Box Set Cross Reference

Growth Strategies Report and Maps

10.4.3

Mixed-income housing, including market rate, workforce, and affordable housing should be encouraged downtown. Financial and development tools and regulations should be considered to incentivize the inclusion of workforce and affordable housing.



Related Policies

3.1.1

3.1.6

1.7.1



Housing Choice

A collection of market-rate, workforce, affordable, and mixed-income housing units are critical elements of a successful, diverse, and stable residential environment.

Source (All Images): City of Wilmington

10.5 Community Facilities and Parks, Recreation, and Open Space

The viability of downtown depends on good planning and coordination, including siting, acquisition, co-location, programming, design, maintenance, and construction of high-performance, sustainable community facilities that benefit and serve the downtown community. Downtown is highly visible and well-known; because everyone in the region is a “downtown stakeholder,” these efforts benefit all citizens.

Greater Downtown has a diverse population, and as such, has a need for parks and open spaces that provide recreational opportunities for residents, visitors, workers, and tourists. Because of the limited amount of open land downtown, creative alternative open spaces and recreation amenities should be developed. Downtown is laid out in a grid pattern with an extensive sidewalk network. The Riverwalk follows the Cape Fear River for over a mile, and connects to several intersecting streets. The supply, quality, and usability of parks and recreational spaces in Greater Downtown should be increased, including extending the greenway system and trail within downtown, and including open/recreation space with new development. A well-located and designed system of open spaces is critical to urban health and wellbeing.

10.5.1

Public park space, recreational facilities, open space, and amenities such as restrooms, and docking facilities, should be increased as demand increases.

10.5.2

Amenities should be provided through traditional (city-created and funded through tax revenues and user fees) and non-traditional methods, such as public-private partnerships, special districts, charitable gifts, development agreements, and the provision of private open space for public use.



Related Policies

4.4.3

10.5.3

Partnerships that result in increased park space, improvements to existing park space, and additional amenities throughout Greater Downtown should be encouraged.



Related Policies

2.6.12

10.5.4

Non-motorized connections to new and existing parks facilities, into and through Greater Downtown, should be prioritized.



Related Policies

2.2.2 3.2.7



Box Set Cross Reference

Growth Strategies Report and Maps

Urban Plaza Example: Director Park (Portland, OR)

Director Park, located in the heart downtown Portland, Oregon, is a public piazza (an Italian style plaza) that provides an elegant, clean, safe, and versatile space that is actively programmed to complement downtown, support arts and culture, and highlight Portland Parks and Recreation.

Source: www.portlandoregon.gov



10.6 Urban Design

Buildings and streets define the public and private spaces of a city. The space between buildings is where and how most people experience downtown, especially at the point where buildings meet the street (often defined by a sidewalks and building front). This creates an opportunity for people to experience the details of a space, and attach meaning, so that it becomes a place. Downtown was created to be experienced as a pedestrian and this experience is still very common today; the type of buildings and structures of spaces downtown is unique to Wilmington and even within Wilmington. Urban design plays a key role in determining the shape and experience of the city.

The image and feeling of downtown are shaped by the built environment, especially building height and design. The built environment mimics the natural environment to an extent, as single-story buildings line

Water Street along the river and taller building emerge moving east from the river. Views of the river from the built environment are particularly important. New construction can reinforce the pedestrian nature of downtown to enhance and maintain the urban character of downtown, including the scale of the ground floor, the form of the building, and the relationships between buildings. While the northern portion of the downtown core lacks the strict grid pattern and dense development pattern, an organized, predictable form is critical for the downtown core and much of the greater downtown area. All of the greater downtown area should be developed in a way that fosters a harmonious relationship between buildings and people.



Box Set Cross Reference

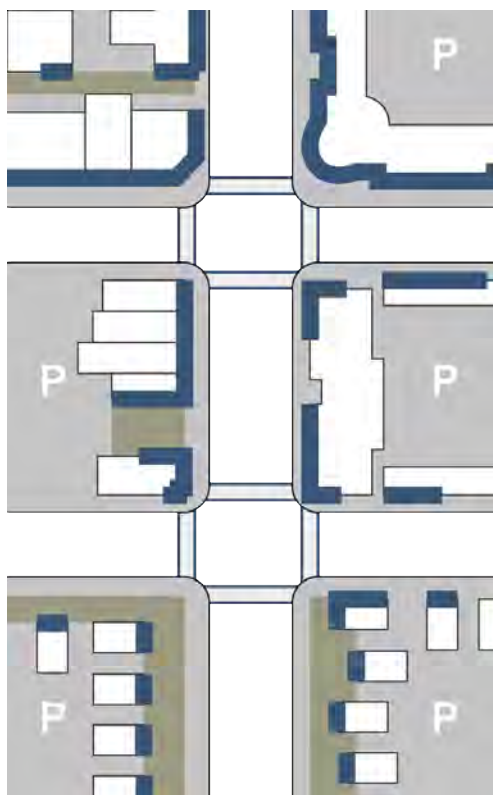
Growth Strategies Report and Maps

Create A Continuous, Well-Designed Public Realm

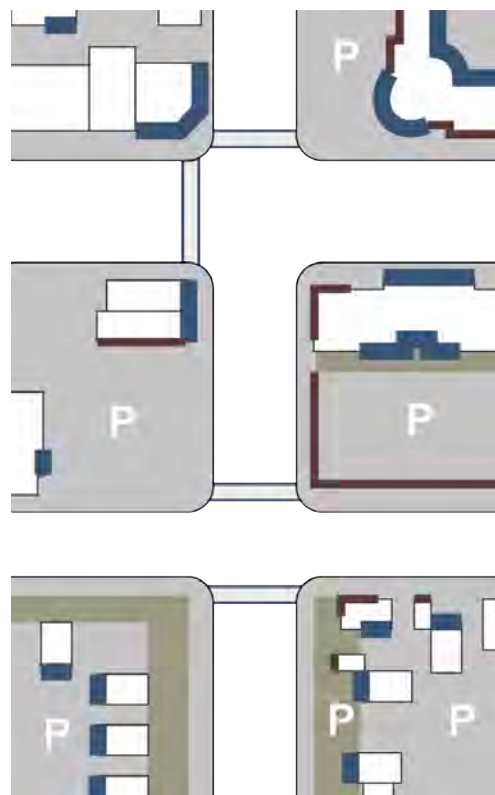
Encourage the continuity of vitality of a location by avoiding the placement of parking areas, blank walls, barriers to movement, false storefronts, trash areas and other undesirable elements along the public space network. Conversely, use infill development opportunities to “bridge the gap” in otherwise continuous places.

-  Buildings
-  Well-designed Building Facade
-  Blank Walls, Garage Doors, etc.
-  Parking Area
-  Parking Deck
-  Streetyard / Park
-  Crosswalk

Good



Poor



10.6.1

The established street grid pattern and limited setbacks within Greater Downtown should be respected and replicated as infill and redevelopment occurs.



Related Policies

2.2.1

9.3.2

10.6.2

The public realm should be reinforced through the placement of main building entrances along public streets, the creation of a continuous street wall and the use of wide sidewalks and streetscape plantings. Parks, plazas, and public spaces should be surrounded by activity such as ground-floor retail and other active uses and upper-floor balconies and terraces.



Related Policies

2.6.10

9.4.2

9.1.1

9.2.5

9.3.4

10.6.3

Pedestrian engagement should be enhanced through the ground-floor design of all new infill and redevelopment. Such street-level enhancements may include the use of multiple building entrances, large, transparent windows, creative signage, lighting, protection from the elements via canopies, awnings, and arcades, and a high level of architectural articulation and pedestrian-scale element on all facades.



Related Policies

9.3.6



Related Information

Good Urban Design (p. 148)

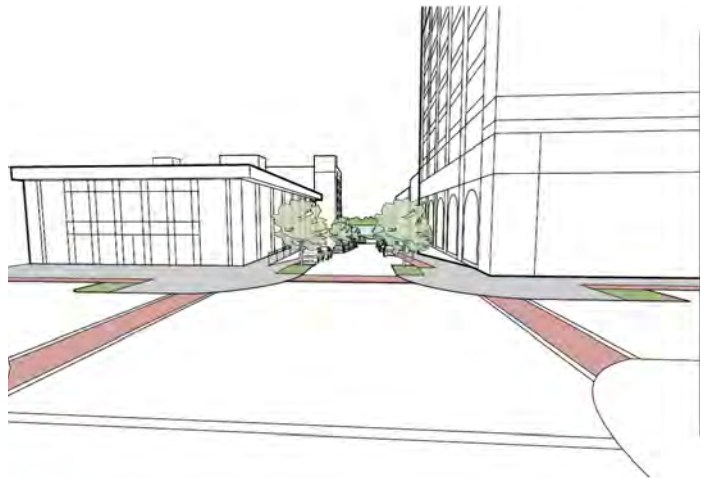
10.6.4

Private use of public space in the form of sidewalk cafés, street furnishings, vending, performance, and sales should be encouraged, as appropriate. Public uses along the river, including access to the river, should be encouraged, where appropriate.



Related Policies

9.2.5



Chestnut Street Extension

Extending Chestnut Street to Water Street would open an otherwise obstructed view of the Cape Fear River and enhance the existing street grid.

Source (All Images): City of Wilmington

10.6.5

Vistas and gateways should be enhanced and protected, including axial views of the Cape Fear River, public viewsheds, cultural and historic landmarks, the downtown skyline, and entrances into downtown.



Related Policies

9.1.5

9.1.6

10.6.6

A high-quality, unified wayfinding system, including an effective system for identifying public and private parking decks, should be promoted and maintained.



Related Policies

9.1.4



Related Information

What is Wayfinding? (p. 151)

10.6.7

Service entrances and functions should be located internal to buildings, in alleys, or in parking decks, whenever possible, with limited presence on the public right of way.



Related Policies

9.2.8



11

Historic Preservation

- 11.1** Wilmington's Historic Identity
- 11.2** Planning, Zoning, and Neighborhood Conservation
- 11.3** Housing, Adaptive Reuse, and Rehabilitation
- 11.4** Funding and Incentives
- 11.5** Education and Outreach

Mitchell-Anderson House

Image (opposite) of the Mitchell-Anderson House, built in 1738, is the oldest standing building in Wilmington.

Source: City of Wilmington

“How will we know it’s us without our past?”

— John Steinbeck



Introduction

Wilmington has a rich past and an abundance of historic resources. The city has been shaped physically, socially, and economically by the Cape Fear River, along which European settlement first occurred in the 1720s. Incorporated in 1739, Wilmington was the largest town in the state by 1840, and remained so through the early 1900s, thanks to the thriving ports along the Cape Fear River and the arrival of the Wilmington and Raleigh Railroad (renamed the Wilmington and Weldon Railroad in 1854). In its earliest years of existence, Wilmington was a thriving port, home to maritime businesses, and the seat of state government. Wilmington was the terminus of several large railroads, and in 1860, Wilmington was the largest exporter of naval stores in the world. Following the end of World War II, the population of Wilmington began to move away from the historic core of the city and the suburbs began to develop. The story of Wilmington's history is told through the built environment.

Wilmington grew out from the river over the years, first expanding the grid pattern with small lots, and upon the arrival of the street car, into a slightly more suburban development pattern. Greater Downtown,

roughly from Burnt Mill Creek west to the Cape Fear River, and from Greenfield Lake north to Smith Creek, encompasses some of Wilmington's greatest historic resources. Wilmington boasts one of the largest districts listed in the National Register of Historic Places in the country, with more than 230 blocks designated by the US Department of the Interior. Wilmington also boasts a waterfront historic district along Masonboro Sound. Wilmington established a historic preservation program in 1962 and has a long tradition of historic preservation success and leadership. Elected officials have reinvested in historic City Hall (Thalian Hall, 1855) and the county courthouse (1892). Thousands of homeowners have invested in and restored historic houses.

Many mixed-use buildings downtown have been brought back to life and new uses have been introduced. Local history advocates have restored mansions and turned them into museums and some historic schools have been repurposed. There are five locally-designated historic districts, and six locally designated landmarks in the city. Over the years, however, some historic resources have been lost to neglect and urban renewal, especially during the 1960s and 1970s, as downtown and the historic core of the city fell out of favor.

What Citizens Said

- Wilmington's unique character makes it a desirable place to live and visit
- Protect our historic buildings and streetscapes
- Redevelop underutilized properties
- Identify historic neighborhoods using unique signage
- More neighborhood-scale commercial uses and mixed-use buildings
- Recognize and preserve Civil War-era historic resources
- Mixed-use development is needed on vacant lots
- Expand the local historic districts
- Save and replace brick streets
- Allow accessory dwelling units in historic districts
- Additional incentives/local property tax credits for rehabilitation are needed



Growth Factors Report

4.9



Historic Renovated Home

Source: City of Wilmington

Growth is projected to continue in Wilmington and in the Brunswick-Pender-New Hanover tri-county region. To maintain the city's character, it is imperative that this growth progresses in a way that protects and enhances that which makes Wilmington unique. Special attention must be paid to the Downtown Core and the historic districts and buildings in and around Greater Downtown. The current permitted building size and technologies for new construction are often much different than that of existing historic buildings. Tension between the modest scale of most of the historic buildings in the Downtown Core, especially in the southern end, and a more modern development style often causes conflict between competing interests. Two issues that have been especially challenging and without specific policy or guidance are the case of unique and/or historic buildings that are not within a locally-designated historic district. The city should work to improve coordination between city departments and other stakeholder groups as to what is required, what roles should be, and what best practices should be employed.



Key Planning Theme

Economic Opportunity

Every \$1 of historic tax credits generates a minimum of \$4 of private sector investment.

Historic Preservation Tax Credits

Income tax incentives for the rehabilitation of historic structures are important tools for historic preservation and economic development in North Carolina. A federal income tax credit for the rehabilitation of historic structures first appeared in 1976 and today consists of a 20% credit for the qualifying rehabilitation of income-producing historic properties. As this is being written, policy debate is occurring at the state level as to whether North Carolina's historic preservation tax credit program, recently suspended, is to be restored.

Source: www.hpo.ncdcr.gov

The economic impacts of historic preservation in Wilmington should not be underestimated. Wilmington's physical heritage and unique character attracts visitors and residents alike, increasing property and sales tax revenue. Studies have shown that buildings in locally-designated historic districts tend to have higher property tax values than non-designated properties. Preservation North Carolina reports that, in North Carolina, \$1 million spent rehabilitating a historic building creates 41.4 jobs – 22 in construction and 19 elsewhere; the same amount spent on new construction yields 5.5 fewer jobs. Tourism is a major industry in North Carolina and in Wilmington, thanks in large part to our extensive cultural resources, and studies show that cultural and heritage tourists tend to stay longer and spend more money in a place.

Wilmington's rich culture and heritage are a benefit to all citizens. Historic preservation is fundamental to Wilmington's development history, and preservation-related issues will be encountered in other chapters of the plan. Detailed maps of historic districts (national and local), designated landmarks, and potential districts and landmarks are included in the Growth Factors Report.



Growth Factors Report

4.9



Historic Bungalow Style Home

Source: City of Wilmington

Policies

11.1 Wilmington's Historic Identity

Wilmington's historic resources are a physical symbol of the city's 275-year history. They display a unique character and scale that make Wilmington different from other places and contribute toward improving Wilmington's livability. Collectively, historic buildings and sites make Wilmington special; however, this collective view does not diminish the importance of protecting individual buildings. Preservation of the essence of Wilmington as a Southern port city is critical in shaping Wilmington's future urban form. Historic preservation helps capitalize upon and nurture the built environment and the distinct places and neighborhoods that make Wilmington unique. These policies are intended to ensure that the built and natural environments that have shaped and defined the city's identity are not overlooked.

11.1.1

Historic resources, including buildings, landmarks, landscapes, natural areas, public viewsheds, cemeteries, brick streets, and archaeological resources should be identified, preserved, and protected.



Related Policies

1.7.8

8.1.5

9.1.6

9.5.3

11.1.2

The city's historic resources and heritage should be recognized and promoted as an economic asset. As the city grows and redevelops, stewardship of neighborhoods, places, landmarks, historic districts, and landscapes should be fostered.



Related Policies

5.6.2

1.7.5

7.4.4



Key Planning Theme

Unique Places, Captivating Spaces

All elements of our built environment should enhance the character of our community, being not only functional, but aesthetically appropriate.

11.1.3

Interagency coordination should be made a priority for the provision of historic preservation planning, development review, inspections, code enforcement, community development, capital projects planning and development, parks, and public services, as well as with the State Historic Preservation Office to ensure the most effective preservation programs and services.

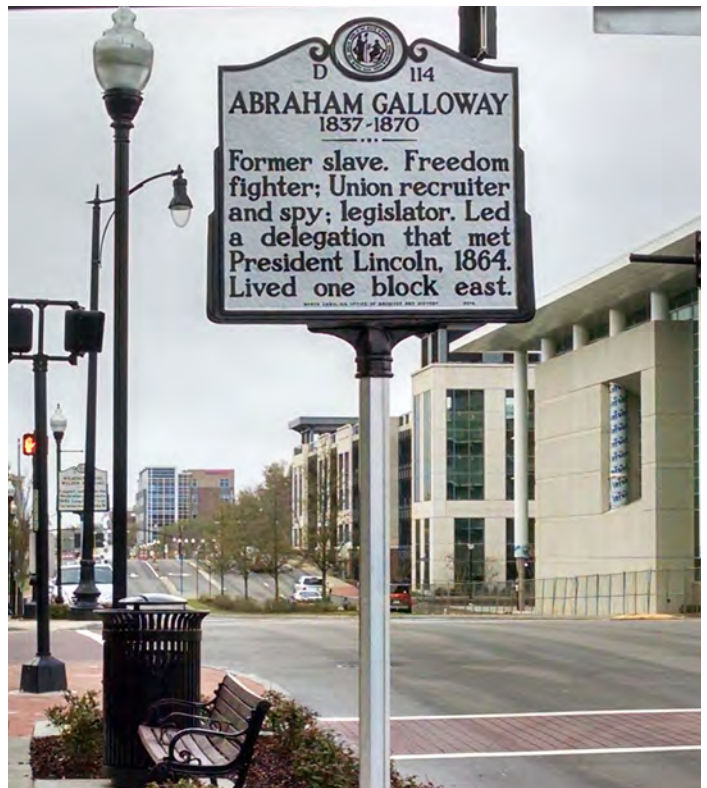


Related Policies

8.1.5

11.1.4

The city should continue to collaborate with nonprofit organizations and other public agencies and private entities to provide the most effective programs and services in support of historic preservation.



Historic Marker for Abraham Galloway

Source: City of Wilmington

11.2 Planning, Zoning, and Neighborhood Conservation

Wilmington has a wonderful collection of unique and diverse historic neighborhoods. From mill villages to shipbuilders' homes, streetcar suburbs to tidewater estates, from high-style to vernacular, Wilmington's historic neighborhoods offer character, variety, and a range of housing options and price points. Many of Wilmington's historic neighborhoods have retained their ability to attract new residents and investment, though not all have been so fortunate. Those areas that continue to attract continued investment are typically marked by an intimate scale, mature trees and landscaping, and integration of historic homes and compatible infill development. Some of Wilmington's historic neighborhoods, however, have not seen as much new investment over the recent decades, but fortunately, the historic integrity and "backbone" remains intact.

Survey and planning are the key to protecting and preserving our historic assets, enhancing the city's historic identity, and ensuring the availability of a diverse building stock. Regular updates to the district designation surveys are necessary to recognize the passage of time, the evolution of the city, the development of new historic contexts, and the progression of professional standards and best practices. Proper use of planning and zoning can help enhance local and national designation programs and other preservation tools.

11.2.1

Accurate inventories of historic resources should be maintained. Databases should utilize all available technologies to ensure that properties can be identified and considered in historic preservation planning.

11.2.2

The nomination and designation of eligible neighborhoods, districts, and individual buildings, sites, structures, and objects to the National Register of Historic Places should be supported and sponsored, where appropriate.



Historic Second Empire Style Home



Historic Victorian Style Home



Historic Craftsman Bungalow Style Home

Source (All Images): City of Wilmington



Additional Information

Wilmington Design Guidelines



Historic Restoration Project

Specialized architects and experienced craftsmen preserve the original character and context of historic structures during restorations.

Source: City of Wilmington

11.2.3

The scale and character of Wilmington's neighborhoods should be protected while allowing for context-sensitive infill development and redevelopment. Where appropriate, the conservation of older neighborhoods should be encouraged.



Related Policies

2.1.3 9.1.8

11.2.4

When considering historic resources, the complete context should be preserved, when possible, as historic landscapes, open spaces, streets, and public viewsheds are critical to the context of our historic buildings and the city's overall character and uniqueness.



Related Policies

9.1.6

11.2.5

Historic resources should be considered when planning for capital projects. Adverse impacts from capital projects on National Register listed or eligible historic resources should be avoided, or minimized and mitigated.



Related Policies

1.7.3

Two Types of Designations

The National Register of Historic Places

The National Register is a federal program of the National Park Service (US Department of the Interior), and is administered in North Carolina by the State Historic Preservation Office. The National Register is an honorary district that makes property owners eligible for tax credits. It does not impose regulations on property owners unless federal or state funding is involved or federal income tax benefits are requested. The designation can be applied to buildings, sites, structures, or objects, either individually or as districts. National Historic Landmarks, like districts, are designated for their unique historic qualities, but as individual buildings or sites. There are less than 2,500 National Historic Landmarks in the country. There are only two in the Wilmington area, the battleship USS North Carolina, across from downtown Wilmington, and Fort Fisher, at the southern tip of New Hanover County. There are eight National Register Districts in Wilmington.

Local Designation

In Wilmington, locally-designated historic districts are zoned to a specific, separate use historic district or overlay district designation, by official amendment to the city's zoning maps. A local zoning district controls land use and requires specific guidelines be followed when altering, constructing, moving, or demolishing properties. There are currently three local districts and two historic district overlays in Wilmington. Local Historic Landmark designation is available for highly significant structures and sites in Wilmington. Although Local Historic Landmark designation does not impact land use, specific guidelines must be followed when altering, constructing, moving, or demolishing properties. There are six locally-designated landmarks in Wilmington.



Growth Factors Report

4.9



Additional Information

The Federal Historic Tax Credit: Transforming Communities



11.3 Housing, Adaptive Reuse, and Rehabilitation

All buildings must have an economic reason to exist. Preservation of individual buildings is largely dependent on the building's continued utility and economic performance. Individual property owners are stewards of the built environment, which benefits the city at-large. The development, interpretation, and application of the various codes and ordinances that govern the use, development, improvement of buildings, and life safety can either help or harm the character of the built environment and building preservation.

Restoration

This home, located at 219 N. 16th Street, was restored in 2014. It is but one of many examples of the successful restoration of a historic home in Wilmington.

Before



After



Source (Both Images): City of Wilmington

11.3.1

Adaptive reuse of historic buildings and sites should be encouraged to support the goals of housing diversity and affordability, economic development, environmental sustainability, parks and recreation, and urban design, particularly in areas with a strong historic context.



Related Policies

3.1

4.4.2

6.6.4

11.3.2

Regular review of codes and policies, including use of the most appropriate version of the North Carolina Building Code, should be conducted to ensure appropriate flexibility for contributing or National Register-eligible historic sites and structures, especially in terms of parking requirements.

11.3.3

Existing historic context should be used to guide redevelopment and new development within the vicinity of a project.



Related Policies

9.1.8

11.3.4

Reuse and rehabilitation of existing dilapidated homes should be encouraged and supported for use as scattered-site workforce housing units. The minimum housing code should be applied in a manner that ensures historic preservation.



Related Policies

3.2.3



Key Planning Theme

Changing Places, Revitalizing Spaces

Wilmington's future will include a significant level of infill and redevelopment. Suitable infill in historic areas will be critical to preserving the historic character of these areas.

11.4 Funding and Incentives

All levels of government have an obligation to protect our cultural heritage and historic resources for the good of all citizens. Beyond planning and regulatory tools, direct funding and tax incentives can go a long way in promoting historic preservation goals. Economic concerns of property owners are often a major impediment to achieving preservation goals and objectives; leveraging private investment in cultural and heritage resources can help optimize preservation goals for the benefit of the greater community.

11.4.1

State and federal programs, including tax credits, rehabilitation assistance, and energy conservation incentives should be promoted to encourage their use.

11.4.2

Opportunities to leverage outside funding, incentives, and acquisition programs should be continually explored.

11.4.3

Local housing land trusts and historic preservation nonprofits should be supported and partnerships maximized.

11.4.4

Tools such as local revolving funds and local tax abatement should be explored.

11.5 Education and Outreach

Wilmington's rich culture and heritage are a benefit to all citizens. In addition to marketing our heritage and cultural amenities to attract visitors, area residents should be encouraged to enjoy and benefit from the city's historic preservation program and diverse collection of historic resources. Historic preservation provides residents a physical link to our heritage and defines us as a community, and enhances our culture and quality of life.

11.5.1

Community awareness and education of historic preservation endeavors, including both benefits and responsibilities of being in a local and national register district, should be fostered and promoted.

11.5.2

A collaborative relationship with state and local agencies, including nonprofit groups, should be fostered to share information about historic preservation programs, incentives, tools, training, and funding opportunities.

11.5.3

Training for the Historic Preservation Commission should be a priority. Consistent with the requirements of the state Certified Local Government Program, the Historic Preservation Commission should receive training on a regular basis on preservation-related issues as well as standard commissioners training.



Historic Buildings

The historic value of structures like Saint Paul's Evangelical Lutheran Church in downtown Wilmington enriches the unique cultural experiences of Wilmington's residents and visitors alike.

Source: City of Wilmington



Additional Information

The Department of the Interior
Historic Preservation Training Center

Notes

1. http://www.fhwa.dot.gov/livability/fact_sheets/transandhousing.cfm (11/7/14)
2. <http://nhts.ornl.gov/briefs/PovertyBrief.pdf> (11/7/14)
3. http://nacto.org/docs/usdg/are-we-strangling-ourselves-on-one-way-networks_walker.pdf (11/5/14)
4. World Health Organization's Global Age-Friendly Cities: A Guide <http://www.aarp.org/content/dam/aarp/home-and-family/livable-communities/2013-12/global-age-friendly-cities-guide-english.pdf> (11/7/14)
5. <http://www.wavetransit.com/routes/tripplanner.aspx> (8/19/15)
6. According to Google Maps calculations of the 5.4-mile trip (8/19/15)
7. http://www.cmap.illinois.gov/documents/10180/21338/Public_transit_chapter.pdf/2eae222c-b988-4a4f-bf05-afc8ddde168f (11/7/14)
8. <http://createwilmington.com/wp-content/uploads/2013/06/Invest-in-Place-Community-Survey-Results-2014.pdf> (11/7/14)
9. <https://www.fhwa.dot.gov/policy/2010cpr/chap1.htm> (11/10/14)
10. Source: City of Wilmington GIS data and New Hanover County Tax office data, 2014
11. http://www.vtpi.org/park_man.pdf and www.vtpi.org/parking.xls (11/10/14)
12. <http://www.cmap.illinois.gov/about/2040/supporting-materials/process-archive/strategy-papers/parking/impacts-of-parking-strategies> (11/10/14)
13. <http://quickfacts.census.gov/qfd/states/37000.html> (6/16/14)
14. US Census, <http://www.census.gov/hhes/www/housing/special-topics/files/who-can-afford.pdf> (3/20/14)
15. http://www.huduser.org/portal/datasets/fmr/fmrs/FY2014_code/2014summary.odn (5/12/14)
16. http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_12_1YR_S2503&prodType=table (5/13/14)
17. <http://onthemap.ces.census.gov/> (2011 Inflow/Outflow analysis, 5/20/14)
18. http://www.nhc.org/media/files/LosingGround_10_2012.pdf (5/20/14)
19. "Public housing units" are those dwellings owned and managed by the Wilmington Housing Authority. "Voucher-based units" are privately-owned dwellings for which the occupant receives rental assistance in order to occupy the housing unit of their choosing. "Project-based voucher units" are those for which a subsidy is provided to a particular development to help offset the cost of construction and/or rehabilitation to make up the difference between market rents and what low-income tenants can afford. Recipients of both vouchers and project-based Section 8 assistance are typically required to contribute 30% of their income for rent and utilities. The voucher pays the rest of the rent, up to a limit set by the state or local housing agency administering the program in the area where the housing is located. <http://housing.mt.gov/content/About/docs/Section8FactSheet.pdf> (5.13.14) HOME funds, provided to the state and city through HUD, are used to meet a variety of housing needs, including building, buying, and/or rehabilitating affordable housing for rent or homeownership or providing direct rental assistance to low-income tenants. http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing/programs/home/ (5.13.14)

20. <http://egis.hud.gov/cpdmaps/> (5/12/14)
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31. Arts and Economic Prosperity IV http://artscouncilofwilmington.org/wp-content/uploads/2013/05/NC_NewHanoverCounty_AEP4_SummaryOffFindings.pdf (2/11/14)
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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
- Paul Lawler
- Frank Smith
- Carlos Braxton
- Bonnie Nelson
- Kevin Smith
- Kemp Burdette
- Linda Pearce
- Deb Hays
- Tom Pollard

City Council

Mayor Bill Saffo
Mayor Pro-Tem Margaret Haynes
Neil Anderson
Paul Lawler
Kevin O'Grady
Laura Padgett (former member)
Charlie Rivenbark
Earl Sheridan

City of Wilmington Staff

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- Don Bennett, P.E.
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- David Cowell, P.E.
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- Mitch Cunningham
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- Ron Satterfield, AICP
- Roger Johnson

