## CAMA LANDUSE ADDENDUM

Town of Leland Comprehensive Land Use Plan

## Leland 2045

### planning for generations

ADOPTED: JUNE 19, 2025

## CONTENTS

| POPULATION & HOUSING DEMOGRAPHICS3Population Growth3Demographics.4Housing.5   |
|---|
| COMMUNITY FACILITIES & NATURAL SYSTEMS7Existing and Future Public and Private Water Supply and Wastewater Systems 7Transportation Facilities8 |
| FUTURE LAND USE COMPATIBILITY.       9         Mitigation Criteria and Concepts to Minimize Conflict.       9                                 |
| IMPLEMENTING THE ACTION PLAYBOOK102045 Action Plan Matrix with Fiscal Year Timelines.11   |
| APPENDIX.25NCDOT AADT Counts Map27CAMA Matrix.28CAMA Policies.35  |

## POPULATION & HOUSING DEMOGRAPHICS

According to the 2010 and 2020 Deccenial Censuses and the American Community Survey (Estimates), The Town of Leland has seen a rapid increase in its population growth in the last decade and is considered one of the fastest-growing municipalities in North Carolina.

Population change 2010-2023

124% 49% Brunswic

49% 14% Brunswick North County Carolina

#### **POPULATION GROWTH**

Brunswick County and the Wilmington region are some of the fastest-growing areas in the state. From 2000 to 2010 Leland jumped from a population of 1,938 to 13,614, according to Census data. Leland has continued to see growth since 2010, approximately 76 percent over a decade (2010 to 2020). The latest estimate placed the Town's population at 30,542 (ACS Estimates, Population 2023), an increase of 124% since 2010 and 28% since 2020.

Leland's population growth is expected to continue with a projected population growth of roughly 2,000 people per year. The population is expected to increase by 254% between 2020 and 2045 with the population in 2050 projected at 84,440. Leland's forecast is based on data collected from NC's State Office of State Budget and Management (OSMB) data projections and within NCDOT's Transportation Analysis Zones and is consistent with the Town's 10-year strategic plan population estimates.

#### Table 1: Population Growth Estimates in 5-Year Increments

|        | 2020   | 2025   | 2030   | 2035   | 2040   | 2045   | 2050   |
|--------|--------|--------|--------|--------|--------|--------|--------|
| Leland | 23,863 | 33,959 | 44,055 | 54,152 | 64,248 | 74,344 | 84,440 |
| % Ch   | ange   | 42.3%  | 29.7%  | 22.9%  | 18.6%  | 15.7%  | 13.6%  |

SOURCE: U.S. Census Bureau 2020; NCDOT Transportation Analysis; and NC OSMB Population Projections



Note: This addendum is utilizing a combination of the 2010 and 2020 Deccencial Census data and the latest American Community Survey estimates.

#### **DEMOGRAPHICS**

Table 2: Households

#### HOUSEHOLDS

In 2023, the Town of Leland had an estimated 11,258 total households, which has grown by about 93% since 2010, 11% since 2020, and is expected to continue increasing. Average household size has decreased slightly from 2.37 in 2010 to 2.34 in 2023. Household size is slightly higher than Brunswick County (2.25) and slightly lower than North Carolina (2.46).

|                | 2010      | 2020      | 2023      | % CHANGE  |
|----------------|-----------|-----------|-----------|-----------|
|                |           |           | ESTIMATES | 2010-2023 |
| Leland         | 5,833     | 10,423    | 11,258    | 93%       |
| Brunswick      | 46,409    | 60,915    | 64,469    | 39%       |
| North Carolina | 3,626,179 | 4,105,232 | 4,186,924 | 15%       |

SOURCE: U.S. Census Bureau 2010, 2020 and ACS 2013 Estimates

#### AGE

The median age in Leland in 2023 is 48.0, higher than North Carolina's (39.4), but lower than Brunswick County's median age of 57.6. This increase in median age is in part due to an increase in population over the age of 65, which is estimated at 27.6% of the population, a trend across the state.

Leland also has a higher population under the age of 5 (5.0%) in comparison to Brunswick County (3.6%) but slightly lower than North Carolina (5.6%). Leland has seen a significant decrease in the persons under 5 from 2010, which was around 10%.

| Table 3: Median Age |      |      |           |           |
|---------------------|------|------|-----------|-----------|
|                     | 2010 | 2020 | 2023      | % CHANGE  |
|                     |      |      | ESTIMATES | 2010-2023 |
| Leland              | 38.6 | 47.1 | 48.0      | 24%       |
| Brunswick           | 47.1 | 54.7 | 57.6      | 24%       |
| North Carolina      | 37.1 | 39.4 | 39.4      | 6%        |

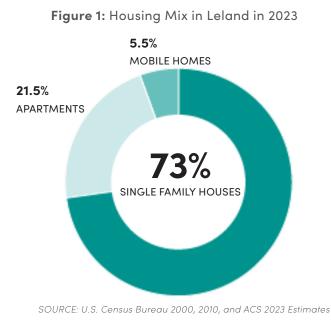
#### Table 3: Median Age

SOURCE: U.S. Census Bureau 2010, 2020 and ACS 2023 Estimates

#### HOUSING

#### HOUSING MIX

Leland had an estimated 10,905 homes in 2020 and an estimated 11,995 in 2023 according to the 2020 Census and 2023 ACS estimates. In 2023, 6% of housing units are vacant, lower than North Carolina's rate of 14.3%, and significantly lower than Brunswick County's vacant housing units, which account for 37.3% in the latest estimates. This data, coupled with the projected population estimates, assumes that Leland will need a total of 21,689 housing units by 2045 to accommodate anticipated growth. According to 2023 estimates, single-family detached homes account for 73.0% of Leland's housing stock while apartments make up 21.5% of housing stock in the Town. Leland must continue to provide a diversity of housing choices to accommodate this expected growth.



#### HOUSING TENURE

Table 4 details household tenure in Leland from 2000 to 2019. During this period, the owner-occupied household tenure continues to increase while renter-occupied decreases. As the share of owner-occupied housing increases in Leland, the share of renter-occupied housing decreases. Vacancy rate has also decreased over the decade and continues to go down after 2020.

#### Table 4: Town of Leland Housing Tenure

|                   | 2010<br>(TOTAL/%) | 2020<br>(TOTAL/%) | 2023<br>(TOTAL/%) |
|-------------------|-------------------|-------------------|-------------------|
| Total Occupied HU | 5,207 / 89.1%     | 10,905 / 92.8%    | 11,258 / 93.9%    |
| Owner-occupied    | 3,827 / 73.5%     | 8,139 / 81.0%     | 9,180 / 81.5%     |
| Renter-occupied   | 1,380 / 26.5%     | 1,923 / 19.0%     | 2,078 / 18.5%     |
| Vacant            | 634 / 10.9%       | 789 / 7.2%        | 732 / 6.1%        |

SOURCE: U.S. Census Bureau 2000, 2010, and ACS 2023 Estimates

#### **MEDIAN HOME VALUE**

The rapid population growth in Brunswick County and Leland is evident as the number of households has almost doubled since 2010. In addition to an influx of households, the median home value in both Leland and Brunswick County has increased at a rate higher than North Carolina.

|                | 2010      | 2020      | 2023      | % CHANGE  |  |
|----------------|-----------|-----------|-----------|-----------|--|
|                |           |           | ESTIMATES | 2010-2023 |  |
| Leland         | \$198,900 | \$237,100 | \$358,800 | 80%       |  |
| Brunswick      | \$174,600 | \$249,400 | \$314,700 | 80%       |  |
| North Carolina | \$155,500 | \$218,00  | \$259,400 | 67%       |  |

#### Table 5: Median Home Value

SOURCE: U.S. Census Bureau 2000, 2010, and ACS 2023 Estimates



## COMMUNITY FACILITIES & NATURAL SYSTEMS

#### **EXISTING PUBLIC AND PRIVATE WATER SUPPLY SYSTEMS**

There are no documented public or private water system overflows, bypasses, or other problems that may degrade water quality or constitute a threat to public health as documented by the North Carolina Division of Water Resources (DWR).

#### WATER SUPPLY WATERSHEDS AND WELLHEAD PROTECTION AREAS

There are no identified water supply watersheds and wellhead protection areas in Town limits. As of this publication, Brunswick County, nor the Town of Leland, have a water supply watershed or a wellhead protection area plan. These plans are anticipated to be developed in the near future.

#### **EXISTING PUBLIC AND PRIVATE WASTEWATER SYSTEMS**

Since 2005, there have been 21 documented public or private wastewater overflows, bypasses, or other problems that may degrade water quality or constitute a threat to public health as documented by North Carolina's Division of Water Resources (DWR).

#### **DOCUMENTED OVERFLOWS**

Documented overflows, bypasses, or other problems that may degrade water quality or constitute a threat to public health as documented by the North Carolina DWR:

#### **Sanitary Sewer Lift Station Overflows:**

- 2010: 1 occurrence (exact date unavaiable)
- **2017**: 2 occurrences on August 8, 1 occurrence on Sept 12
- **2018**: 3 occurrences on May 19, 2 occurrences on May 28, 1 occurrence on June 25, 1

occurrence on September 14, 1 occurrence on September 15, 1 occurrence on September 17, 1 occurrence on September 23, 1 occurrence on Oct 15

- **2019**: 1 occurrence on March 4, 1 occurrence on August 15
- 2020: 1 occurrence on December 22
- 2021: 2 occurrences on September 20
- 2023: 1 occurrence on May 3

#### Belville Wastewater Treatment Plant Overflow:

• 2005: 1 occurrence on October 8

Belville Wastewater Treatment Plant Effluent Violations:

- Exceeded Ammonia Nitrogen Allowable Weekly Average Limit July 31, 2003
- Exceeded Ammonia Nitrogen Allowable Monthly Average Limit May 2006
- Exceeded BOD Allowable Monthly Average Limit June 2006
- Exceeded Ammonia Nitrogen Allowable Weekly Average Limit April 28, 2007
- Exceeded Ammonia Nitrogen Allowable Monthly Average Limit April 2007

SOURCE: Data from H2GO, Brunswick Regional Water & Sewer

/ 33

#### FUTURE WATER SUPPLY AND WASTEWATER NEEDS

Considering population projections, H2GO Brunswick Regional Water and Sewer anticipates having the same number of water connections and sewer connections.

H2GO is projecting 48,000 metered customers serving a county-wide population of 116,640 in **2045**. H2GO anticipates this equating to 8.28 million gallons per day (MGD) average water usage.

H2GO is projecting 60,000 metered customers serving a population of 145,800 in **2065**. H2GO anticipates this equating to 10.08 MGD average water usage.

#### **TRANSPORTATION FACILITIES**

#### **HIGHWAY SEGMENTS**

To assess transportation and roadway deficiencies, Annual Average Daily Traffic (AADT) counts are compared to a road's design capacity. Traffic on key roadway segments is measured annually and evaluated against the design capacity standards set by the North Carolina Department of Transportation (NCDOT), which vary by roadway type. For instance, a two-lane road has a different capacity than a two-lane road with a center turn lane. The Town of Leland's highest AADT counts in 2023 are found on US Highway 17-74-76, west of State Road 1472 (Village Road NE), which the NCDOT reports has an AADT of 69,500. A GIS map of AADT counts in the Town of Leland can be found in the appendix. None of the roadways within the Town of Leland have an AADT which exceeds the current capacity. It should be noted that NCDOT designs roadways for average daily traffic counts, not peak traffic counts.

#### **EXISTING TRANSPORTATION IMPACTS**

Roadways in the Town of Leland are classified by the North Carolina Department of Transportation (NCDOT) as: 1) Interstate; 2) Major Collector; 3) Principal Arterial; 4) Minor Collector; or 5) Minor Arterial. Each roadway plays a uniquely significant role in shaping land use patterns. The Town's proximity to metropolitan Wilmington and major state roads like Interstate 140, U.S. Highway 17, U.S. Highway 74/76, U.S. Highway 133, Village Road, and Old Fayetteville Road have facilitated suburban expansion, encouraging residential and commercial development along these corridors. Improved connectivity shapes land use by concentrating development in accessible areas.

#### Key impacts include:

**Residential Growth**: Improved connectivity has spurred suburban housing developments, particularly near U.S. Highway 17, U.S. Highway 74/76, Village Road, and Old Fayetteville Road, catering to commuters traveling to and from Leland and Wilmington.

**Commercial Clusters**: Retail and service businesses have concentrated near high-traffic areas along U.S. Highway 17 and U.S. Highway 74/76, as well as within the Town's Gateway District along Village Road and Old Fayetteville Road. It is critical that the Town consider transportation impacts as it encourages future development of economic clusters in the Gateway District.

**Suburban Sprawl**: Easy access to transportation has led to dispersed development, consuming more land and increasing reliance on vehicles for connectivity. Leland will continue to plan for transportation facilities that bolster connectivity in the midst of urban sprawl.

**Economic Diversification**: The Leland Innovation Park is a 630 acre campus located off U.S. Highway 74/76 and Interstate 140. The Leland Innovation Park is home to the largest collection of world-class companies in the region, and with available development-ready land, economic diversification is heavily influenced by transportation facilities near the area..

These patterns underscore the interdependence between transportation infrastructure and land use, with accessibility driving spatial organization and growth. It is, however, important to note that U.S. Highway 17, U.S. Highway 74/76, U.S. Highway 133, Village Road, and Old Fayetteville Road are owned and maintained by NCDOT.

## FUTURE LAND USE AND COMPATIBILITY

#### MITIGATION CRITERIA AND CONCEPTS TO MINIMIZE CONFLICT

Successful land use planning requires the adoption of clear mitigation strategies to address and minimize conflicts among competing interests. Below are criteria and concepts the Town of Leland utilizes to minimize conflict in land use planning:

**Comprehensive Public Engagement & Established Review Processes**: Leland has predictable development review processes, some of which provide for public input at board and Town Council meetings. Additionally, all developments are reviewed by the Technical Review Committee, a group of subject matter experts who provide a comprehensive review of potential developments before final approval

**FlexCode Strategies**: The Town continues to develop clear and enforceable policies for land use changes and development approvals. The Town adopted the FlexCode in 2011 as a flexible zoning ordinance designed to promote mixed-use, pedestrian-friendly development. The FlexCode provides developers and property owners with more options for land use, aiming to create a more walkable and connected community. The FlexCode employs a progressive approach to planning, encouraging diverse and adaptable development that aligns with the town's goals for anticipating growth and further connecting the community.

**Environmental Impact Mitigation**: Leland aims to protect critical habitats, water resources, and other environmentally sensitive areas. The Town is currently introducing the use of eco-friendly design, such as low-impact development (LID) and green infrastructure. The Town is making continous efforts to collaborate regionally to plan for lacquisition of areas that will be rezoned to the Conservation District. Additionally, the Town is utilizing the FLUM is utilized when considering the impact land use changes have on the environment.

**Infrastructure Alignment**: Leland ensures adequate road, public transit, and pedestrian pathways to prevent congestion and access issues and plans for water, sewer, and energy infrastructure to meet the demands of proposed developments without overburdening existing systems.

**Geospatial Mapping and Analysis**: To follow the above strategies, Leland draws upon up-to-date GIS mapping to identify overlapping interests or areas of potential conflict.

By integrating these mitigation criteria and concepts, the Town of Leland proactively addresses potential conflicts, promotes sustainable development, and furthers balanced and equitable land use plans and developments.

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The Action Playbook covers implementation and priority investment and organizes specific actions into a matrix action plan by theme establishing timing, level of investment, and assigning responsibility. This addendum includes the specific fiscal year in which each action is anticipated to start and finish.

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Action

## 2045 ACTION PLAN: ACT ON THE ACTION PLAN

| A-1  | A-2   | A-3  | A-4  |
|--|---|--|--|
| Provide an update<br>on the Action<br>Plan quarterly<br>to Department<br>Heads, Planning<br>Board, and<br>Council. | Create a simple<br>and user-friendly<br>dashboard of the<br>Action Plan and put<br>on Town website. | Use the Action<br>Plan when making<br>annual budgets<br>and department<br>plans. | Revise the Action<br>Plan annually<br>should any items<br>become irrelevant<br>or if new actions<br>become a higher<br>priority. |

| INVESTMENT                             | Low                         | Low  | Low             | Low                         |
|--|-----------------------------|--|-----------------|-----------------------------|
| ANTICIPATED<br>TIMING<br>(START - END) | FY22-ONGOING                | FY24-FY25                                      | FY22-FY45       | FY22-FY45                   |
| ENTITY<br>RESPONSIBLE                  | Planning and<br>Inspections | Planning and<br>Inspections,<br>Communications | All Departments | Planning and<br>Inspections |
| INITIATED                              | $\checkmark$                | $\checkmark$                                   | $\checkmark$    | ✓                           |
| COMPLETED                              |                             |  |                 |                             |

ACTION

# 2045 ACTION PLAN: NATURAL RESOURCES

|  | N-1   | N-2  | N-3  | N-4   |
|--|---|--|--|---|
| ACTION                                 | Coordinate<br>existing and new<br>development<br>standards with<br>the environmental<br>and cultural<br>resource mapping<br>created for the<br>comprehensive<br>plan by overlaying<br>the existing<br>zoning map to see<br>where there are<br>conflicts and use<br>this information to<br>evaluate zoning<br>ordinance changes. | Share<br>environmental<br>resource mapping<br>with organizations<br>focused on land<br>conservation, to<br>assist them with<br>organizing their<br>conservation. | Evaluate the<br>Flood Damage<br>Prevention<br>Ordinance every<br>five years to<br>determine if it<br>is effective at<br>avoiding flood<br>damages and is<br>reducing flood<br>damages. | Promote and<br>expand the<br>integration of<br>Low Impact<br>Development<br>(LID) and Green<br>Infrastructure<br>(GI) into normal<br>development<br>standards and<br>practices. |
| INVESTMENT                             | Low   | Low  | Low  | Medium/High   |
| ANTICIPATED<br>TIMING<br>(START - END) | FY23-ONGOING  | FY22-ONGOING   | FY25-ONGOING   | FY25-ONGOING  |
| ENTITY<br>RESPONSIBLE                  | Planning and<br>Inspections   | Planning and<br>Inspections  | Planning and<br>Inspections  | Planning and<br>Inspections   |
| INITIATED                              | $\checkmark$  | $\checkmark$   | $\checkmark$   |   |

COMPLETED

## 2045 ACTION PLAN: LIVABLE, DIVERSE, AND CONNECTED NEIGHBORHOODS

**B-2** 

| B-1               |
|-------------------|
| Catalyze          |
| development       |
| investment in the |
| Gateway District  |

by targeting public

investment towards

improvement that

will support future

development.

Expand the use of FlexCode into appropriate areas such as identified nodes and other areas with higher development opportunities based on low environmental constraints and proximity to existing or planned infrastructure. **B-3** 

Create detailed small area plans for the Jackeys Creek and 76/74 Interchange areas (Focal Areas) that include connectivity, parks and open spaces, community services, land uses, housing diversity, active nodes, and community health elements.

#### **B-4**

Create a Land Development Code that reflects the Future Land Use Map, principles, and strategies in the comprehensive plan to refine zoning regulations, the FlexCode, current zoning districts, new zoning districts, street design standards, and subdivision regulations into one clear and easy to use document.

| ٨ | СТ |           | NI |
|---|----|-----------|----|
| A |    | <b>IU</b> | N  |
|   |    |           |    |

| INVESTMENT                             | Medium/High                              | Low   | Medium   | Medium                      |
|--|--|---|--|-----------------------------|
| ANTICIPATED<br>TIMING<br>(START - END) | FY24-ONGOING                             | FY24-ONGOING  | FY25-FY27  | FY24-ONGOING                |
| ENTITY<br>RESPONSIBLE                  | Economic and<br>Community<br>Development | Planning and<br>Inspections,<br>Economic and<br>Community<br>Development  | Planning and<br>Inspections,<br>Economic and<br>Community<br>Development | Planning and<br>Inspections |
| INITIATED                              | <ul> <li>✓</li> </ul>                    | <ul> <li>Image: A set of the set of the</li></ul> | ✓  | <ul> <li>✓</li> </ul>       |
| COMPLETED                              |  |   |  |                             |

#### **B-5**

#### **B-6**

Revise street connectivity requirements to improve connectivity within and between developments. Create a Town signage and wayfinding plan that is reflective of Leland's vision, brand, and sense of place.

#### **B-7**

Coordinate with MOTSU Intergovernmental Council to explore preferred use, density, and setback allowances for areas adjacent to the MOTSU rail corridor.

| Low  | Medium  | Low                         |
|--|---|-----------------------------|
| FY 24-ONGOING                                | FY26-FY30   | FY26-ONGOING                |
| Planning and<br>Inspections,<br>Public Works | Planning and<br>Inspections,<br>Public Works,<br>Economic and<br>Community<br>Development | Planning and<br>Inspections |
|  |   |                             |
|  |   |                             |

## 2045 ACTION PLAN: A RESILIENT AND STABLE ECONOMY

|   | E-1   | E-2   | E-3  | E-4  |
|---|---|---|--|--|
| N | Research ways to<br>expand diversity in<br>job opportunities,<br>housing, and<br>economic<br>development. | Promote the Leland<br>Innovation Park<br>as the preferred<br>location for high<br>tech, well–paying<br>employers. | Coordinate the<br>plan for the Leland<br>Innovation Park<br>with the Focal<br>Area Plan and<br>subsequent small<br>area plan to<br>create a complete<br>community within<br>and around it. | Promote business<br>and development<br>opportunities<br>in the Gateway<br>District by creating<br>incentive programs<br>for development<br>and job-creating<br>uses. |

| INVESTMENT                             | Low   | Low   | Low  | Medium                                   |
|--|---|---|--|--|
| ANTICIPATED<br>TIMING<br>(START - END) | FY24-ONGOING  | FY25-ONGOING  | FY25-FY27  | FY24-ONGOING                             |
| ENTITY<br>RESPONSIBLE                  | Economic and<br>Community<br>Development  | Economic and<br>Community<br>Development  | Planning and<br>Inspections,<br>Economic and<br>Community<br>Development | Economic and<br>Community<br>Development |
| INITIATED                              | <ul> <li>Image: A start of the start of</li></ul> | <ul> <li>Image: A start of the start of</li></ul> |  | <ul> <li>✓</li> </ul>                    |
| COMPLETED                              |   |   |  |  |

#### ACTION

| E-5   | E-6  |
|---|--|
| Grow and educate<br>the workforce to<br>be prepared for<br>emerging and<br>trending industries<br>anticipated<br>to located in<br>the region by<br>partnering with<br>high schools,<br>colleges, and<br>universities<br>on vocational<br>assessment and<br>skill development. | Work with<br>regional partners<br>to coordinate<br>promotion the<br>area's economic<br>assets to further<br>economic<br>development. |
| Medium  | Low/Medium   |
| FY22-ONGOING  | FY22-ONGOING   |
| Economic and<br>Community<br>Development,<br>Human<br>Resources   | Economic and<br>Community<br>Development   |
|   |  |
|   |  |

# 2045 ACTION PLAN: AN INCLUSIVE, SUPPORTED, HEALTHY, SAFE, AND EDUCATED COMMUNITY

|       | H-1  | H-2  | H-3  | H-4   |
|-------|--|--|--|---|
| CTION | Coordinate with<br>area education<br>providers to<br>develop criteria to<br>help determine the<br>timing and location<br>of schools. | Create a plan to<br>support aging in<br>place. | Update the Parks,<br>Recreation, and<br>Open Space Plan<br>to reflect the Future<br>Land Use Map and<br>consideration for<br>new community<br>centers and<br>programs that<br>are inclusive for<br>all community<br>residents. | Revisit the<br>allowance of gated<br>communities to<br>ensure that the<br>transportation<br>and multimodal<br>facilities are<br>connected when<br>possible. |

| INVESTMENT                             | Low   | Medium   | Medium   | Low                         |
|--|---|--|--|-----------------------------|
| ANTICIPATED<br>TIMING<br>(START - END) | FY26-ONGOING  | FY23-FY28  | FY25-FY30  | FY25-ONGOING                |
| ENTITY<br>RESPONSIBLE                  | Planning and<br>Inspections,<br>Economic and<br>Community<br>Development,<br>Administration | Planning and<br>Inspections,<br>Economic and<br>Community<br>Development | Parks,<br>Recreation,<br>and Culutral<br>Resources | Planning and<br>Inspections |
| INITIATED                              |   | $\checkmark$   | <ul> <li></li> </ul>                               |                             |
| COMPLETED                              |   | $\checkmark$   |  |                             |

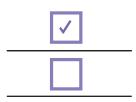
#### H-5

Evaluate land use regulations and the zoning map during the Land Development Code project to ensure equitable opportunities for residents in all areas and of all socioeconomic and demographic groups.

Low/Medium

FY22-ONGOING

Planning and Inspections



## 2045 ACTION PLAN: INFRASTRUCTURE THAT SUPPORTS COMMUNITY LIFE

| I-1                   |   |
|-----------------------|---|
| Create horizontal     | ι |
| street cross          | C |
| sections that meet    | t |
| standards for         | F |
| complete streets      | t |
| for all street types. | ( |
|                       |   |

I-2

Update and consolidate the bicycle and pedestrian plans to reflect the FLUM and Focal Area Plans. I-3

Create a blueways, greenways, and water access plan in collaboration with partners to assist with funding, design, and development.

#### **I-4**

Coordinate recommendations for new streets, roads, trails, sidewalks, multi-use paths, streetscapes, and other improvements to public spaces in Capital Improvement Plan.

| INVESTMENT                             | Low/Medium   | Low/Medium   | Medium  | Low  |
|--|--|--|---|--|
| ANTICIPATED<br>TIMING<br>(START - END) | FY25-ONGOING   | FY26-ONGOING   | FY26-ONGOING  | FY24-ONGOING   |
| ENTITY<br>RESPONSIBLE                  | Planning and<br>Inspections,<br>Public Works,<br>Engineering | Planning and<br>Inspections,<br>Public Works,<br>Engineering | Planning and<br>Inspections,<br>Parks,<br>Recreation,<br>and Culural<br>Resources | Planning and<br>Inspections,<br>Public Works,<br>Engineering |
| INITIATED                              | $\checkmark$   |  |   |  |
| COMPLETED                              |  |  |   |  |

#### I-5

Update and consolidate the collector street plan and street infill plans to reflect the FLUM and Focal Area Plans.

Low/Medium

FY24-ONGOING

Planning and Inspections, Public Works, Engineering

## 2045 ACTION PLAN: AN ACTIVE PARTICIPANT IN A COOPERATIVE REGION

|            | R-1  | R-2   | R-3   |
|------------|--|---|---|
| ACTION     | When transportation<br>and recreation<br>plans, including<br>those for trails,<br>streets, multi-use<br>paths, blueways,<br>greenways, transit,<br>and other regionally<br>significant linkages,<br>are being prepared,<br>coordinate with<br>surrounding<br>jurisdictions to<br>create high levels<br>of integration and<br>linkages. | Collaborate<br>regionally to<br>promote economic<br>development<br>opportunities. | Work<br>collaboratively<br>with surrounding<br>jurisdictions to<br>protect natural<br>resource and<br>improve open<br>space connectivity. |
| INVESTMENT | Low  | Low   | Low   |

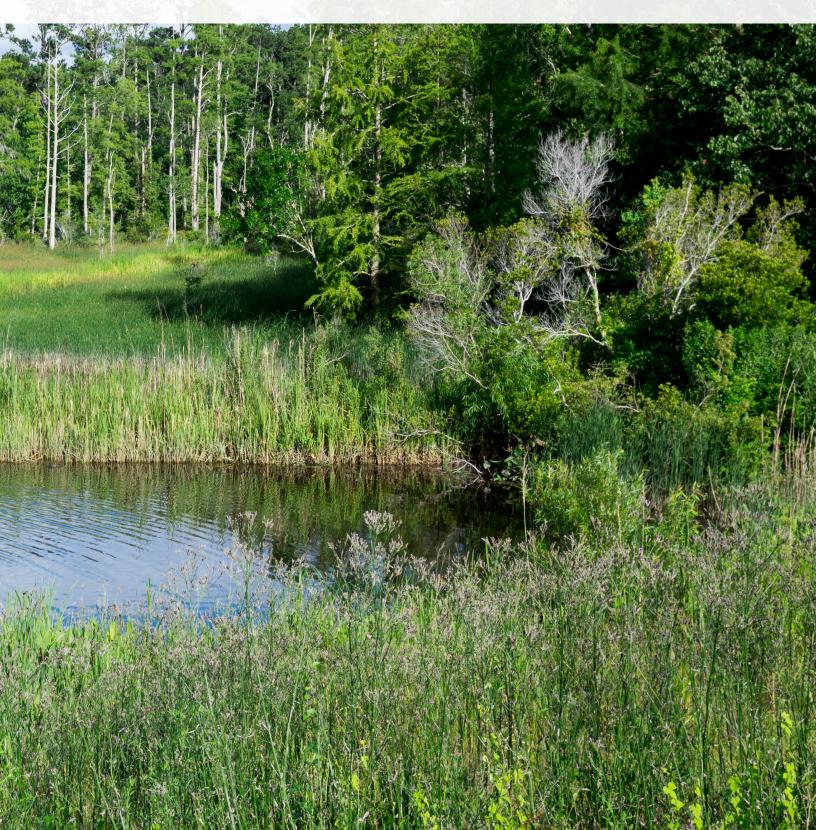
| INVESTMENT                             | Low  | Low   | Low   |
|--|--|---|---|
| ANTICIPATED<br>TIMING<br>(START - END) | FY22-ONGOING   | FY22-ONGOING  | FY22-ONGOING  |
| ENTITY<br>RESPONSIBLE                  | Planning and<br>Inspections,<br>Public Works,<br>Engineering | Economic and<br>Community<br>Development,<br>Administration | Planning and<br>Inspections,<br>Public Works,<br>Engineering  |
| INITIATED                              |  |   | <ul> <li>Image: A set of the set of the</li></ul> |
| COMPLETED                              |  |   |   |

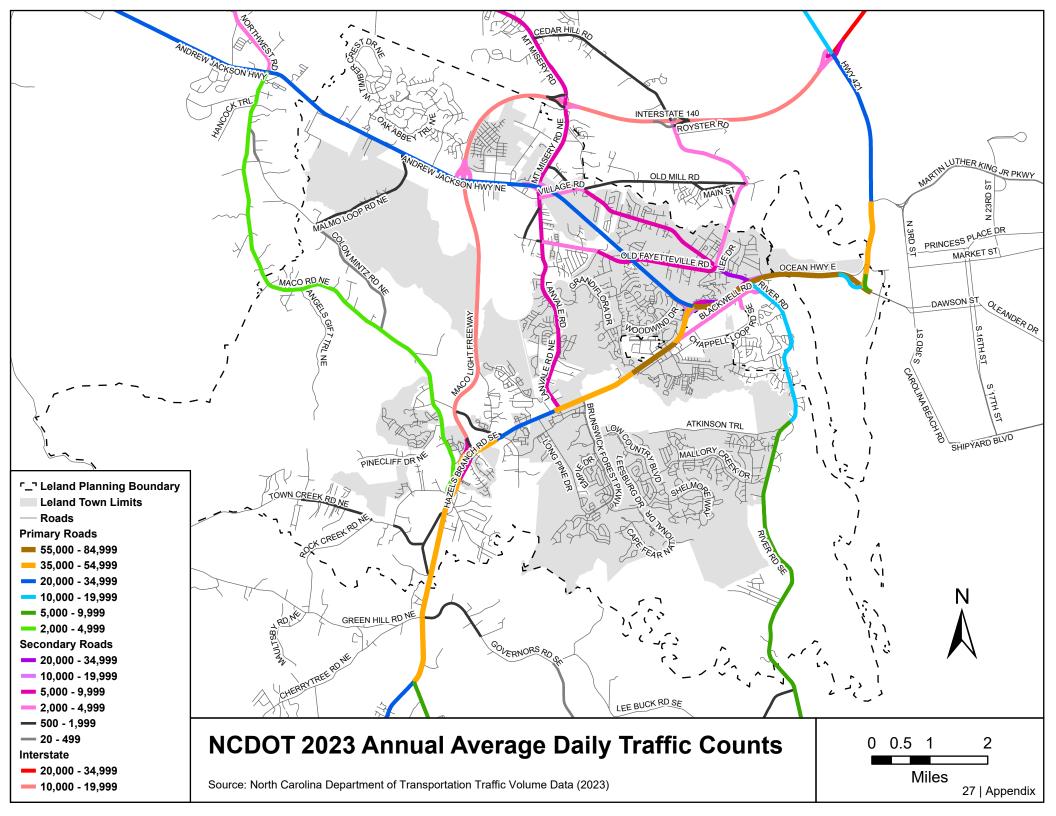
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# APPENDIX

## CONTENTS

| APPENDIX              |  |
|-----------------------|--|
| NCDOT AADT Counts Map |  |
| CAMA Matrix           |  |
| CAMA Policies         |  |





#### Town of Leland Coastal Area Management Act (CAMA) Policies

#### CAMA Management Goal 1.0: Implementation strategies to bolster public access

- Policy 1.1 Partner with local, state, and federal agencies and organizations to provide public shoreline and water access for people with all abilities through grants, donations, and land acquisition.
- Policy 1.2 Support commercial operations that provide and promote access to recreational activities within public waterways.

## CAMA Management Goal 2.0: Implementation strategies ensuring land use compatibility

- Policy 2.1 Limit the density and intensity of development in and immediately adjacent to AECs.
- Policy 2.2 Floating homes, a stationary structure built on a float, designed for residential occupancy use, that is moored or anchored in a body of water, and connected to land-based utilities or serviced by a pumpout vessel, and is not designed for self-propulsion, are not allowed, nor is any land-dependent infrastructure for floating home communities.

*Definition clarification for floating homes*: Unlike a houseboat, a floating home is not intended to be a mobile vessel and is typically permanently connected to utilities like electricity, water, and sewer lines or serviced by a pump-out vessel.

Floating homes are secured in place, often docked among other floating homes, rather than being able to move independently. The foundation of a floating home is a float, which can be made of various materials like concrete or logs. Floating homes are intended for long-term and short-term living.

- Policy 2.3 Houseboat communities, defined as clusters of docked and mobile boats used as residences, shall not be established or permitted on any public or private water bodies in the Town of Leland, and no land-dependent infrastructure shall be allowed in the Town to support houseboat communities outside of Town limits.
- Policy 2.4 Prioritize shared-use private and community boating facilities over multiple individual piers and docks along the same shoreline.
- Policy 2.5 Participate in regional hazard mitigation planning and implementation.
- Policy 2.6 Moorings and mooring fields shall only be allowed where they have no adverse effect on navigation channels.

## CAMA Management Goal 3.0: Implementation strategies to ensure infrastructure carrying capacity

| Policy 3.1 | Prohibit clearcutting, mowing, or removal of coastal wetland  |
|------------|---|
|            | vegetation within any coastal wetland AEC unless specifically |
|            | authorized by the CAMA.                                       |

Policy 3.2 Limit dredging activities to channel maintenance only, unless associated with a new public water access facility.

## CAMA Management Goal 4.0: Implementation strategies conserving and maintaining natural hazard areas

- Policy 4.1 Prohibit the use of estuarine waters, estuarine shorelines, and public trust areas for development activity which would result in significant adverse impact to the natural function of those areas.
- Policy 4.2 Limit density and intensity of development in areas susceptible to coastal inundation and/or flooding.
- Policy 4.3 Consider acquiring properties for conservation, repetitive flood damage loss mitigation, and habitat preservation.

## CAMA Management Goal 5.0: Implementation strategies protecting, maintaining, and enhancing water quality

- Policy 5.1 The Town will inform and educate the public about the importance of stormwater management, water quality, and environmental concerns associated with nonpoint sources of pollution.
- Policy 5.2 Encourage development practices that incorporate low-impact design (LID) and green infrastructure to reduce runoff and improve water quality.
- Policy 5.3 Integrate water quality considerations into land-use planning, ensuring that urban development minimizes impervious surfaces and optimizes stormwater management through permeable materials, detention ponds, and vegetative buffers.
- Policy 5.4 Allow permanent and/or temporary hardened shoreline protections such as seawalls, rip-rap, bulkheads, and sandbags only when there is no feasible alternative.
- Policy 5.5 The Town shall preserve and, where possible, enhance all existing wetland areas to improve water quality and provide a buffer for flooding.

| Matrix for Land Use Plan Eleme                           | nts – 15A NCAC 7B .0702 |
|--|-------------------------|
|  | Page Reference(s)       |
| Organization of the Plan                                 |                         |
| Matrix that shows the location of the                    |                         |
| required elements as set forth in this                   | Addendum page 30        |
| Rule   |                         |
| Community Concerns and Aspirations                       |                         |
| Description of the dominant growth-                      |                         |
| related conditions that influence land                   |                         |
| use, development, water quality and                      | Pages 18-21             |
| other environmental concerns in the                      |                         |
| planning area  |                         |
| Description of the land use and development              |                         |
| topics most important to the future of the               |                         |
| planning area, including:                                |                         |
| Public Access  | Page 24                 |
| Land Use Compatibility                                   | Pages 19; 28            |
| Infrastructure Carrying Capacity                         | Page 72                 |
| Natural Hazard Areas                                     | Pages 70; 118-123       |
| Water Quality  | Page 116-117            |
| Community Vision   |                         |
| Description of the general physical                      |                         |
| appearance and form that represents                      |                         |
| the local government's plan for the                      |                         |
| future. It shall include objectives to be                | Pages 18-21             |
| achieved by the plan and identify                        |                         |
| changes that may be needed to                            |                         |
| achieve the planning vision.                             |                         |
| Existing and Emerging Conditions                         |                         |
| Public, Housing, and Economy                             |                         |
| Discussion of the following data and trends:             |                         |
| <ul> <li>Permanent population growth trends</li> </ul>   |                         |
| using data from the two most [recent?]                   | Addendum pages 3- 6     |
| decennial Censuses                                       |                         |
| <ul> <li>Current permanent and seasonal</li> </ul>       | Page 106                |
| population estimates                                     |                         |
| <ul> <li>Key population characteristics</li> </ul>       | Pages 100-101;110       |
| including age and income                                 |                         |
| <ul> <li>Thirty-year projections of permanent</li> </ul> |                         |
| and seasonal population in five-year                     | Addendum page 3         |
| increments   |                         |
| <ul> <li>Estimate of current housing stock,</li> </ul>   |                         |
| including permanent and seasonal                         | Pages 106-109           |
| units, tenure, and types of units                        |                         |

| (single family multi family and  |                       |
|--|-----------------------|
| (single-family, multi-family, and manufactured)  |                       |
| Description of employment by major<br>sectors and community economic<br>activity   | Page 110 (figure 14)  |
| Natural Systems  |                       |
| Description of natural features in the planning  |                       |
| jurisdiction to include:   |                       |
| Areas of Environmental Concerns<br>(AECs) as set forth in Subchapter 15A<br>NCAC 07H   | Pages 112-113         |
| <ul> <li>Soil characteristics, including<br/>limitations for septic tanks, erodibility,<br/>and other factors related to<br/>development</li> </ul>  | Pages 114-115         |
| <ul> <li>Environmental Management<br/>Commission (EMC) water quality<br/>classifications and related use support<br/>designations</li> </ul>   | Page 116-117 (Map 32) |
| <ul> <li>Division of Marine Fisheries (DMF)<br/>shellfish growing areas and water<br/>quality conditions</li> </ul>  | Page 116-117 (Map 32) |
| <ul> <li>Flood and other natural hazard areas</li> </ul>   | Page 118              |
| Storm surge areas  | Page 119              |
| <ul> <li>Non-coastal wetlands, including<br/>forested wetlands, shrub-scrub<br/>wetlands and freshwater marshes</li> </ul>   | Page 120              |
| <ul> <li>Water supply watersheds and<br/>wellhead protection areas</li> </ul>  | Addendum page 7       |
| Primary nursery areas  | Not applicable        |
| <ul> <li>Environmentally fragile areas, such as<br/>wetlands, natural heritage areas,<br/>areas containing endangered species,<br/>prime wildlife habitats, or maritime<br/>forests</li> </ul> | Pages 121-123         |
| <ul> <li>Additional natural features or<br/>conditions identified by the local<br/>government</li> </ul>   | Pages 126-127         |
| Environmental Conditions   |                       |
| Discussion of environmental conditions within  |                       |
| the planning jurisdiction to include an  |                       |
| assessment of the following conditions and   |                       |
| features:  |                       |
| Status and changes of surface water<br>quality, including:   |                       |

| <ul> <li>Impaired streams from the most<br/>recent Division of Water Resources<br/>(DWR) Basin Planning Branch<br/>Reports</li> </ul>  | Page 130 (Table 10)            |
|--|--------------------------------|
| - Clean Water Act 303 (d) List   | Pages 116; 130                 |
| - Other comparable data  | Page 130                       |
| Current situation and trends on<br>permanent and temporary closures of<br>shellfishing waters as determined by<br>the Report of Sanitary Survey by the<br>Shellfish Sanitation and Recreational<br>Water Quality Section of the DMF    | Pages 116-117 (Map 32)         |
| Areas experiencing wastewater     treatment malfunctions   | Addendum page 7                |
| <ul> <li>Environmentally fragile areas (as<br/>defined in Part (c)(2)(A)(ix) of the Rule,<br/>or areas where resources functions<br/>are impacted as a result of<br/>development</li> </ul>  | Pages 121-122 (Maps 36 and 37) |
| Natural resource areas that are being<br>impacted or lost as a result of<br>incompatible development. These may<br>include, but are not limited to the<br>following: coastal wetlands, protected<br>open space, and agricultural land. | Not applicable                 |
| Existing Land Use and Development  |                                |
| MAP of existing land use patterns  | Pages 124-125 (Map 38)         |
| Description of the existing land use     patterns  | Pages 124-125                  |
| Estimates of the land area allocated to<br>each land use category  | Page 125 (Table 6)             |
| Characteristics of each land use<br>category   | Page 124-125 (Map 38)          |
| MAP of historic, cultural, and scenic areas<br>designated by a state or federal agency or by<br>the local government   | Page 127 (Map 39)              |
| <ul> <li>Descriptions of the historic, cultural<br/>and scenic areas</li> </ul>  | Page 126-127                   |
| Community Facilities   |                                |
| Evaluation of existing and planned capacity,<br>location and adequacy of community facilities<br>to include:   |                                |
| MAP of existing and planned public and private water supply service areas  | Page 129 (Map 40)              |

| Description of existing public and                                     |                                   |
|--|-----------------------------------|
| private water supply systems to  |                                   |
| include:   |                                   |
| - Existing condition   | Page 128                          |
| - Existing capacity  | Page 128 (Tables 7 and 8)         |
| - Documented overflows, bypasses                                       |                                   |
| or other problems that may   |                                   |
| degrade water quality or constitute                                    | Addendum page 7                   |
| a threat to public health as   |                                   |
| documented by the DWR  |                                   |
| <ul> <li>Future water supply needs based</li> </ul>                    | Addendum page 7                   |
| on population projections  | Addendum page 7                   |
| MAP of existing and planning public and                                | Page 129 (Map 40)                 |
| private wastewater systems to include:                                 | 1 age 129 (Map 40)                |
| Description of existing public and private                             |                                   |
| wastewater systems to include:   |                                   |
| - Existing condition   | Page 129                          |
| - Existing capacity  | Page 129 (Table 9)                |
| <ul> <li>Documented overflows, bypasses</li> </ul>                     |                                   |
| or other problems that may   |                                   |
| degrade water quality or constitute                                    | Addendum page 7                   |
| a threat to public health as   |                                   |
| documented by the DWR  |                                   |
| - Future water supply needs based                                      | Addendum page 7                   |
| on population projections  |                                   |
| MAP of existing and planned multimodal                                 | Pages 43 (Map 7); 73 (Map 11); 79 |
| transportation systems and port and airport facilities                 | (Map 13)                          |
|  |                                   |
| Description of any highway segments     desmad by the NC Department of |                                   |
| deemed by the NC Department of<br>Transportation (NCDOT) as having     | Addendum page 8                   |
| unacceptable service as documented                                     | NCDOT AADT Map in appendix page   |
| in the most recent NCDOT   | 27                                |
| Transportation and/or Thoroughfare                                     | 21                                |
| Plan   |                                   |
| Description of highway facilities on the                               |                                   |
| current thoroughfare plan or current                                   | Pages 72-73 (Map 11)              |
| transportation improvement plan  |                                   |
| Description of the impact of existing                                  |                                   |
| transportation facilities on land use                                  | Addendum page 8                   |
| patterns   |                                   |
| Description of the existing public                                     |                                   |
| stormwater management system   | Page 130 (Table 10)               |
| Identification of existing drainage                                    |                                   |
| problems and water quality issues                                      | Pages 94; 114                     |
| ····· · ····· · ······ · ·····   |                                   |

| related to point-source discharges of<br>stormwater runoff   |   |                                      |
|--|---|--------------------------------------|
|  |   |                                      |
|  | Strategy/Action<br>(Policy) Citations   | Page<br>References                   |
| Future Land Use  |   |                                      |
| Policies   |   |                                      |
| <ul> <li>Policies that exceed the use standards<br/>and permitting requirements found in<br/>Subchapter 7H, State Guidelines for<br/>Areas of Environmental Concern</li> </ul> | Not applicable  | Not<br>applicable                    |
| Policies that address the Coastal Resources<br>Commission's (CRC's) management topics:   |   |                                      |
| <b>Public Access</b> Management Goal:<br>Maximize public access to the beaches and<br>the public trust waters of the coastal region.   |   |                                      |
| The planning objectives for public access are local government plan policies that:   |   |                                      |
| <ul> <li>Address access needs and opportunities</li> </ul>   | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources<br>Opportunity 6<br>Infrastructure that<br>Supports Community<br>Life<br>Action I-3<br>Policies 1.1 and 1.2 | Pages 24; 60;<br>Addendum<br>page 28 |
| <ul> <li>Identify strategies to develop public access</li> </ul>   | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources<br>Opportunity 6<br>Infrastructure that<br>Supports Community<br>Life<br>Action I-3<br>Policies 1.1 and 1.2 | Pages 24; 60;<br>Addendum<br>page 28 |
| <ul> <li>Address provisions for all segments of<br/>the community, including persons with<br/>disabilities</li> </ul>  | An Inclusive,<br>Supported, Healthy,<br>Safe, and Educated<br>Community   | Pages 58-59;<br>Addendum<br>page 28  |

|  | Actions H-3 & H-5                  |                |
|--|------------------------------------|----------------|
|  |                                    |                |
|  | Policy 1.1                         |                |
| For oceanfront communities, establish                |                                    | NL-4           |
| access policies for beach areas                      | Not applicable                     | Not            |
| targeted for nourishment                             |                                    | applicable     |
| Land Use Compatibility Management Goal:              |                                    |                |
| Ensure that development and use of                   |                                    |                |
| resources or preservation of land balance            |                                    |                |
| protection of natural resources and fragile          |                                    |                |
| areas with economic development, and avoid           |                                    |                |
| risks to public health, safety, and welfare.         |                                    |                |
| The planning objectives for land use                 |                                    |                |
| computability are local government plan              |                                    |                |
| policies that:                                       |                                    |                |
| <ul> <li>Characterize future land use and</li> </ul> | Critical Future Goals              |                |
| development patterns                                 | 3, 4, 9, and 11                    |                |
|  | ·                                  |                |
|  | Highly Valued and                  |                |
|  | Protected Natural                  |                |
|  | and Cultural                       |                |
|  | Resources                          |                |
|  | Opportunities 1, 2, 3,             |                |
|  | 4, 5, and 7<br>Actions N-1 and N-4 |                |
|  | ACTIONS IN-1 and IN-4              |                |
|  | Livable, Diverse, and              |                |
|  | Connected                          | Pages 19       |
|  | Neighborhoods that                 | (Map 2), 24-   |
|  | Accommodate                        | 28; 30; 33;    |
|  | Growth                             | 38; 42-45; 53- |
|  | Opportunity 1                      | 54; 60-61; 88- |
|  | Action B-2                         | 89 (Map 14);   |
|  |                                    | Addendum       |
|  | An Inclusive,                      | pages 28-29    |
|  | Supported, Healthy,                |                |
|  | Safe, and Educated                 |                |
|  | Community                          |                |
|  | Opportunity 6                      |                |
|  |                                    |                |
|  | Infrastructure that                |                |
|  | Supports Community                 |                |
|  | Life                               |                |
|  | Opportunities 9 and                |                |
|  | 10                                 |                |
|  | Actions I-2 and I-5                |                |

|  | Future Land Use Map<br>(FLUM) Focal Areas<br>1 and 2<br>Policies 2.1 - 2.6  |   |
|--|---|---|
| Establish mitigation criteria and  | Strategies to   | Addendum  |
| concepts to minimize conflicts   | Minimize Conflict   | page 9  |
| Infrastructure Carrying Capacity   |   | page 5  |
| Management Goal:   |   |   |
| Ensure that public infrastructure systems are  |   |   |
| sized, located, and managed so the quality   |   |   |
| and productivity of AECs are other fragile   |   |   |
| areas are protected or restored.   |   |   |
| The planning objectives for infrastructure   |   |   |
| carrying capacity are local government plan  |   |   |
| policies that:   |   |   |
| Establish service criteria   | Future Land Use Map<br>(FLUM)   | Page 19   |
| Ensure improvements minimize<br>impacts to AEC's and other fragile<br>areas  | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources<br>Actions<br>Actions N-1 and N-4<br>Infrastructure that<br>Supports Community<br>Life<br>Actions I-2 and I-5<br>Policies 3.1, 3.2, 4.1,<br>and 4.2 | Pages 24-28;<br>38; 53; 60-61;<br>Addendum<br>pages 28-29 |
| <b>Natural Hazard Areas</b> Management Goal:<br>Conserve and maintain barrier dunes,<br>beaches, floodplains, and other coastal<br>features for their natural storm protection<br>functions and their natural resources giving<br>recognition to public health, safety, and<br>welfare issues. |   |   |
| The planning objectives for natural hazard areas are local government plan policies that:  |   |   |
| <ul> <li>Establish mitigation and adaptation</li> </ul>  | Highly Valued and   | Pages 24-28;  |
| concepts and criteria for development  | Protected Natural   | 33; 53;   |
| and redevelopment, including public  | and Cultural  | Addendum  |
| facilities   | Resources   | pages 28-29   |

|   | Actions N. 1. N. 2 and   |   |
|---|--|---|
|   | Actions N-1, N-3 and N-4   |   |
|   | 11-4   |   |
|   | Polices 2.1, 3.1, 4.1<br>and 4.2   |   |
| <ul> <li>Minimize threats to life, property and<br/>natural resources resulting from<br/>erosion, high winds, storm surge,<br/>flooding, and other natural hazards</li> </ul>           | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources  | Pages 24-28;<br>Addendum<br>page 28-29            |
|   | Policy 4.3   |   |
| <i>Water Quality</i> Management Goal:<br><i>Maintain, protect and where possible</i><br><i>enhance water quality in all coastal wetlands,</i><br><i>rivers, streams, and estuaries.</i> |  |   |
| The planning objectives for water quality are local government plan policies that:  |  |   |
| Establish strategies and practices to<br>prevent or control nonpoint source<br>pollution  | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources<br>Opportunities 1 and 4<br>Action N-4   | Pages 24-28;<br>42-45; 116;<br>Addendum           |
|   | Infrastructure that<br>Supports Community<br>Life Opportunity 9<br>Policies 5.1 – 5.6  | page 28-29  |
| Establish strategies and practices to maintain and improve water quality  | Highly Valued and<br>Protected Natural<br>and Cultural<br>Resources<br>Opportunity 7<br>Action N-3<br>Infrastructure that<br>Supports Community<br>Life<br>Opportunities 9 and | Pages 24-28;<br>45; 53;<br>Addendum<br>page 28-29 |
|   | 10<br>Policies 5.1 – 5.6   |   |
| Future Land Use Map   | Page Referei   | nce(s)  |
| MAP of future land uses that depicts the policies for growth and development and the  | Pages 19; 90-95  |   |

| desired future patterns of land use and                        |                      |
|--|----------------------|
| development with consideration given to                        |                      |
| natural system constraints and infrastructure                  |                      |
| <ul> <li>Descriptions of land uses and</li> </ul>              |                      |
| development associated with the                                | Pages 18-21; 90-95   |
| future land use map designations                               |                      |
|  |                      |
| Tools for Managing Development                                 |                      |
| Description of the role of plan policies,                      |                      |
| including the future land use map, in                          | D 50.00              |
| local decisions regarding land use and                         | Pages 50-63          |
| development  |                      |
| Description of the community's                                 |                      |
| development management program,                                |                      |
| including local ordinances, codes, and                         | Page 51              |
| other plans and policies                                       |                      |
| Action Plan and Implementation Schedule                        |                      |
| Description of actions that will be                            |                      |
| taken by the local government to                               |                      |
| implement policies that meet the                               |                      |
| CRC's management topic goals and                               | Addendum pages 11-23 |
| objectives, specifying fiscal year(s) in                       |                      |
| which each action is anticipated to                            |                      |
| start and finish   |                      |
|  |                      |
| <ul> <li>Identification of specific steps the local</li> </ul> |                      |
| government plans to take to implement                          | Degee 50.62          |
| the policies, including adoption and                           | Pages 50-63          |
| amendment of local ordinances, other                           |                      |
| plans, and special projects                                    |                      |



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