Carolina. Coastal Zone Management Program

LAND USE PLAN UPDATE

COASTAL ZONE
INFORMATION CENTER

PREPARED FOR:

THE TOWN OF HOLDEN BEACH, NC

BY:

SATILLA PLANNING
PLANNERS ☐ LANDSCAPE ARCHITECTS

Adopted November 25, 1985

Certified By the Coastal Resources Commission
December 13, 1985

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Prepared for

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P.O. BOX 1110, ST. MARYS, GEORGIA 31558

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INTRODUCTION

The Coastal Area Management Act of 1974 establishes a cooperative program of land planning and management between local governments and the State. Land use planning is intended to be the focus of local government's involvement; it gives local leaders an opportunity to establish and implement policies to guide the development of their community.

The Holden Beach Land Use Plan is an expression of both short and long range planning goals in which the local government has set forth its major policies concerning how and where future development should occur over the next ten years. Coordination with Brunswick County during plan development was accomplished through the County Planning Department.

The Land Use Plan is an important policy document at local, regional, state and federal levels. The users, in addition to the Town of Holden Beach, are regional councils of government, state and federal permitting agencies, and public or private funding and development groups.

Local Government Uses

The Plan provides policy guidance for decisions related to overall community development, while serving as the basis for land development regulations and capital facilities programming. Planning for the provision and extension of capital intensive services, such as central sewer and water, is aided by the land use plan's identification of likely growth trends and by plan policies which will direct growth.

Local Land Development Uses

Developers and investors (including prospective residents) can use the land use plan as a primary source of information about the community. The plan provides data and analysis on present development patterns, capacity of community facilities, growth patterns, and physical limitations to development. The plan also provides developers with information about the community's preferences for development types, densities and locations.

Regional Uses

The Holden Beach Land Use Plan will be used by the Cape Fear Council of Governments for regional planning purposes

and in their function as Regional Clearinghouse (A-95) for State and Federal funding programs. Brunswick County will use this and other municipal plans in the development of a County-wide land use plan. The local plan indicates to these agencies what types of development the community feels are likely and where the development should take place.

State and Federal Uses

Coastal government's land use plans are used in evaluating development proposals requiring approval by various State and Federal agencies. These agencies must ensure that permitting decisions consider and are consistent with the policies and land classification system established by the Land Use Plan. This requirement for consistency is established by the North Carolina Coastal Area Management Act. Similarly, the use of State and Federal funds, either as grants or as direct agency expenditures, must be consistent with the local plan.

EXISTING CONDITIONS

Existing Land Use

Existing land use in Holden Beach is displayed by Map One. It shows how each parcel of land in the town is currently used (based on field inventories conducted during September and October, 1984) and is subdivided into seven categories:

- Single Family Residential
- Duplex
- Multi-family
- Mobile Home
- Commercial
- Public/Institutional
- Recreational

Single Family Residential includes all detached Single Family Homes on individual lots.

All structures with two, attached units are included in the Duplex category.

Residential structures with three or more dwelling units constitute the Multi-Family category.

The Mobile Home category includes both single mobile homes on individual lots and mobile homes in parks. Recreational vehicle/travel trailer parks are also included here.

The Commercial use category consists of retail sales and service establishments including tourist oriented, recreational businesses.

Public/Institutional uses include government offices with related areas, and churches.

The Recreational category consists of private and public parks and recreation areas.

The following table provides a quantitative breakdown of land uses within the town. Both results of the 1984 survey and information from the 1980 Land use Plan update are provided.

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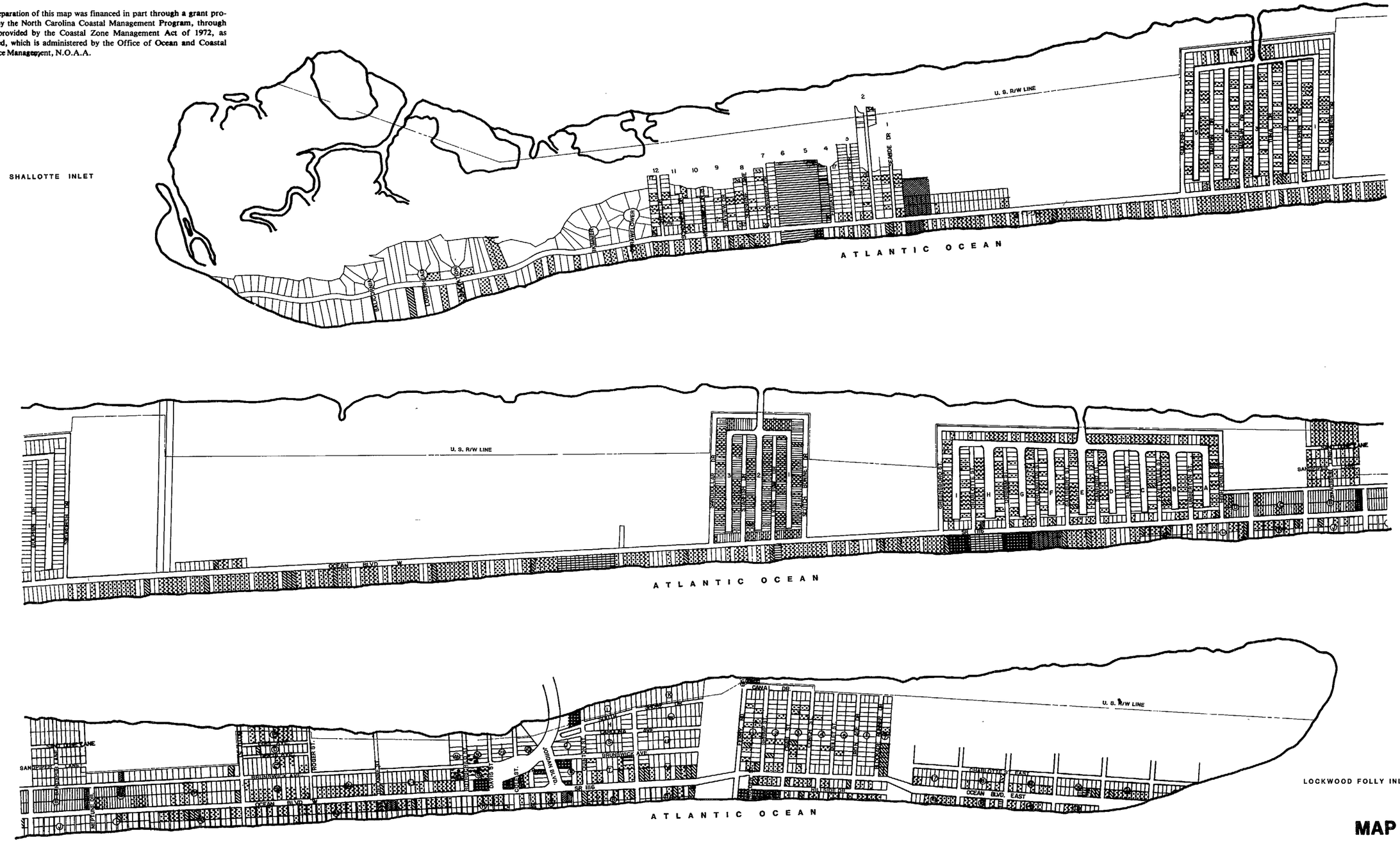

MAP 1

EXISTING LAND USE

- SINGLE FAMILY RESIDENTIAL
- DUPLEX
- MOBILE HOME
- MULTI FAMILY
- COMMERCIAL
- PUBLIC/INSTITUTIONAL
- RECREATIONAL
- VACANT

HOLDEN BEACH, N.C.

Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

Mapping Date: JUNE, 1985

NORTH

0' 250' 500' 1000' 1500' 2000'

TABLE ONE
EXISTING LAND USE
HOLDEN BEACH, NORTH CAROLINA

	1980 Acreage	1984 Acreage	Percent Change
Single Family Residential	116.5	155.3	+ 33.3%
Duplex	(1)	11.4	
Multi-Family	14.1	3.6	+ 6.4%(2)
Mobile Home/RV	4.9	26.5	(3)
Commercial	6.6	9.9	+ 49.7%
Public/ Institutional	0.5	1.2	+130.0%
Recreational	21.7	0.4	(3)
Streets	201.8	200.0	- 0.1%
TOTAL	366.1	408.3	+ 11.5%

(1) Included with multi-family.

(2) Net increase in duplex and multi-family categories combined.

(3) 1980 plan classified Campgrounds/R.V. areas as recreation; these uses are included in Mobile Home/Recreational Vehicle category of the 1985 update; 1980-1981 comparisons not meaningful.

Source: 1980 Holden Beach Land Use Plan Update and Satilla Planning, Inc. from September, 1984 field survey.

The existing land use table does not account for vacant land and water areas. According to the 1980 plan, there were 1,400 acres of vacant land. Since this time, 43 acres were converted to urban land uses and approximtely 150 acres of waterfront land was lost to erosion leaving an estimated 1,207 acres vacant at the present time. The majority of this 1,207 acres is probably not developable as discussed in the vacant land ownership analysis.

The existing land use table indicates significant increases in all land use development categories except multi-family and streets. Of the 452 acres converted from vacant to developed land uses in the past five years, almost 39 acres or 93% resulted from single family development.

Another way to view and analyze Holden Beach's existing land use pattern is to examine the net, developed area only, excluding water, marsh, vacant lands and street rights-of-way. This analysis is presented by Table Two:

TABLE TWO
DEVELOPED LAND
HOLDEN BEACH, N.C.

	1980 Acres	1980 %	1984 Acres	1984 %	CHANGE 1980-1984 Acres	CHANGE 1980-1984 %
Single Family Residential	116.5	70.9	155.3	-74.6	+38.8	+33.3%
Duplex	(1)		11.4	5.5	(1)	
Multi-Family	14.1	8.6	3.6	1.7	+ 0.9	+6.4% (2)
Mobile Home/RV	4.9	3.0	26.5	12.7	(3)	
Commercial	6.6	4.0	9.9	4.8	+ 3.3	+50%
Public/ Institutional	.5	.3	1.2	.5	+ 0.7	+140%
Recreational	21.7	13.2	0.4	.2	(3)	
TOTAL	164.3	100.0	208.3	100.0	44.0	+26.8%

(1) Included with multi-family.

(2) Net increase in duplex and multi-family categories combined.

(3) 1980 plan classified Campgrounds/R.V. areas as recreation; these uses are included in Mobile Home/Recreational Vehicle category of the 1985 update; 1980-1984 comparisons not meaningful.

Source: 1980 Holden Beach Land Use Plan Update and Satilla Planning, Inc. from September, 1984 field survey.

The developed land table demonstrates the single family character of Holden Beach - accounting for nearly three-fourths of all developed land uses with all residential uses comprising almost 95%. The small amount of land devoted to commercial uses indicates that virtually all retail and service sector needs are being met by facilities off the island. An examination of the land use map shows that certain key features of Holden Beach's land use pattern stand out as follows:

Residential Land Use. Most of the oceanfront lots are developed as single family with occasional duplex and multi-famly uses. There are numerous vacant residential building lots in the platted interior areas including each of the finger canal subdivisions. There are very few mobile homes outside of campground/mobile home park areas. Because there is no central sewage disposal and due to current zoning regulations, there are also very few multi-family developments on the island.

Commercial Land Use. As stated, most commercial services utilized by Holden Beach visitors and residents are located off the island - primarily along the causeway (St. Rt. 130). On the island, commercial activites are located in three basic areas: 1) at the foot of the swing bridge - grocery store and real estate offices; 2) on the ocean just east of Ferry Road - water slide and pavilion; and 3) across from Holden Beach Harbor on the ocean - the pier, campground and pavilion.

Public/Institutional. Most uses in this category are located on Rothschild Street: the Town Hall, Police Station, Water Tower and the Holden Beach Chapel. The only other public/institutional use on the island is the Volunteer Fire Department Building at the corner of Ocean Boulevard and Starfish Drive.

Recreational. The only recreation areas identified by Map One are private tennis courts associated with subdivision developments. Beach access points that are officially designated by the Town are identified by Map Three, Community Facilities (page 11). As a practical matter, the Town's beaches serve as the principal recreational resource but these areas have not been calculated.

Summary. Holden Beach can be characterized as a family vacation area consisting primarily of single family homes and cottages. There are no significant land use compatabilty problems or major problems resulting from unplanned developments. Redevelopment is now occurring at the island foot of the new bridge consisting primarily of commercial uses. This redevelopment has caused some minor land use conflicts.

Vacant Land Ownership

Ownership patterns of available vacant, developable land can be a principal factor affecting future growth and development. This section and Map Two on the following page presents and analyzes these ownership patterns as they relate to future development.

Ownership of each significant parcel was identified, compiled and mapped from County tax records, according to the following two categories:

- Realty/Development Company or Partnership
- Individual, Family or Trust

For land use planning purposes, it is important to consider vacant land ownership patterns in conjunction with the natural capacity of the land to support development. Therefore, the Vacant Land Ownership Map should be analyzed in conjunction with flood hazard, wetlands and other environmental maps to determine the feasibility and desirability of developing these vacant areas. For example, significant areas that are currently vacant may not be developable at all under current State regulations governing wetlands and marshes.

As indicated by Map Two, Vacant Land Ownership, most of Holden Beach's vacant land is owned by realty companies, development concerns or partnerships. Of the land in this category, the majority is owned by one

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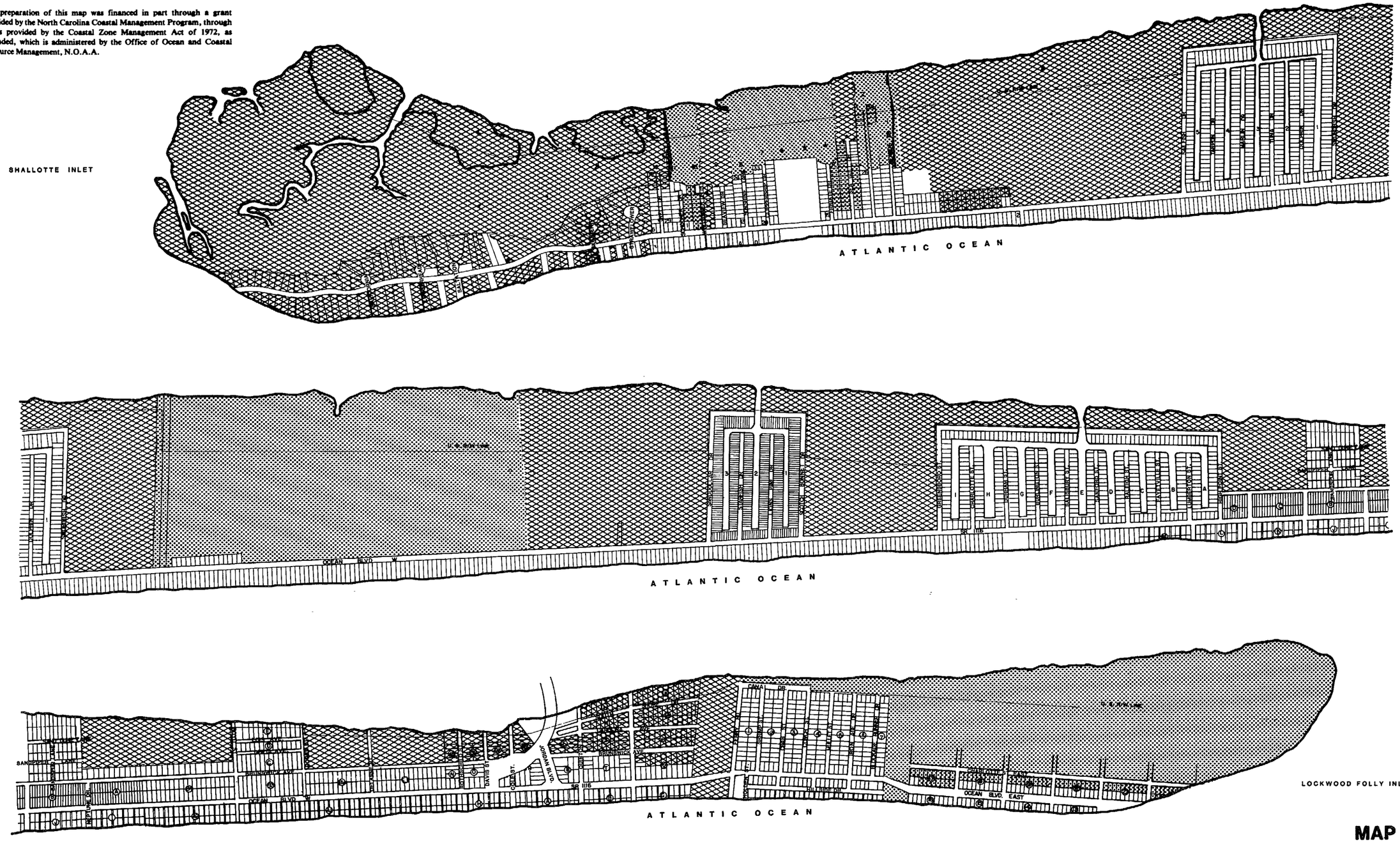

MAP 2

VACANT LAND OWNERSHIP

REALTY, DEVELOPMENT COMPANY OR PARTNERSHIP

INDIVIDUAL, FAMILY OR TRUST

HOLDEN BEACH, N.C.

Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

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NORTH

0' 250' 500' 1000' 1500' 2000'

realty company. There are also significant areas owned by individuals, particularly at the island's eastern end (east of Jordan Boulevard).

Most of the island's vacant unplatted land is either economically undevelopable or prohibited from development under today's state and federal environmental regulations. This is particularly true of the western two-thirds of the Island.

At the eastern end of the island, however, much of the vacant land is already platted and developable. At the extreme east end (the eastern 4,500 feet) there are about 100 acres of vacant - developable land, most of which is unplatted.

In addition to the large vacant areas identified by Map Two, there are hundreds of platted, vacant bulding lots, most of which are buildable. The ownership of these areas is divided between individuals and realty companies.

Roadways & Transportation

Street networks in and around a community are important aspects of future development. Road access can be a key determinant of the attractiveness of land for various types of land development. There are also critical reciprocal relationships between roads and land use. On one hand, the availability of good road capacity and traffic volume makes the adjoining land attractive for commercial uses that depend on high visibility and accessibility for economic success. On the other hand, the overloading of these roads with ill-designed land uses, such as strip commercial development with no control of curb cuts, can lead to problems of traffic safety, road capacity and poor visual appearance that can ultimately detract from the viability of the land uses and the road itself.

As a long and narrow island with one access point, Holden Beach's transportation system had few deveopment alternatives. Nevertheless, some of the customary relationships between roads and land use are evident on the causeway (secondary rd.130) which connects the island with the mainland transportation network.

A customary land use plan would identify the community's road system in components such as Principal Arterials, Minor Arterials, Major Collectors, etc. With one access point by way of a causeway and bridge over the Intracoastal Waterway (SR 130) and one major east-west road serving the island (SR 1116) this type of classification and analysis is unnecessary. It should be sufficient to say that Ocean Boulevard (SR 1116) serves as a Collector Street feeding into Jordan Boulevard (SR 130 - bridge and causeway - which serves as a Minor Arterial in turn connecting with U.S. Route 17 - a Principal Arterial.

One major transportation issue in Holden Beach has been the one lane swing bridge over the Intracoastal Waterway. With a new two-lane high rise bridge under construction, this problem will soon be eliminated. The new bridge will, however, bring new land use management issues to the forefront: increased commercial develoment activity along the causeway; new building at the island foot of the high rise bridge; and redevelopment as old-obsolete structures are removed from the island across the new, wider bridge.

Completion of the new bridge may well be the most important single factor affecting future island development.

Parking Conditions

Parking issues in most beach communities inevitably relate to beach access. Most residential and commerical areas have adequate parking to serve their direct uses or customers. However, the demand and capacity of the Town's beaches make the provision of adequate parking a difficult task. A directly related issue is the conflict between beachfront owner/renters and day visitors.

Brunswick County prepared a Beach Access Study for the town in conjuction with the Holden Beach Access Advisory Committee during 1980. This study inventoried 68 public and private access points and presented a development plan which categorized the 68 points as vehicular, neighborhood, major, or undesirable. The Town recently raised beach access and related parking as a major issue that must be addressed. Alternatives such as: a few, relatively large beach access points vs. a greater number of small scale beach access/parking areas are addressed by the policy section of this plan (page 36). Funding and possible joint projects with Brunswick County should also be considered. Additionally, the use of State R.O.W. under the new bridge may provide a practical, inexpensive means of increasing parking near the beach.

Community Facilities

Community facilities are an important land use planning factor not only because they can constitute significant land uses in themselves, but also because the type, location and capacity of these facilities bear an imporant reciprocal relationship to the areas they serve and therefore to most other land use categories.

The location of Holden Beach's existing and proposed Community Facilities are identified by Map Three. As a small, family oriented community with only 300 year round residents, the Town does not have extensive public facilities. The existing and proposed facilities identified are:

- The water distribution system
  - water tank
  - source from Long Beach
  - proposed new source from mainland (along S.R. 130)
- The Town Hall and Police Department
- Boat Ramp at the end of Ferry Road
- Holden Beach Pier
- The Holden Beach Chapel
- Public beach access points

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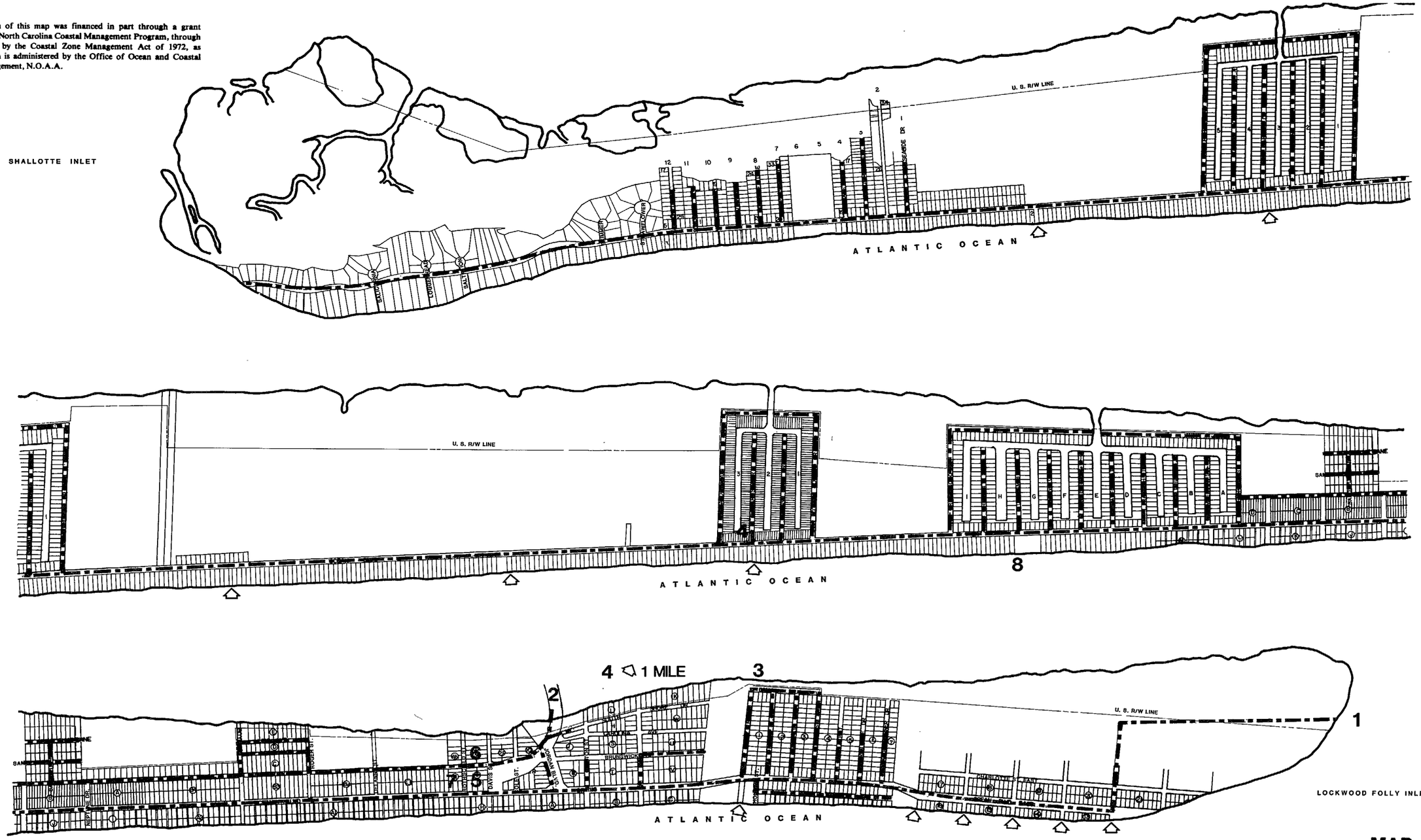

MAP 3

COMMUNITY FACILITIES

- —·- WATER DISTRIBUTION SYSTEM
- 1– WATER SUPPLY SOURCE FROM LONG BEACH
- 2– PROPOSED WATER SUPPLY SOURCE FROM BRUNSWICK COUNTY SYSTEM
- 3– BOAT RAMP
- 4– TRI BEACH VOL. FIRE DEPT.
- 5– TOWN HALL–POLICE DEPT.
- 6– WATER TOWER
- 7– CHURCH
- 8– HOLDEN BEACH PIER
- △ PUBLIC BEACH ACCESS

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- Tri-Beach volunteer fire department (mainland and island buildings)

Water System. The Town's water system was connected to the Brunswick County system in 1979. It is currently supplied by a 12 inch line from Long Beach that crosses under Lockwood Folley Inlet. The actual supply originates at the county's Highway 211 water plant. The town maintains pressure in its system through a 300,000 gallon elevated storage tank. The Town plans an additional connection to the County's system along SR 130. The 12 inch supply main from Long Beach has come unanchored in the past and has floated to the surface in Lockwood Folley Inlet. Once the additional connection to the County system is complete, the Town's water supply needs should be adequately taken care of for at least the next 20 years.

Sewage Treatment. Sewage disposal is now handled through individual treatment and disposal systems. The original 1975 land use plan and the subsequent 1980 update each state construction of a sewage collection and treatment system as an objective. Since the preparation of these plans, the construction of sewage treatment facilities in accordance with the Southwest 201 Facilities Plan has been abandoned. The Town continues, however, to support the construction of waste water collection and treatment facilities.

Beach Access. The Community Facilities Map identifies eleven public beach access points. These are located primarily at the end of street rights-of-way. The future development of beach access facilities in Holden Beach is addressed by the policy section of this plan (page 36).

Solid Waste. Holden Beach uses solid waste disposal facilities provided by Brunswick County on the mainland. This practice is expected to continue. An area company is used by contract for collection and hauling services.

Land Use Regulations

Zoning. The Holden Beach zoning ordinance regulates the use of land with the Town's corporate limits. The Town does not exercise one mile extra-territorial zoning jurisdiction. The land use districts provided for in the ordinance are as follows:

- R-1 One and Two Family Residential District
- R-2 Multi-family Residential District
- C-1 Commercial District

Virtually all of the island is zoned R-1. Exceptions are:

- C-1 Commercial zoning in the area where Jordan Boulevard enters the island (realty offices, Town Hall, grocery store)
- C-1 Commercial zoning at the ocean and intracoastal waterway east of Ferry Road (seafood dock and oceanfront pavilion)
- C-1 Commercial zoning across from Holden Beach Harbor on the ocean side of Ocean Boulevard (pier, mini golf, pavilion,

49 space campground)

- o C-1 Commercial zoning on the oceanside of Ocean Boulevard just west of Heritage Harbor (26 trailers)

- o R-2 Multi-family residential zoning on the ocean side of Ocean Boulevard across from Jordan Boulevard (one 4-unit and one 8-unit)

- o R-2 Multi-family residential on the ocean side of Ocean Boulevard, just east of the pier (3 structures: 8 units, 4 units and 4 units)

- o R-2 Multi-family residential on the north (waterway) side of Ocean Boulevard, 100 feet east of Seaside Drive (25 units)

A comparison of the Town's zoning map with the existing land use map shows that the zoning districts correlate very well with existing land use.

The ordinance does not contain planned development section or similar means of dealing with the re-platting of land for master planned developments.

While simple, the town's zoning ordinance does a good job of specifying land use and development standards. Strict enforcement of the ordinance is evident as there are generally no non-conforming situations that were not in existence when the ordinance was first adopted in 1978. The Town's efforts to keep the ordinance current and relevant to its needs and policy objectives is obvious also by the amendments which have been made since 1978.

Subdivision Regulations. Adopted on September 1, 1975, the Town's subdivision regulations establish design and construction standards that apply when land is subdivided or re-subdivided for immediate or future sale. Specific objectives and areas regulated include:

- o No Town services provided until final plat is approved.

- o No dedication of streets or other improvements accepted until final plat approval.

- o New street alignments must comply with any adopted thoroughfare plan.

- o Subdivisions must comply with the Town's zoning ordinance or any other officially adopted plan.

- o Subdivision platting requirements established including design standards for lots, streets, etc.

- o Construction standards for street grading and paving, drainage, water, sewer (as available), and underground utilities established.

Flood Damage Prevention Ordinance. Adopted to comply with the National Flood Insurance Program, this ordinance requires the following:

- All new residential construction or improvements greater than 50% of structure's market value must be elevated to or above 100-year base flood elevations.

- Commercial buildings must be elevated above base flood elevations or flood proofed.

- Anchorings and piling designs must be certified by a registered engineer or architect, or must be in full compliance with the N.C. State Building Code.

- No alternations of frontal dunes with fill for structural support is allowed in "V" or velocity zones except as may specifically be allowed under C.A.M.A. regulations.

GROWTH TRENDS AND PROJECTIONS

Table Three presents population projections from the 1980 Land Use Plan Update.

TABLE THREE
HOLDEN BEACH POPULATION PROJECTIONS

Year	Average Seasonal	Permanent
1980	6,800	250
1985	8,600	300
1990	10,400	350
2000	12,647	445

Source: 1980 Holden Beach Land Use Plan Update.

Growth trends over the past five years can be analyzed by comparing residential unit counts from 1980 and 1985.

TABLE FOUR
RESIDENTIAL UNITS
1980 - 1985

	1980	1985	Net Change	% Change
Single Family	728	1,004	276	+ 37.9%
Duplex and Multi-Family	176	213	37	+ 21.0%
Mobile Homes, RV's, & Travel Trailers	61	177 (1)	116	+190.0% (1)
TOTAL	965	1,394	429	+ 44.5%

(1) Includes all spaces in parks and campgrounds; the 1980 plan apparently did not include these spaces in its totals.

Source: 1980 Holden Beach Land Use Plan and Satilla Planning, Inc. from September, 1984 field surveys.

Estimates as to seasonal population can be made once an average number of persons per dwelling unit is established. Based on discussions with real estate rental representatives and planning board members, the Town has estimated that the average dwelling unit is occupied by 6.5 persons during vacation periods. This means that the Town's average seasonal population is 9060 persons based on the Fall, 1984 housing count. The following table presents projection of average seasonal population (using 6.5 persons

/dwelling unit) and dwelling units for the years 1990 and 2000 based on growth trends experienced over the past ten years.

TABLE FIVE
PROJECTED SEASONAL POPULATION AND DWELLING UNITS

	Dwelling Units	Average Seasonal Population
1985	1,394	9,061
1990	1,730	11,245
2000	2,350	15,275

Source: Satilla Planning, Inc., 1985.

CONSTRAINTS TO DEVELOPMENT

Land Suitability

The 1980 Land Use Plan presented a Land Suitability Analysis based on:

- o Soil Suitability Analysis
- o Septic Tank Suitability Analysis
- o Fragile Area Identification

This section will serve to update the 1980 Plan. Information provided by Part II, Pages 41-47 of the 1980 plan remains valid. Readers requiring further detail, including maps, are referred to the previous plan. An overview of the 1980 Plan's methodology and findings is presented below.

Soil and Septic Tank Suitability Analysis. The 1980 plan analyzed soil properties as identified by the Outer Banks Soil Conservation Service Soil Survey. Once mapped, each soil group or "series" was rated for bearing capacity and septic tank filter capacity. The rating system consisted of four cateogories:

- o Slight: Few limitations, best available areas.

- o Moderate: Generally favorable with only moderate limitations that can be corrected by appropriate design and construction techniques.

- o Severe: Soil properties unfavorable with limitations very difficult or expensive to correct.

- o Very Severe: Generally the development of these areas is either unpractical due to cost or restricted by State and Federal regulations (e.g. wetlands).

The following identifies the various soils comprising the above categories in Holden Beach:

- o Slight.

  Newhan fine sand. The soils are sandy and range from well-drained to excessively drained, often experiencing drought conditions. Water percolation is very rapid through the stratified sandy deposits that range from fine to coarse sands with varying amounts of shells. Typically found in long ridges on dunes parallel to the ocean, these soil areas are subject to salt spray and blowing sand.

  A substantial amount of the developed and/or platted areas in Holden Beach are located on this soil type. These areas are located along either side of Ocean Boulevard from west of Sailfish Drive to Conch Street near the Island's east end. Near the Jordan Boulevard Bridge (approximately 3200 feet either side of the bridge), this soil group widens out

and encompasses nearly the entire width of the Island.

o Moderate

Newhan-Corolla complex. This complex consists of two dominant soil types, Newhan and Corolla, which occur in an interrelated pattern on the landscape. Often this complex type occupies the traditional zone between the higher lying dunes to the south and the broad flats to the north, consisting of low dunes and intervening basins that separate the dunes.

Newhan soils are well to excessively drained, dry and have a low natural fertility. There is a thin surface layer low in organic matter and plant fiber. Sand is coarse and contains varying amounts of shell fragments. The water table is more than seven feet below the surface.

Corolla soils are moderately well drained and sandy throughout, containing a high percent of coarse sand with varying amounts of shell fragments. Typically, the water table is within 15 to 20 inches of the surface.

This soil group is found in three well defined areas of the Island: 1) at the west end encompassing development either side of Ocean Boulevard including the platted areas between Seaside Drive and Shell Drive; 2) an area approximately 1,000 feet either side of Sand Spur Lane; and 3) almost the entire Island east of Conch Street.

o Severe.

Madeland. This soil is primarily sandy, but some areas contain up to 10 percent shells. Permeability is rapid and most areas are quite dry. Flooding by sea water is rare. The water table fluctuates with changes in tide level; however, most areas have a depth to the water table of about two to four feet during high tide. Found on the sound side of the island adjacent to the water, the soil has been dredged during the construction of canals and has been deposited between canals for use as building sites. Essentially, all of the material has been deposited over marsh and its average thickness ranges from three to six feet.

Corolla fine sand. These soils are moderately well-drained and sandy throughout, with a thin surface layer that is very low in organic matter. The coarseness of the sand and the amount of shell fragments varies throughout. Percolation is rapid. Depth to the high water table fluctuates with seasonal changes between one and one-half to three feet. These soils are located on the flats that lie behind the foredunes. Only two small packets of this soil type exist in Holden Beach: one at the west end south of Ocean Boulevard, and a second around Delanne Street.

Dredge Spoil. The soils are composed primarily of sand and shells. They are generally dry with rapid permeability. Located along the Intracoastal Waterway, the spoils are a result of dredging maintenance of the waterway. Most of the areas are less than ten feet in height, and have been deposited on marsh.

o Very Severe.

Carteret. These soils are sandy and permeability is rapid. Saltwater flooding may occur daily. The depth to the seasonal high water table ranges from zero to three feet. Found on the sound side of the Island, these soils contain varying amounts of shell fragments.

Beach-Foredune Association. This soil area includes both the beach and the "frontal dune." The beaches are flooded daily by tidal action and contain sand ranging from fine to very coarse with varying amounts of shell fragments. The foredune portion consists of a dune just landward and parallel to the beach. It is subject to severe erosion by wind and wave action in the absence of vegetation. Permeability is rapid for both areas and the high water table ranges from zero to three feet on the beach and up to six feet at the foredunes.

While soil suitability analysis can be an important land use planning tool, there are related factors which should be considered. First, coastal area soils generally rank very poorly in a suitability analysis when compared to inland soil groups. For example, this is why it is so difficult to locate solid waste landfills in coastal counties under today's environmental standards. Therefore, a soil group ranked as "severe" in comparison to the region's other soils may well be the best that is available within a limited geographic area such as a barrier island.

The second consideration is land value. Many soil related development constraints can be overcome through good design and construction techniques. If the location and resulting value of the real estate justifies the added site preparation and construction expense, soil limitations can generally be overcome. In such a case, it is usually more important to ensure appropriate design and construction methods than to consider development infeasible based only on soil considerations. In other words, land values in Holden Beach can be expected to justify engineering solutions to poor soil conditions that would not be economically feasible in other areas.

Fragile Areas

These areas in Holden Beach correspond to the specific resource systems identified by the C.A.M.A. as Areas of Environmental Concern (AECs). The 1980 Land Use Plan Update identified AEC's within Holden Beach. The Town's Storm Hazard Mitigation Plan dated June 18, 1984, identifies AECs relative to Hazard Area Management.

AEC's applicable to the Holden Beach Land Use Plan are:

The Estaurine System

- o Coastal Wetlands
- o Estuarine Waters
- o Public Trust Areas
- o Estuarine Shorelines

Ocean Hazard Areas

- o Ocean Erodible Area
- o High Hazard Flood Area
- o Inlet Hazard Area

The approximate location of these AEC's are identified by maps Four and Five. Map Four delineates Coastal Wetlands, Ocean Erodible Areas, Inlet Hazard Areas, and the Estuarine Shoreline (estuarine waters are not mapped). It should be noted, however, that the Finger Canal areas on Holden Beach are Public Trust Areas and therefore subject to AEC regulations. Map Five depicts the High Hazard Flood Area AEC (Federal flood insurance "V" zones) as well as the balance of the 100-year flood plain (not an AEC, but identified by the Federal Flood Insurance Program as "A" zones).

Descriptions of the AEC's and management policies are provided in the following chapter (page 25).

In addition to the AEC's identified above the 1980 Land Use Plan Update discussed the following categories:

Public Water Supplies

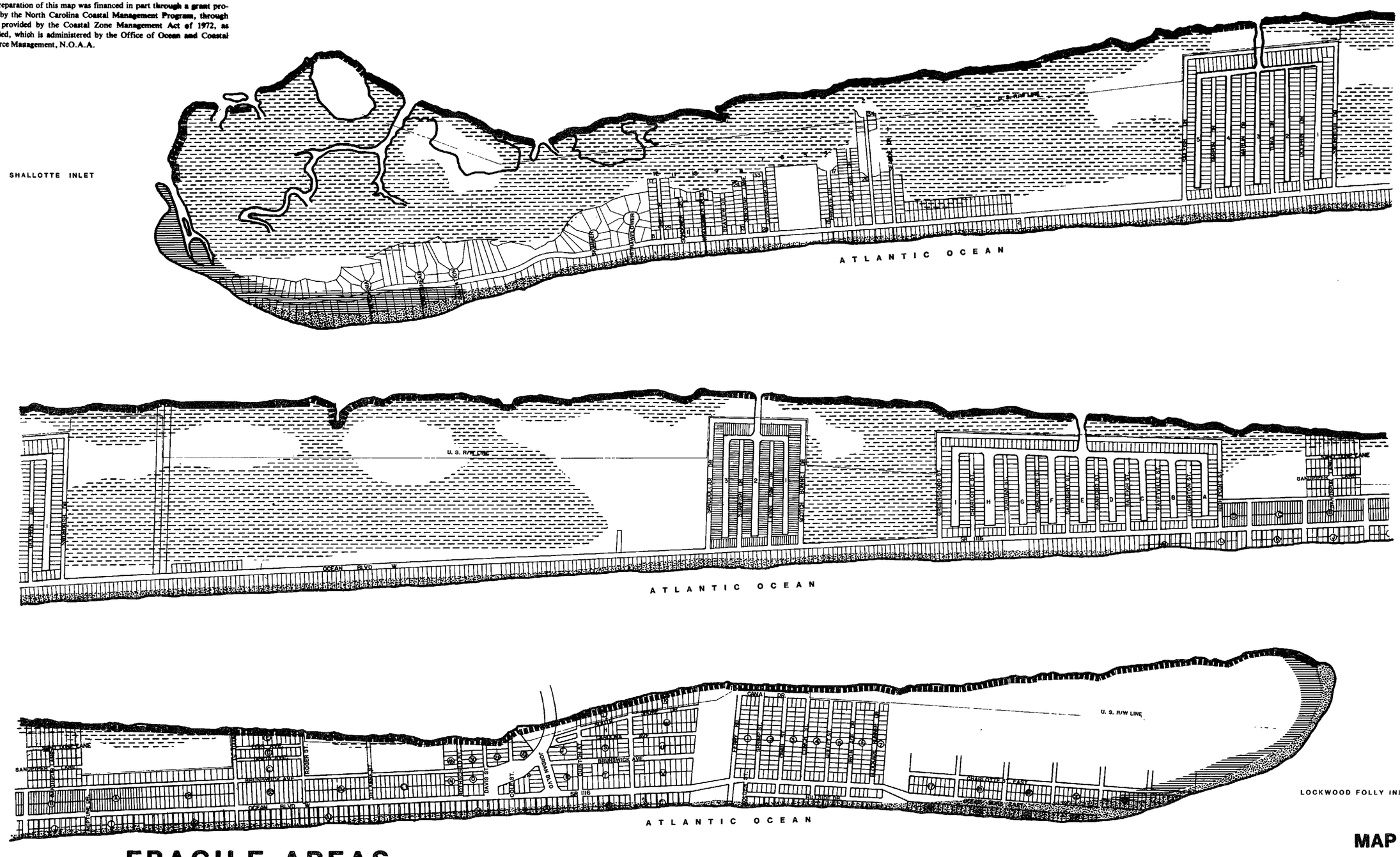
- o Small Surface Water Supply Water Sheds
- o Public Water Supply Well Fields

Fragile Coastal Natural Resource Areas

- o Coastal Areas that Sustain Remnant Species
- o Coastal Complex Natural Areas
- o Unique Coastal Geologic Formations
- o Significant Coastal Archeological Resources
- o Significant Coastal Historic Architectural Resources

The 1980 Plan determined that these AEC categories were not applicable to the Holden Beach Plan because none were identified within the Town. Nothing has changed since 1980 to affect this finding. Therefore, these AEC's are not addressed by this plan. The Town will consider nominating specific resource areas for management and protection under the terms the Resource Protection Policies (1.c. page 30).

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.



MAP 4

FRAGILE AREAS

- OCEAN ERODIBLE AREAS OF ENVIRONMENTAL CONCERN
- ESTUARINE SHORELINE AREAS OF ENVIRONMENTAL CONCERN
- INLET HAZARD AREAS OF ENVIRONMENTAL CONCERN
- COASTAL WETLANDS OF ENVIRONMENTAL CONCERN

NOTE: THIS MAP IS FOR GENERAL PLANNING PURPOSES ONLY. ALL AEC'S APPROXIMATE

HOLDEN BEACH, N.C.

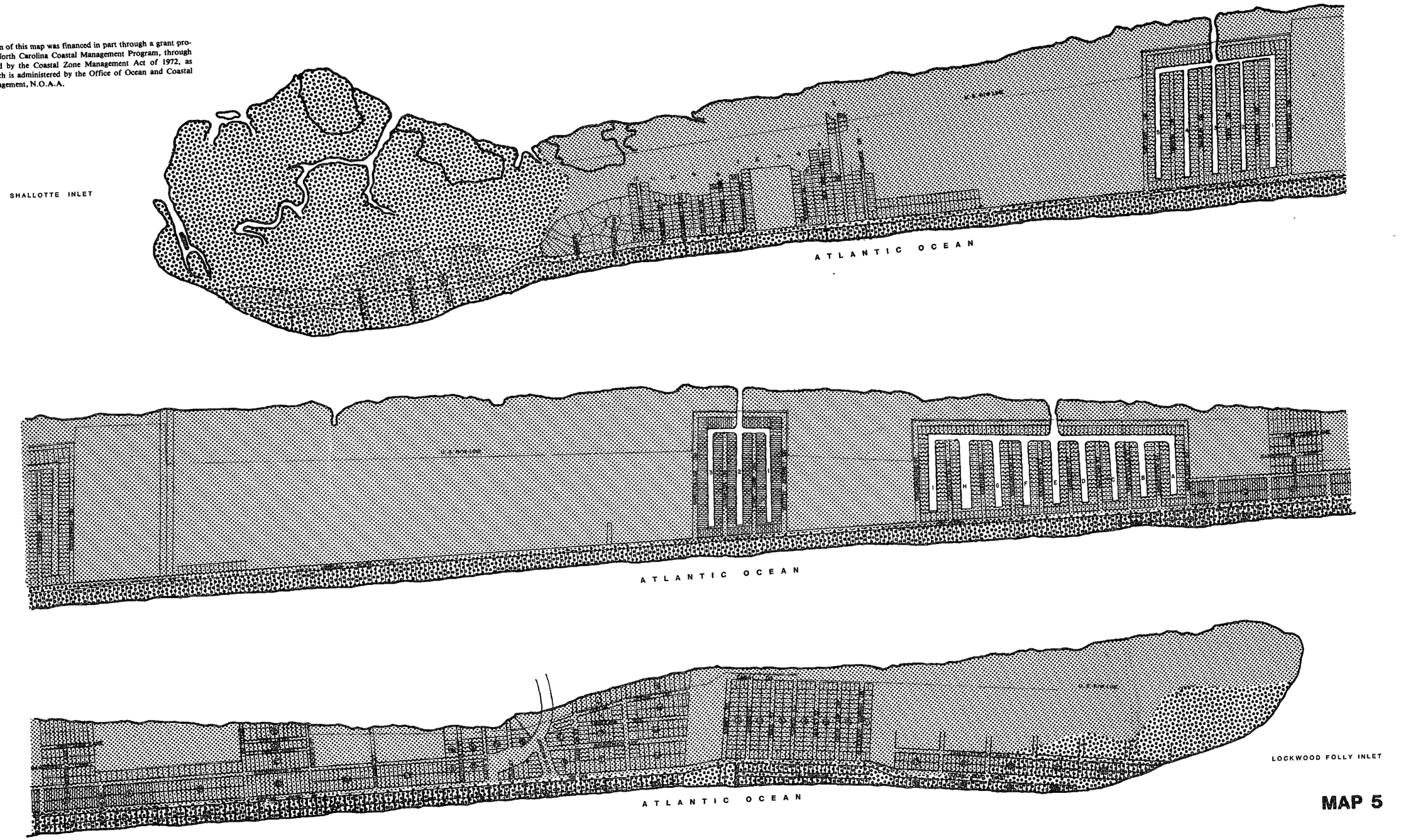
Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

Mapping Date. JUNE, 1985

NORTH

0' 250' 500' 1000' 1500' 2000'

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.



MAP 5

HOLDEN BEACH, N.C.

FLOOD HAZARD AREAS (FROM 1976 F. I. R. M.)

FLOOD HAZARD AREA ("V" ZONES)

FLOOD HAZARD AREA - 100 YEAR FLOOD PLAIN ("A" ZONES)

Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

Mapping Date: JUNE, 1985

NORTH

0' 250' 500' 1000' 1500' 2000'

Community Facilities Capacity

Specific community facilities within Holden Beach are identified and their capacities discussed in the Existing Conditions Section of this Land Use Plan Update (page 10).

POLICY STATEMENTS AND IMPLEMENTATION STRATEGIES

The Holden Beach Board of Commissioners has adopted the following policies for dealing with land use planning issues which will affect the community within the next ten years. These policies establish a systematic basis by which proposed developments will be judged. If a proposed project or development would violate the intent of these policies, action to prevent its construction will be taken by local, state and federal government agencies.

These policies will be used by local officials in their decision making process to increase the consistency and quality of their decisions.

Outline

1. RESOURCE PROTECTION
   a. Estuarine system
   b. Ocean Hazard Areas
   c. Natural and Cultural Resources
   d. Storm Water Runoff
   e. Marina Development
   f. Floating Home Development
   g. Potable Water Supply
   h. Development of Sound & Estuarine Islands

2. PHYSICAL CONSTRAINTS TO DEVELOPMENT
   a. Septic Tank Suitability
   b. Package Sewage Treatment Plants
   c. Storm Drainage
   d. Bearing Capacity

3. RESOURCE PRODUCTION AND MANAGEMENT
   a. Commercial and Recreational Fisheries
   b. Off-Road Vehicles

4. PROVISION OF SERVICES TO DEVELOPMENT
   a. Public Water Supply
   b. Public Sewage System
   c. Solid Waste Disposal
   d. Rescue Squad and Fire Protection
   e. Public School System
   f. Transportation
   g. Street Lights
   h. Beach and Water Access
   i. Beach Access Structures
   j. Recreation

5. ECONOMIC AND COMMUNITY DEVELOPMENT
   a. Industry
   b. Airports

6. GROWTH PATTERNS
   a. Contiguous Growth
   b. Provision of Services
   c. Population Growth
   d. Segregation of Existing Land Uses
   e. Housing
   f. Aesthetics
   g. Planned Unit Developments

7. STORM HAZARD MITIGATION & POST DISASTER PLANNING
   a. Storm Hazard Mitigation
   b. Post Disaster Reconstruction

8. CONTINUING PUBLIC PARTICIPATION

1. RESOURCE PROTECTION

Holden Beach will support and enforce through its CAMA permitting capacity the State Policies and permitted uses in the Areas of Environmental Concern (AECs). The State Policy Statements for AECs offer protection for Holden Beach's fragile and significant environmental resources through CAMA permitting procedures. In Accordance with those policies set forth in subchapter 7H of the State CAMA regulations, Holden Beach adopts the following policies concerning AECs in its jurisdiction.

a. The Estuarine System. In recognition of the enormous economic, social, and biological values the estuarine system has for North Carolina, Holden Beach will promote conservation and management of the estuarine system as a whole, which includes the individual AECs: coastal wetlands, estuarine waters, public trust areas, and estuarine shorelines. The significance of the system and its components is described in this plan under Fragile Areas.

   The management objective for the system shall be to give highest priority to the protection and coordinated management of all the elements as an interrelated group of AECs, so as to safeguard and perpetuate their biological, social, economic, and aesthetic values, and to minimize the likelihood of significant loss of private property and public resources.

   In general, permitted land uses in the coastal wetlands, estuarine waters, and public trust areas shall be those which are water dependent. Examples of such uses may include: utility easements, docks, boat ramps, dredging, bridges and bridge approaches, revetments, bulkheads, culverts, groins, navigational aids, mooring pilings, navigational channels, simple access channels, and drainage ditches.

Land uses that are not water dependent shall not be permitted in coastal wetlands and public trust areas. Examples of uses that are not water dependent may include: restaurants, residences, apartments, motels, hotels, trailer parks, private roads, factories, and parking lots.

Specific policies regarding the individual AECs of the estuarine system are stated below. In every instance the particular location, use, and design characteristics shall be in accord with the general use standards for coastal wetlands, estuarine waters, and public trust areas as stated in subchapter 7H of the State CAMA regulations.

(1) Coastal Wetlands. Activities in the coastal wetland areas shall be restricted to those which do not significantly affect the unique and delicate balance of this resource. Suitable land uses include those giving highest priority to the protection and management of coastal wetlands, so as to safeguard and perpetuate their biological, social, economic, and aesthetic values to establish a coordinated management system capable of conserving and utilizing coastal wetlands as a natural resource essential to the functioning of the entire estuarine system. Highest priority of use shall be allocated to the conservation of existing coastal wetlands. Second priority shall be given to those uses that require water access and cannot function elsewhere.

Acceptable land uses may include utility easements, fishing piers, and docks. Unacceptable uses may include, but would not be limited to, restaurants, businesses, residences, apartments, motels, hotels, parking lots, private roads, and highways.

(2) Estuarine Waters. In recognition of the importance of estuarine waters for the fisheries and related industries as well as aesthetics, recreation, and education, Holden Beach shall promote the conservation and quality of this resource. Activities in the estuarine water areas shall be restricted to those which do not permanently or significantly affect the function, cleanliness, salinity, and circulation of estuarine waters. Suitable land/water uses include those giving highest priority to the conservation and management of these areas so as to safeguard and perpetuate their biological, social, economic, and aesthetic values and to establish a coordinated management system capable of conserving and utilizing estuarine waters in order to maximize their benefits to man and the estuarine system. Highest priority of use shall be allocated to the conservation of estuarine waters and its vital components. Second priority shall be given to uses that require water access and cannot function elsewhere.

Appropriate uses may include simple access channels, structures which prevent erosion, navigation channels, boat docks, marinas, piers, and mooring pilings.

Holden Beach, in recognition of the shellfish areas pollution problem which closes these areas to harvesting, acknowledges that the construction of waste water collection and treatment facilities may become necessary.

Holden Beach will also support projects in estuarine water areas which aim to increase the productivity of these waters. Such projects include oyster reseeding programs and inlet channeling and dredging operations for the purpose of increasing the flushing action of tidal movement.

(3) Public Trust Areas. In recognition of certain land and water areas in which the public has certain established rights and which also support valuable commercial and sports fisheries, have aesthetic value, and are resources for economic development, Holden Beach shall protect these rights and promote the conservation and management of public trust areas. Suitable land/water uses include those which protect public rights for navigation and recreation and those which preserve and manage the public trust areas in order to safeguard and perpetuate their biological, economic, social, and aesthetic value, e.g. dredging, bulkheading, jettying.

In the absence of overriding public benefit, any use which significantly interferes with the public right of navigation or other public trust rights which apply in the area shall not be allowed. Projects which would directly or indirectly block or impair existing navigation channels, increase shoreline erosion, deposit spoils below mean high tide, cause adverse water circulation patterns, violate water quality standards, or cause degredation of shellfish waters shall, in general, not be allowed.

Uses that may be allowed in public trust areas shall not be detrimental to the public trust rights and the biological and physical functions of the estuary. Examples of such uses include the development of navigational channels or drainage ditches, the use of bulkheads to prevent erosion, the building of piers, docks, or marinas.

(4) Estuarine Shoreline. CAMA defines the estuarine shoreline at Holden Beach as the areas 75 feet landward of the estuarine waters. Holden Beach recognizes: (1) the close association between estuarine shorelines and adjacent estuarine waters, (2) the influence shoreline

development has on the quality of estuarine life, and (3) the damaging processes of shorefront erosion and flooding to which the estuarine shoreline is subject.

Shoreline development has profound effect on adjacent estuarine waters. Effluent from poorly placed or functioning septic systems can pollute shellfish areas. Holden Beach discourages the use of estuarine shoreline areas for residential purposes where there is a substantial chance of pollution occurring.

Holden Beach supports the Army Corps of Engineers in their efforts to preserve the Estuarine Shoreline AEC, their dredging operations, and their efforts to find suitable locations for spoil material.

Suitable land uses are those compatible with both the dynamic nature of estuarine shorelines and the values of the estuarine system.

Residential, recreational, and commercial land uses are all appropriate types of use along the estuarine shoreline provided that:

(a) a substantial chance of pollution occurring from the development does not exist,

(b) natural barriers to erosion are preserved and not substantially weakened or eliminated,

(c) the construction of impervious surfaces and areas not allowing natural drainage is limited to only that necessary to adequately service the development,

(d) standards of the North Carolina Sedimentation Pollution Control Act 1973, as amended, are met,

(e) development does not have a significant adverse impact on estuarine resources,

(f) development does not significantly interfere with existing public rights of access to, or use of, navigable waters public resources.

b. Ocean Hazard Areas. In recognition of the critical nature of Ocean Hazard Areas due to their special vulnerability to erosion and dynamic processes and their possible danger to life and property because of natural forces, Holden Beach supports the State Policies for ocean hazard areas in Subchapter 7H of the State CAMA Regulations. The ocean hazard area designation for Holden Beach includes the AECs of ocean erodible areas, high hazard flood areas, and inlet hazard areas.

Ocean erodible areas are where a substantial possibility of excessive erosion and significant shoreline fluctuations exist. The ocean erodible AEC is based on a setback from the first line of stable natural vegetation plus an additional area where erosion can be expected from storm surges and wave action.

An inlet hazard area is a natural hazard area that is especially vulnerable to erosion, flooding and other adverse effects of sand, wind, and water because of its proximity to dynamic ocean inlets. Areas adjacent to both the Shallotte Inlet and the Lockwood Folley Inlet are designated hazard areas. Erosion at Lockwood Folley Inlet has damaged State Route 116 (Ocean Boulevard) and continues to threaten homes. Erosion during recent winter storms has been particularly pronounced and is expected to continue. Lands adjacent to Shallotte Inlet are relatively undeveloped and therefore damage to structures is not an immediate problem. However, there have been recent proposals to develop this area which is also subject to frequent flooding.

The high hazard flood AEC corresponds to the National Flood Insurance Program V-zones, which refer to flood prone areas that are also susceptible to high velocity wave surges.

Suitable land uses in ocean hazard areas generally are those which eliminate unreasonable danger at life and property and which achieve a balance between the financial, safety, and social factors involved in hazard area development. Ocean shoreline erosion control activities and dune establishment/stablization are acceptable types of land uses. Residential, commercial, and recreational land uses and parking lots for beach access are also acceptable types of use in ocean hazard areas provided that:

(1) Setback measurements begin at the first line of stable vegetation and continue inland to a depth 60 times the average annual rate of erosion. Provided there has been no long term erosion or the rate of erosion is less than two feet per year, this distance is set at 120 feet. In areas where the erosion rate is more than 3.5 feet per year, the setback line is based on a distance of 30 times the long-term annual erosion rate plus 105 feet. Erosion near each inlet has averaged 4 feet per year and setback is therefore 225 feet deep in these areas.

(2) Development does not involve the removal or relocation of frontal dune sand or vegetation thereon.

(3) Mobile homes are not located within high hazard flood areas.

(4) Development is consistent with minimum lot size and set back requirements established by local regulations.

(5) Development implements means and methods to mitigate or minimize adverse impacts of the project.

(6) Development of growth-inducing public facilities such as sewers, waterlines, roads, bridges, and erosion control measures occurs only in cases where:

(a) national or state interest and public benefits are clearly overriding factors,

(b) facilities would not exacerbate existing hazards or damage natural buffers,

(c) facilities would be reasonably safe from flood and erosion related damage,

(d) facilities do not promote growth and development in ocean hazard areas.

(7) Prior to the issuance of any permit for development in the ocean hazard AECs, there shall be a written acknowledgment from the applicant that he is aware of the risks associated with development in this area.

(8) Holden Beach, recognizing that erosion along the beach has caused many problems, supports beach renourishment projects that would allow approved-suitable soils to be taken from the Intracoastal Waterway and inlet dredging operations and placed on designated island beaches.

(9) Holden Beach, recognizing that inlet migration is a natural ongoing process, encourages permanent stabilization of Inlet Hazard Areas by either jettying or bulkheading.

c. Natural and Cultural Resource Areas. Uncontrolled or incompatible development may result in major or irreversible damage to fragile coastal resource areas which contain environmental, natural, or cultural resources of more than local significance. In recognition of this Holden Beach will seek to protect such natural systems or cultural resources; scientific, educational, or associative values; and aesthetic qualities.

Individual AEC's included in this general category are: coastal complex natural areas, coastal areas that sustain remnant species, unique coastal geologic formations, significant coastal architectural resources, and significant coastal historic architectural resources.

In general, these resources are noted to be valuable educational, scientific, and aesthetic resources that cannot

be duplicated. They may be important components in a natural system or in the broad patterns of history. Their importance serves to distinguish the designated areas as significant in relation to the coastal landscape and historical architectural and archaeological remains in the coastal zone.

In accordance with policies stated in subchapter 7H of the State CAMA regulations, Holden Beach will support the following actions regarding these irreplaceable resources:

(1) Protection of unique habitat conditions that are necessary to the continued survival of threatened and endangered native plants and animals and to minimize land use impacts that might jeopardize these conditions.

(2) Protection of the features of a designated coastal complex natural area in order to safeguard its biological relationships, educational and scientific values, and aesthetic qualities. Specific objectives for each of these functions shall be related to the following policy statements either singly or in combination:

Development may be permitted in designated fragile coastal natural or cultural resource areas provided that:

(1) The proposed design and location will cause no major or irreversible damage to the stated values of a particular resource. One or more of the following values must be considered depending upon the stated significance of the resource:

(a) Development shall preserve the values of the individual resource as it functions as a critical component of a natural system.

(b) Development shall not adversely affect the values of the resource as a unique scientific, associative, or educational resource.

(c) Development shall be consistent with the aesthetic values of a resource as identified by the local government and citizenry.

(2) No reasonable alternative sites are available outside the designated AEC.

(3) Reasonable mitigation measures have been considered and incorporated into the project plan. These measures shall include consultation with recognized authorities and with the Coastal Resources Commission.

(4) The project will be of equal or greater public benefit

than those benefits lost or damaged through development.

d. Storm Water Runoff Uncontrolled development adjacent to coastal waters can pose a serious threat to the estuarine system through the rapid discharge pollutants washed off of impervious surfaces via storm water. Impervious surfaces include streets, parking lots, and rooftops.

Holden Beach's zoning ordinance limits lot coverage by buildings to 30% in Residential Zones. Further, the Town will encourage the use of "best management practices" to minimize the rapid release of pollutants to coastal waters through storm water runoff. Examles of these practices include using pervious or semi-pervious materials, such as turfstone or gravel for driveways and walks, retaining natural vegetation along marsh and waterfront areas to retain its natural filtering properties, and allowing storm water to percolate into the ground, rather than discharging it directly to coastal waters.

e. Marina Development There are no marinas located in Holden Beach; however, potential sites exist on both sides of the Intracoastal Waterway at Holden Beach. The Town will review any proposed marina development for consistency with Land Use Plan policies and determine the desirability of any marina proposal after such review. All proposed marinas must be consistent with zoning regulations as well as C.A.M.A. and other State and Federal regulations.

f. Floating Home Development The Town of Holden Beach does not support floating home development of any type.

g. Potable Water Supply. Holden Beach's water distribution system is supplied by the Brunswick County water systems. Brunswick County's water source is from deep wells which draw from the Castle Hayne Aquifer. This aquifer is recharged on the mainland and its protection cannot be aided by Town policy. Further, Holden Beach requires all new development to tie into its system for supply and prohibits individual wells for domestic supply or use.

h. Development of Sound and Estuarine Islands It is the policy of Holden Beach to allow residential development of these islands at densities consistent with the Town's zoning ordinance provided that such development is consistent with policies of the Land Use Plan. Additionally, State and Federal agency regulations may govern development in these areas.

2. PHYSICAL CONSTRAINTS TO DEVELOPMENT

Holden Beach adopts the following policies regarding physical

constraints to development.

a. Septic Tank Suitability

In conformity with State Health regulations, growth and development will be discouraged in areas where septic tanks will not function properly and sewer services are not available.

Some areas of Holden Beach contain soils which do not permit adequate percolation necessary for septic system functioning. Also, some areas have high water table which similarily inhibit septic system functioning. These areas, (as they are delineated on the soil suitability maps contained in the 1980 Plan Update, page 44) will not be allowed to be developed unless: 1) the site is adapted by filling or drainage improvements to lower the water table sufficiently; or, 2) sewer service is available.

b. Package Sewage Treatment Plants

Holden Beach may permit the use of private sewage collection and treatment systems if associated development is consistent with the Town's development plans and policies; the system meets state and federal permitting requirements; the project will have no adverse impacts beyond its boundaries; and perpetual operation and maintenance of the system can be guaranteed without obligation to the Town in any way. Further, the Town prefers ground infiltration and dispersal as the method of handling effluent from such systems.

c. Storm Drainage

Because Holden Beach lies in the low coastal plain of the East Coast, flooding can occasionally result. Growth and development will not be allowed where poor drainage exists unless appropriate corrective improvements are to be completed as part of the project. If residential or other low density "urban" uses are to be developed in an area of seasonal highwater, special requirements such as subsurface drainage will be necessary.

d. Bearing Capacity

Growth and development will be discouraged in areas where soils will not adequately support buildings.

Where suitable alternative locations exist for a particular development project, Holden Beach will discourage its location in an area where soils will not adequately support the buildings. If no alternative sites exist, the project may be constructed if corrective measures to stabilize the building foundation are incorporated into the project design.

3. RESOURCE PRODUCTION AND MANAGEMENT

Holden Beach's natural resources play a vital role in its economy. It's waters and beaches are utilized for recreational uses as well as for fishing. Protection of these resources is a prime concern of Holden Beach. To deal with issues that involve resource production and management, Holden Beach adopts the following policies:

a. Commercial and Recreational Fisheries

Holden Beach will encourage the preservation and expansion of its fisheries industry, both sport and commercial. Protection of our Coastal and Estuarine Waters is a prime prerequisite of this policy objective. Habitats for shellfish and finfish in all stages of their life cycle must be preserved in order to maintain fishing as a viable economic and recreational activity.

Therefore, any development which will profoundly and adversely affect Coastal and Estuarine Waters will be discouraged. Only those developments which are water dependent, such as docking facilities, seafood processing plants, and marinas shall be allowed to be placed near and to affect coastal and estuarine water habitats. In the design, construction and operation of water dependent developments, every effort must be made to mitigate negative effects on water quality and fish habitat. These efforts will be at the owners' or operators' own expense.

In order to expand Holden Beach's sport and commercial fisheries industry, Holden Beach will support private and public projects which will positively affect those industries. Holden Beach supports channel and inlet dredging and stabilization projects which will increase the water access for fishing boats. It is recognized that in dredging and stabilization operations, some fish habitat damage may occur. Only those projects which have a reasonable likelihood of providing greater benefits than damage to fisheries industry will be supported. All dredging and stabilization operations must be performed so as to minimize any unavoidable damage to fish habitat.

Holden Beach supports projects which increase productivity of Coastal and Estuarine Waters. Projects such as oyster reseeding programs and properly constructed artificial reef construction have proved successful in the past, and therefore, will be supported in the future. Holden Beach supports the Brunswick County Shellfish Action Plan.

Holden Beach recognizes the importance of boat building, ship maintenance and repair, and docking and harbor facilities as supportive and necessary for the fisheries industry. These industries will be supported and allowed to locate on and

near coastal and estuarine waters if they do not prove to injure fish habitat more than they support and provide services for the fisheries industry. All developments which require State or Federal permits, licenses or funds must meet this policy criteria.

b. Off - Road Vehicles

Holden Beach has a substantial amount of beach area under its jurisdiction and beach areas are the principal concern with respect to off-road vehicle policies. Accordingly, all vehicles are prohibited from beach areas year round except emergency vehicles.

4. PROVISION OF SERVICES TO DEVELOPMENT

a. Public Water Supply

Holden Beach presently supplies water to all its residential and commercial users. It is Holden Beach's responsibility to provide the sources of water to the public. Holden Beach purchases its water from Brunswick County, and supports the regional concept of water distribution in Brunswick County. The cost of securing this supply will be borne by the users. User Charges are the main means of financing these costs.

Holden Beach has provided major trunk lines throughout the town where public water is feasible and needed. Individual connections will be done at the user or property owners' expense. Developers of new subdivisions will be required to install water lines at their own expense.

b. Public Sewage System

Holden Beach will work to achieve cleansing of polluted waters through the construction of treatment facilities. Poorly functioning septic tanks threaten to pollute estuarine and coastal waters. This in turn renders shellfish areas unfit for harvest. In order to avoid future pollution problems, Holden Beach supports the development of waste water collection and treatment facilities.

Any future development that will substantially harm or pollute Estuarine or Coastal waters using septic systems will be discouraged. If the developer will provide a sewerage collection and treatment system, the development may be permitted.

c. Solid Waste Disposal

Holden Beach recognizes its role as the provider of solid waste disposal services for its residents. It is the policy of Holden Beach to have this service provided in an

efficient, safe, and sanitary manner. In order to carry out this role, adequate means of final disposition must always be available. Holden Beach presently uses a County landfill. Holden Beach supports the County's landfill projects so long as adequate, appropriately located, landfill sites are retained, maintained, and guaranteed.

d. Rescue Squad and Fire Protection

Although Holden Beach has a large, dense summer population, it is prohibitedly expensive to provide fire protection and rescue services with paid professionals throughout the entire year. However, Holden Beach believes it has the responsibility to help provide these services. Therefore, Holden Beach will contract with volunteer fire departments and rescue squads for these services. Currently these contracts are with Tri-Beach Volunteer Fire Department and Coastal Rescue Services.

Holden Beach will promote the expansion of services to include marine rescue and supervised swimming areas (lifeguard services), although it is beyond its local financial resources to provide such services.

e. Public School System

Although Holden Beach has no school facilities in its jurisdiction, Holden Beach does support and encourage the improvement of the County school facilities utilized by its residents. Therefore, Holden Beach will encourage continued and expanded multi-purpose use of school facilities for recreation and other purposes.

f. Transportation

Although Holden Beach has no formal program to provide transportation for the elderly and handicapped, and other needy residents, Holden Beach does support and encourage any such program that will aid the citizens of Holden Beach. The new bridge to Holden Beach will significantly influence future island development. This is discussed on page .

g. Street Lights

Holden Beach does not support the installation of street lights.

h. Beach and Water Access

Recognizing that access to the beach is a major issue for the Town, Holden Beach supports the establishment of "No Parking" zones along the road right-of-way and the financing of construction of public dune walkovers at selected points. Also, Holden Beach supports the establishment of official beach access points with designated parking lots.

Holden Beach supports the spending of tax money to improve beach access for non-beach front as well as for the beach front property owners.

Public parking for beach access is currently located at the end of B, C, and D Avenues, and at the Pavilion. The only current access to the Intracoastal Waterway is at Ferry Road where a public boat ramp exists.

It is a policy of the Town that land areas under the new high rise bridge (N.C. Department of Transportation right-of-way) be used for parking. Implementation of this policy would be through a lease from the D.O.T. to the Town. Further, additional access to the Intracoastal Waterway could be accomplished by leasing this same area to the Town.

i. Beach Access Structures

Holden Beach encourages the construction of individual over-the-dune structures for access to the beach at every private access point. Such structures will be provided by the Town at every public access point.

j. Recreation

Holden Beach will work to provide improved and additional recreational areas. Holden Beach supports the construction of a bike and jogging trail along Ocean Boulevard.

5. ECONOMIC AND COMMUNITY DEVELOPMENT

The citizens of Holden Beach believe that there is a place for many types of residential, commercial and recreational developments in Holden Beach, provided that proper and adequate measures are incorporated into the design, construction and operation of the development to eliminate substantial negative impacts to neighboring land uses and the environment. New development will be encouraged in the most suitable areas as determined from the Holden Beach suitability map. New development shall also be provided with the necessary public services.

a. Industry

Holden Beach will encourage in the area of Brunswick County, but outside its town limits, only those industries that are quiet, clean, and present no substantial environmental or health hazards. Example of the industries encouraged in the area by Holden Beach would be tourism, textile, electronics, and seafood processing.

Holden Beach will encourage the tourist industry within its Town to grow with the development of single family and multi-family residences, duplexes, and low profile apartments.

b. Airports

Obviously, no land within Holden Beach is used or will be used as an airport. However, Holden Beach is near the County Airport approach zones. Major airport approach zones should be kept well away from residential developments because of:

a. Noise
b. Crash hazards
c. Likelihood of industrial growth near the airport

Holden Beach supports the development of appropriate general aviation facilities on the mainland designed primarily for small private aircraft.

6. GROWTH PATTERNS

a. Contiguous Growth

Holden Beach is a contained island community and therefore has natural geographic limits on where growth and development can occur. The Town will consider exercising extra-territorial jurisdiction on the mainland adjacent to Holden Beach as future circumstances may warrant.

b. Provision of Services

Urban growth and development will be directed to occur in areas where services are available or planned. Low and medium density growth is recommended until such time that wastewater collection and treatment facilities are available.

c. Population Growth

Holden Beach's policy is to discourage large amounts of growth and development and large increases in population. Low and medium density growth is recommended due to the Town's present lack of a sewer system. This policy is implemented through densities established by the Town's zoning ordinance.

d. Segregation of Existing Land Uses

Spatial segregation of conflicting land uses will be encouraged. The Town's zoning ordinance provides the principal means of implementing this policy.

e. Housing

Holden Beach will encourage seasonal and permanent single

family and multi-family residences, duplexes, and low profile apartments.

f. Aesthetics

Holden Beach supports the adoption of an ordinance requiring property owners to maintain their property's appearance.

g. Planned Unit Developments

Holden Beach will encourage the development of any individual residential projects over three acres as planned unit developments.

7. STORM HAZARD MITIGATION AND POST DISASTER RECONSTRUCTION

a. Storm Hazard Mitigation

The Storm Hazard Mitigation Plan Adopted June 18, 1984 by The Holden Beach Board of Commissioners contains the following policies:

The entire Town of Holden Beach is susceptible to significant storm damage from a hurricane or a storm of similar magnitude. All of the development in the Town is located in AEC's or in areas susceptible to flooding associated with the 100-year storm. The entire Town is susceptible to wind damage. In general, the Town's existing mitigation policies meet the requirements for hazard mitigation planning outlined in Before the Storm. Specifically:

(1) The Town's growth policy encourages low density residential development avoiding high density - high rise developments that are found in many North Carolina beach communities. The lack of specific plans for a central sewage treatment system will also enhance the continuation of this policy.

(2) The Town's policies support and are consistent with State policies and regulations for development in Areas of Environmental Concern.

(3) All new development must conform with the provisions of the N.C. Building Code.

(4) The Town's flood plain development policies conform with all Federal and State requirements.

(5) The Town does an excellent job of controlling mobile home developments in order to minimize hazard damages. Mobile homes are restricted to a specific district and must conform with elevation and other requirements.

b. Post Disaster Reconstruction

The Town's Post Disaster Reconstruction Plan was adopted June 18, 1984 by the Holden Beach Board of Commissioners. It is organized in the following sections:

- o Introduction
- o Organization of Local Damage Assessment Team
- o Damage Assessment Procedures and Requirements
- o Organization of Recovery Operations
- o Recommended Reconstruction Policies

The following provides a summary of the Plan's most important provisions and policies from each of these five sections:

(1) Introduction. Defines plan purpose and use; identifies 3 distinct reconstruction periods: Emergency, Restoration, and Replacement/Reconstruction. Outlines sequence of procedures to be followed to meet State and Federal Disaster Relief regulations: 1) Assess storm damage and report to County; 2) County compiles and summarizes individual community reports; 3) State compiles County data and makes recommendation to the Governor; 4) Governor requests Presidential declaration; 5) Federal relief programs available.

(2) Organization of Local Damage Assessment Team. Outlines personnel available; establishes team members; designates building inspector as team chief.

(3) Damage Assessment Procedures and Requirements. The purpose of this phase is to rapidly determine immediately following a storm disaster: 1) number of structures damaged; 2) magnitude of damage by structure type; 3) estimated total dollar loss; and 4) estimated total dollar loss covered by insurance. To accomplish this, the Plan establishes four categories of damage: 1) destroyed - (repairs over 80% of value); 2) major (repairs over 30% of value); 3) minor (repairs under 30% of value); and 4) habitable (repairs under 15% of value). A color coding system in conjunction with County tax maps is recommended for this phase of damage assessment. Total damage in dollars is estimated by taking the County tax valuations times a factor to make prices current and then factoring these figures according to the above damage classifications. Estimated insurance coverage is made by utilizing information as to average coverage obtained from insurance agencies on an annual basis.

(4) Organization of Recovery Operations. The Mayor and Board of Commissiors assume the duties of a Recovery Task Force. The Task Force must accomplish the following:

- o Establish reentry procedures
- o Establish overall restoration schedule
- o Set restoration priorities
- o Determine requirements for outside assistance and request such assistance when beyond local capabilities.
- o Keep appropriate County and State officials informed using Situation and Damage Reports
- o Keep the public informed
- o Assemble and maintain records of actions taken and expenditures and obligations incurred
- o Proclaim a local "state of emergency" if warranted
- o Commence cleanup, debris removal and utility restoration activities undertaken by private utility companies
- o Undertake repair and restoration of essential public facilities and services in accordance with priorities developed through situation evaluations
- o Assist individual property owners in obtaining information on the various types of assistance that might be available from federal and state agencies

A schedule outlining tasks and general time frames is provided in the plan.

(5) Recommended Reconstruction Policies. The policies outlined are for the Mayor and Commissioners to consider after a storm occurs. It is not practical to determine at this time what specific responses are appropriate. The following policy areas are discussed:

- o Reentry. Not allowed until the Mayor determines it safe and initial damage assessment is completed. A list of property owners will be maintained and kept at the Bridge entry to Town.

- Permitting. Permits to restore previously conforming structures outside AEC's issued automatically. Structures suffering major damage allowed to rebuild to original state but must be in compliance with N.C. Building Code, Zoning and Flood Hazard Regulations. Structures with minor damage allowed to rebuild to original state before the storm. Structures in AEC's allowed to rebuild only after determination has been made as to adequacy of existing development regulations in these special hazard areas.

- Utility and Facility Reconstruction. Water system components repaired or replaced must be flood-proofed or elevated above 100-year flood levels. Procedures established to effect emergency repairs to N.C. Rt. 130 if necessary.

- Temporary Development Moratorium. To be considered after major storm damage for AEC's if existing regulations appear inadequate to protect structures from storm damage.

8. CONTINUING PUBLIC PARTICIPATION

Holden Beach realizes an important part of any planning program is citizen involvement. In order to provide for public participation, Holden Beach adopted the following public involvement policy.

All land use plans and updates will be done with public participation. Citizen participation in the land use planning process has been accomplished by using the following plan.

Time Use of One Year Planning Period

one-third I. Education

A. Newspaper
1. News releases
2. Letter to editors

B. Pamphlets
C. Public Meetings

one-third II. Input
A. Public meetings
B. Review and comments
1. Newspaper spread of plan summary
2. Public review meeting

one-third III. Support
A. Use of education and input properly
B. Public hearing (formal)

During the preparation of this Land Use Plan Update, the Town encouraged its citizens and property owners to participate in the planning process. Public meeting dates and times were announced in the local newspaper and members of the public attended meetings of the Town Planning Board when the Update was discussed. Specifically, public meetings were held at Town Hall on the following dates:

October 23, 1984 - Planning and Zoning Board, Initial meeting to review Land Use Plan Update project, schedule, etc.

February 6, 1985 - Planning and Zoning Board - Work session on Land Use Plan Update; public meeting.

March 7,1985 - Notice of Public Hearing on March 19, 1985 published. Public review of and comment on Land Use Plan invited. Material available for public review.

March 19, 1985 - Planning and Zoning Board - Public hearing to receiv public comment.

April 16, 1985 - Planning and Zoning Board - Public Meeting to finalize policy statements and Land Classification Map.

May 23, 1985 - Planning and Zoning Board - Public meeting to review changes.

May 28,1985 - Joint Meeting - Planning and Zoning Board and Board of Commissioners - public meeting to review changes.

November 18, 1985 - Formal Public Hearing held on Plan by Board of Commissioners after 30-day public notice.

November 25, 1985 - Board of Commissioners adopted Plan for final submission to the Coastal Resources Commission.

December 13, 1985 - CRC Certification.

LAND CLASSIFICATION

Background and Purpose

The North Carolina Coastal Area Management Act Guidelines require that each city, town and county located in the twenty county coastal areas develop a land classification map classifying all of the land within its jurisdiction into one of five classes and their subclasses.

A land classification system for Holden Beach has been developed as a means of assisting in the implementation of the goals, objectives, and policies of this Plan. By delineating land classes on a map, the Town and its citizens can specify those areas where certain policies (local, state, and federal) will apply. Although specific areas are outlined on the Land Classification Map, it is merely a tool to help implement policies and not a strict regulatory mechanism. The designation of land classes therefore allows the Town to illustrate its policies as to where and to what density growth is desired, and where natural and cultural resources will be preserved.

Relationship of the Land Classification Map to Policy Statements

The land classification map is a graphic representation of the policy statements formulated and adopted through the citizen participation and plan development process. The classification of land reflects existing development patterns as well as the desired pattern of development as specified in the policy statements. Additionally, development in AEC's must conform to all applicable C.A.M.A. requirements.

The Transition classification reflects the policy of the Town to accommodate development in those areas with existing or planned urban facilities within the next ten years, and those areas that are consistent with the Holden Beach Zoning Ordinance. The subclasses of the Transition Classification are Transition Residential and Transition Mixed-Use. Lands meeting the above policy for Transition areas were classified as one of these subclasses according to whether planned outlying development was to be strictly residential or a variety of land uses such as residential, commercial, institutional and recreational. All classification of land within these subclasses are in accordance with the Holden Beach Zoning Ordinance.

The Rural Classification reflects the policy of the Town toward the protection of low intensity resource potential lands as well as the policy to provide lands for low density residential development where urban services are neither provided nor planned. This latter policy is further supported by the Town's policy of compact growth and because it is very inefficient and uneconomical to provide facilities to sparsely populated outlying areas. To comply with these two policies, the Rural classification is divided into two subclasses, Rural and Rural Residential. The main difference between these two subclasses is their accessibility and degree of development.

The Conservation classification reflects the policy of the Town to protect and provide effective long term management for significant, limited or irreplacable lands. Within the Conservation classification are areas of environmental concern. For a listing of the areas of environmental concern applicable to Holden Beach, see the Fragile Areas section of this Plan (page 19). Areas of environmental concern are necessarily protected in accordance with the North Carolina Coastal Area Management Act (C.A.M.A.) of 1974; Holden Beach supports all C.A.M.A. regulations.

Land Classes and The Land Classification Map

The Land Classes applicable to Holden Beach are described below. Each of the five broad classes identified by the C.A.M.A. are not used in Holden Beach. The three applicable broad classes with subcategories are:

Transition

- o Mixed Use
- o Residential
  - Low Density
  - Medium Density

Rural

- o Rural
- o Rural Residential

Conservation

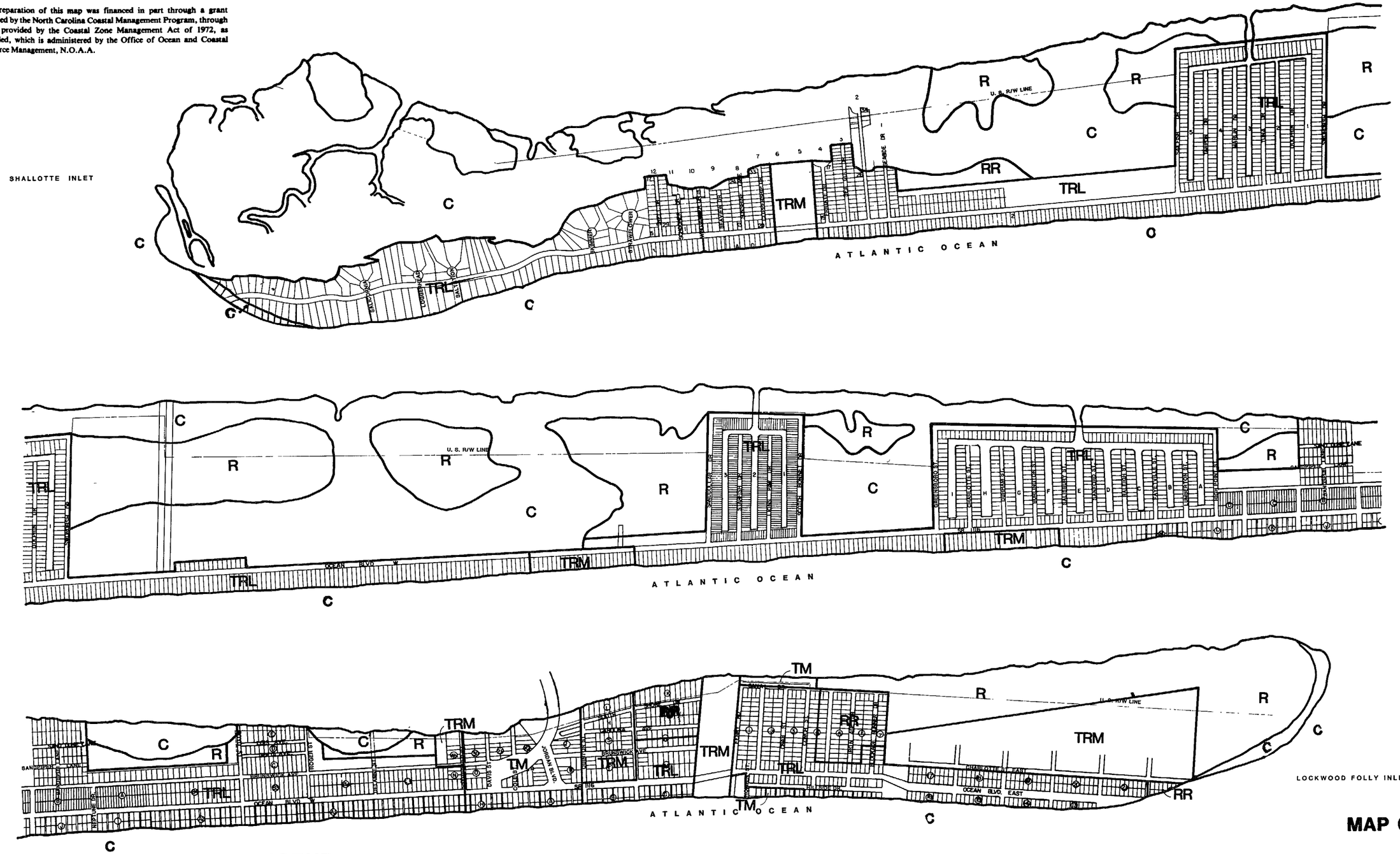
The inclusion of a land area into one of these classification categories or subcategories does not dictate the type of land use that will be allowed in a particular location. Several of the classes provide for and are designed to encourage a variety of different land uses. The classifications and subclasses are defined below. Map Six delineates each of the subclasses adopted by Holden Beach.

1) Transition

The purpose of the transition class is to provide for future intensive urban development within the ensuing ten years on lands that are most suitable and that will be scheduled for provision of necessary public utilities and services. The transition lands also provide for additional growth when additional lands in the developed class are not available or when they are severly limited for development.

The transition class should be the only land in Holden Beach under active consideration for intensive urban development requiring urban services. The area within this class is where detailed local land use and public investment planning must occur. State and federal expenditures on projects associated with urban development (water, sewer, urban systems, etc.) will be guided to

The preparation of this map was financed in part through a grant provided by the North Carolina Coastal Management Program, through funds provided by the Coastal Zone Management Act of 1972, as amended, which is administered by the Office of Ocean and Coastal Resource Management, N.O.A.A.



MAP 6

LEGEND

C	Conservation
R	Rural
RR	Rural Residential
TRL	Transition Residential- Low Density
TRM	Transition Residential-Medium Density
TM	Transition Mixed Use

HOLDEN BEACH, N.C.

LAND CLASSIFICATION MAP

Prepared By: SATILLA PLANNING
200 Osborne Street
St. Marys, Georgia

Mapping Date: MAY, 1985

NORTH

0' 250' 500' 1000' 1500' 2000'

these areas.

In accordance with the State Guidelines, first priority lands for allocation to the Transition category are those areas which presently exhibit a gross population density of 2,000 persons per square mile. The second priority includes those areas which have experienced septic tank problems and/or face potential public health threats in terms of contamination of on-site wells or pollution of estuarine waters to which much existing residential development is adjacent. The third priority provides for inclusion of more areas where future development is expected and can be clustered through the provision of services. The fourth priority includes lands located along existing or proposed service corridors in which higher density development is to be encouraged.

a) Transition Mixed Use

This class includes areas where public services are currently provided or planned, yet are more suitable for a wide variety of development ranging from recreational facilities to commercial establishments. The guide for the placement of development within this class is the Holden Beach Zoning Ordinance and the Holden Beach Policy Statements.

b) Transition Residential

This class includes the areas with planned facilities best suited for residential development.

A large portion of the land in Holden Beach is designated either transition Mixed Use or Transition Residential. Generally, all developed residential areas that are currently provided with public water are classified Residential. Those areas currently develop with a wide range of uses, such as piers, arcades, stores, or other commercial establishments, are classified Transition Mixed Use. All those areas are scheduled to be provided with public sewer within the upcoming ten year period.

The Transition Residential areas in Holden Beach are subdivided into two sub-classes as follows:

- Transition Residential - Low Density, which shall include single and duplex dwellings

- Transition Residential - Medium Density, which shall include single, duplex and multi-family dwellings

2. <u>Rural</u>

The purpose of the rural class is to provide for agriculture, forest management, mineral extraction and other low intensity uses where urban services are not required and where natural resources

will not be permanentlyimpaired.

a) Rural Residential

The purpose of this class is to provide for low density residential development where urban services are not provided or planned and where natural resources will not be permanently impaired.

In Holden Beach, the Rural classification is made for those lands that are suitable for development but that have not been made accessible by public streets and roads. The Rural Residential classification is made for low density residential areas not presently provided with public water. It is the intent of the Rural designations to encourage development of those areas classified Transition before those classified Rural or Rural Residential.

3. Conservation

The purpose of the Conservation class is to provide for effective long-term management of significant limited or irreplaceable areas. This management may be needed because of the area's natural, cultural, recreational, productive, or scenic values. These lands should not be identified as transition lands in the future.

The Conservation Class should be applied to lands that contain: major wetlands; essentially undeveloped shorelands that are unique, fragile, or hazardous for development; necessary wildlife habitat or areas that have a high probability of providing necessary habitat conditions, publicly owned water supply watersheds, and aquifers; and forest lands that are undeveloped and will remain undeveloped for commercial purposes.

Those lands designated as Conservation in Holden Beach are primarily coastal wetlands, oceanfront shorelines, or inlet hazard areas.