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July 1, 1991

Mr. Rob Mikell
South Carolina Coastal Council
4130 Faber Place, Suite 300
Charleston, SC 29405

RE: Town of Surfside Beach
Local Comprehensive Beach Management Plan

Dear Rob:

I am pleased to enclose a copy of the Surfside Beach Local Comprehensive Beach Management Plan. I have worked closely with the Town over the past three months to produce a plan that will satisfy the requirements of the Beach Management Act and serve the Town well in its efforts to manage its shoreline.

The Surfside Beach Town Council adopted the plan at its June 18th meeting, and will implement all phases of the plan during the coming year. Please review the enclosed document and let me know if you have any questions or comments. I'll be glad to work with you and the Town to resolve any questions so that we might get SCCC approval soon.

Sincerely yours,

Christopher P. Jones, P.E.
Associate Vice President

Enclosure

CPJ/amg

cc: Pat DiGiovanni
Ron Peaks
Eddie Richardson

LOCAL COMPREHENSIVE BEACH MANANGEMENT PLAN

TOWN OF SURFSIDE BEACH

JUNE 1991

Prepared for:

TOWN OF SURFSIDE BEACH

Submitted by:

APPLIED TECHNOLOGY AND MANAGEMENT, INC.
950 Houston Northcutt Blvd., Suite 100
Mt. Pleasant, SC 29464
(803) 884-8750

NOTE

It should be pointed out that all inventories and other work associated with this Plan were based on the interim baseline and 40-year setback line adopted by the South Carolina Coastal Council (SCCC) in February 1990, and in effect when this Plan was completed

The SCCC determined at its October 1990 meeting that the pre-Hugo dune line, as indicated on the July 1988 SCCC aerial photographs, would be the location for the final baseline along the Surfside Beach shoreline. Final lines were adopted by the SCCC in June 1991, resulting in minor changes to the baseline and setback line in some locations. The inventories contained in this Plan are based on the interim lines; some minor changes are expected when the inventories are revised to reflect the final line locations.

SECTION 1. BACKGROUND AND SUPPORTING DATA

TOWN OF SURFSIDE BEACH

LOCAL COMPREHENSIVE BEACH MANAGEMENT PLAN

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Physical Description and Shoreline Processes

The Town of Surfside Beach lies adjacent to 2.1 miles of ocean shoreline in southern Horry County. Beaches along Surfside Beach are composed of moderately well-sorted, fine to medium sands; the beaches tend to be relatively narrow and steep, and prior to hurricane Hugo were backed by a near-continuous dune ridge approximately 12 ft above mean sea level.

The ocean shoreline of Surfside Beach tends to be stable to slightly erosional over the long term, but is susceptible to erosion during severe storms. The long-term erosion rate adopted by the SCCC for the area is -0.9 ft/yr.

Existing Development and Land Use

Development along the Surfside Beach shoreline is governed by Town regulations, the local building code, SCCC setbacks and FEMA requirements..

A review of the development existing along the Surfside Beach ocean shoreline in April 1991 revealed the following:

1. There are 144 oceanfront parcels along the Surfside Beach shoreline, 126 parcels in the R-3 zoning district (High Density and Accommodations) and 18 parcels in the C-3 zoning district (Amusement-Commercial).

2. At the time of the April 1991 field inventory, 39 single family and 49 multi-family/commercial buildings existed on the oceanfront parcels; 52 of the structures are less than 5,000 ft^2 and 36 of the structures are more than 5,000 ft^2 in size; 35 oceanfront parcels were vacant.

3. Oceanfront habitable structures lie an average of 2 ft landward of the SCCC interim setback line (38 ft landward of the SCCC interim baseline).

4. Forty-seven habitable structures and 21 pools lie an average of 17 ft seaward of the SCCC interim setback line (19 ft landward of the SCCC interim baseline). Twelve habitable structures or pools lie within 10 ft of the interim baseline; no pools or habitable structures lie seaward of the

baseline (with the exception of the Surfside Pier). Another two pools and 34 habitable structures lie within 50 ft landward of the SCCC interim setback line.

5. Only one erosion control structure was visible during the field inventory, that being the rock revetment at the Holiday Inn. The crest of the revetment lies approximately five ft seaward of the interim baseline.

6. There are six locations where storm water drains onto the beach; all but one have been improved with six ft wide timber swashes. The drainage structure opposite Surfside Drive is a 24-in. diameter reinforced concrete pipe.

7. There are 33 public beach access structures along the Surfside Beach shoreline (29 dune walkovers and four vehicle ramps). There are 79 private dune walkover structures.

8. A total of 350 public, off-street parking spaces are available in eight parking areas; three planned parking areas will bring the total number of spaces to more than 410.

Town Beach Management Goals, Objectives and Policies

As part of its Local Comprehensive Beach Management Plan, the Town of Surfside Beach will:

adopt and implement policies, procedures and ordinances to protect, preserve, restore and enhance the natural character of Surfside Beach's beach/dune system.

encourage full and complete public access to its beaches.

work closely with property owners and government agencies to maintain the protective, ecological and recreational functions of the beach/dune system.

develop strategies for erosion control and beach/dune restoration that will minimize potential adverse environmental impacts.

develop strategies for protecting critical habitats and threatened/endangered species.

develop strategies for improving, protecting and/or relocating structures and facilities along the shoreline.

periodically collect and/or review beach profile and other data to assess changing conditions along the shoreline.

periodically revise this Plan to take into consideration changes in shoreline conditions and oceanfront development.

periodically update the structure, drainage, access and parking inventories contained in this Plan.

The Town of Surfside Beach recognizes the important protective and ecological functions that a healthy dune system provides. The Town also recognizes that the dune system along the oceanfront must be carefully managed to insure these important functions are not lost. As such, the Town has adopted a Shore Protection Ordinance that establishes a Shore Protection Line and regulates the alteration, destruction, restoration or enhancement of dune areas in the area seaward of that line.

The Shore protection line shall be redefined to lie 36 ft landward of the final SCCC baseline. This revision is consistent with the intent of the original Shore Protection Ordinance and the prior Shore Protection Line location, yet simplifies the administration and enforcement of oceanfront regulations.

Erosion Control

The Town hereby declares that **preferred erosion control strategies** for the protection of habitable and other structures along the Surfside Beach shoreline will consist of:

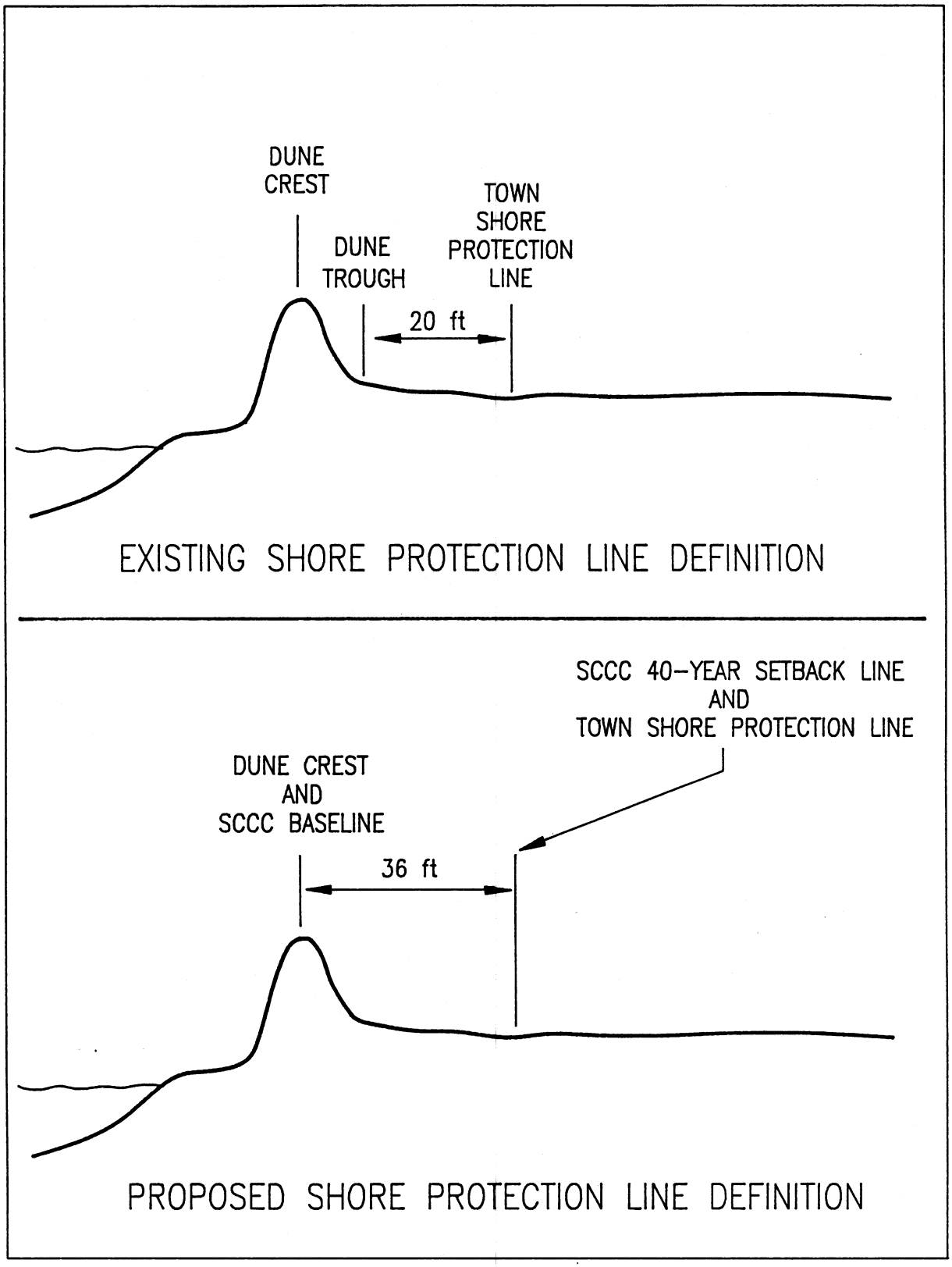
dune restoration and revegetation

beach nourishment using approved borrow sources

sand bagging (under emergency conditions)

Sediment borrow sources and methods of transportation and placement must be approved in advance by the SCCC, other appropriate agencies, and the Town. The Town shall consider the following as preferred borrow sources and transportation/placement methods (note that this preference does not constitute Town, SCCC or other agency approval for specific projects):

upland sources of beach-compatible sand, hauled to the site by truck, conveyor or other approved means



Comparison of existing and revised Town shore protection line definitions.

offshore borrow sources whose use will not adversely affect the Town shoreline by exposing it to increased wave energy

beach scraping from the low tide beach using land-based equipment, provided other borrow sources cannot be used and provided the scraping will not adversely affect the shoreline.

Dune Restoration and Revegetation

The Town incorporates the following policies related to dune protection and restoration into its Local Comprehensive Beach Management Plan:

The Town shall work with property owners and other government agencies to protect, enhance and restore the dune system along Surfside Beach.

Dune construction, restoration, revegetation, fencing and walkover/deck construction must be carried out in accordance with Town-approved procedures contained in this Plan and the Surfside Beach Code, Sec. 17-389

Any activity, construction or alteration of sand dunes seaward of the SCCC 40-year setback line must be approved, in advance, by the SCCC; any activity, construction or alteration of sand dunes seaward of the Town Shore Protection Line must be approved, in advance, by the Town.

Sand dunes seaward of the Shore Protection Line or SCCC 40-year setback line must not be altered unless there is no feasible alternative. Permanent alterations must be carried out in such a way that the disturbance to the dune system is minimized. In the case of temporary alterations, the dune system must be restored to its pre-existing condition.

The Town may, at its discretion, require mitigation for the permanent alteration or destruction of dune areas seaward of the Shore Protection Line or SCCC 40-year setback line. Such mitigation may include: creation of new dune habitat, enhancement of existing dune habitat, installation of protective fencing or walkover structures, dedication of land or easements for access to the beach, or contribution to the Town's Beach and Dune Restoration Fund.

Sand dunes designated as critical habitat areas must not be altered, except for those activities allowed in Section 2.7.

Although the Town encourages all property owners to install and maintain native vegetation seaward of the Shore Protection Line, the current regulations restricting landscaping in the Shore Protection Area shall be revised to allow landscaping with non-native vegetation between the Shore Protection Line and the landward trough of the primary oceanfront sand dune.

Maintenance of a Dry Sand and Ecologically Stable Beach

The Town of Surfside Beach recognizes the importance of maintaining a dry sand and ecologically stable beach. The beach affords habitat to a variety of species, protection to upland development and space for recreational activities. In an effort to insure the continued existence of a natural beach along Surfside Beach, the Town will work closely with property owners and other government agencies to accomplish the following:

to encourage property owners to site oceanfront buildings and structures as far landward as possible. Where appropriate, the Town shall approve variances to reduce front yard (street) setbacks and increase rear yard (oceanfront) setbacks.

to encourage oceanfront property owners to reduce lot coverage by impervious surfaces and control stormwater discharge.

to require nonconforming structures in the Shore Protection Area that are destroyed or damaged 51 percent or more (based on structure value) to be removed [see Sec. 17-392(a) of the Surfside Beach Code]. Rebuilt structures must conform to all provisions of the Surfside Beach Code and the Local Comprehensive Beach Management Plan.

to facilitate the relocation and/or abandonment and removal of structures which, because of erosion, encroach onto the active beach. In cases where such encroachment is a result of severe storms or other short-term phenomena not expected to persist, the Town shall work with affected parties to carry out erosion control efforts consistent with the Surfside Beach Code. In cases where long-term erosion and encroachment are likely to persist, and where erosion control efforts are not feasible or successful, the Town shall work with affected parties to remove the structures.

The Town shall not approve construction of buildings or other structures, except for dune walkways and temporary sand bagging, seaward of the Shore Protection Line. Furthermore, the Town shall not approve construction which

results in unnecessary destruction of dunes and dune vegetation seaward of the Shore Protection Line. The Town may, at its discretion, allow limited landscaping of areas between the landward trough of the primary oceanfront sand dune and the Shore Protection Line. The Town may require mitigation for construction or permanent alteration of dune areas.

Protection of Endangered Species and Critical Habitats

In order to protect threatened, endangered and protected species, and valuable habitat areas, the Town of Surfside Beach shall:

assist the SCWMRD and other agencies with the identification and mapping of critical habitat areas along the Surfside Beach shoreline.

adopt and enforce ordinances that prohibit trespassing into designated areas during certain seasons (nesting areas, for example).

adopt a leash law restricting free roaming dogs and other domestic pets on the beach during the period May 15 through October 31.

encourage beachfront property owners to eliminate or reduce lighting that shines directly onto the beach, since artificial lighting can interfere with nesting sea turtles and turtle hatchlings.

regulate vehicular traffic on the beach.

regulate erosion control activities; where possible, such approved activities will be restricted to wintertime.

Beach Access and Vehicular Traffic

Public access to beaches is a major concern of the Town of Surfside Beach . The Town has constructed 33 dune walkover/access structures and eight parking areas (providing 350 off-street public parking spaces) along the shoreline. Three planned parking areas will provide an additional 60 public parking spaces. The existing and planned access and parking facilities are sufficient to classify the entire Surfside Beach shoreline as having full and complete access according to SCCC standards.

The Town wishes to encourage property owners and others to use the beach for those recreational uses allowed in Chapter 12, Article IV of the Surfside Beach Code.

Vehicular traffic on the beach is generally prohibited, except for those uses listed below:

emergency vehicles and law enforcement vehicles

Town and other government vehicles

vehicles used to conduct beach surveys

other vehicle uses deemed essential by the Town

Vehicles using the beach shall be operated in such a manner that pedestrians and other beachgoers are not endangered or harmed. Further, vehicles shall be driven on the wet sand beach whenever possible and shall not travel on the dry sand or upper beach; vehicles shall not disturb nesting or other sensitive areas.

Stormwater Management and Drainage

The Town, as a matter of policy, shall encourage all property owners to use those guidelines and best management practices outlined in the SCCC report, Storm Water Management Guidelines. The Town shall also work closely with property owners and the SCCC to control drainage and stormwater discharges by enforcement of the Town Stormwater Management and Floodplain Management ordinances.

Controlling stormwater and other discharges along the beachfront areas of Surfside Beach is a priority of the Town. The Town of Surfside Beach has recently completed a shoreline drainage project and adopts as part of this Plan a policy to prohibit any additional outfalls or other means of direct discharge to the beach.

Post-Disaster Recovery and Redevelopment

The Town shall work with all appropriate agencies, prior to and after a severe storm or natural disaster, to minimize potential injury and damage, and to expedite recovery and redevelopment.

SECTION 1. BACKGROUND AND SUPPORTING DATA

1.1 Physical Description and Inventory of Shoreline Data

1.1.1 Physical Setting

The Town of Surfside Beach occupies approximately 2.1 miles of ocean shoreline along the southern section of South Carolina's Grand Strand. Surfside Beach lies in Horry County, approximately 9 miles southwest of Myrtle Beach and 25 miles northeast of Georgetown (see Figure 1).

Beaches along Surfside Beach are composed of moderately well-sorted, fine to medium sands averaging 0.25 to 0.35 mm in diameter (ATM/OA, 1986). The beaches tend to be relatively narrow and steep, and prior to Hurricane Hugo were backed by a near-continuous dune ridge with a crest elevation approximately 12 ft above mean sea level. The beach is unaffected by tidal inlets, but is crossed by several small drainage swashes.

Tides in the vicinity are semidiurnal, with a mean range of 5.0 ft and a spring range of 5.8 ft (NOAA, 1991). Wave energy along the shoreline tends to be mild, with a mean significant wave height of 1.87 ft and a mean wave period of 5.7 sec (Jensen, 1983). Winds and waves tend to approach from the south and southeast during the summer months and from the northeast during the winter. The south/southeast direction of approach is more frequent but the northeast winds and waves are usually stronger, leading to a net direction of sediment transport along Surfside Beach from north to south.

1.1.2 Prior Reports and Studies

There has been considerable effort devoted to the description and analysis of storm effects, shoreline changes and coastal processes along the Surfside Beach shoreline. Much of the early work was conducted by the U.S. Army Corps of Engineers following Hurricane Hazel in 1954. Later studies by the University of South Carolina, various consultants and the South Carolina Coastal Council (SCCC) documented shoreline changes and established construction setback lines along the shoreline using beach profile data and aerial photographs. Some of the more significant reports are summarized below.

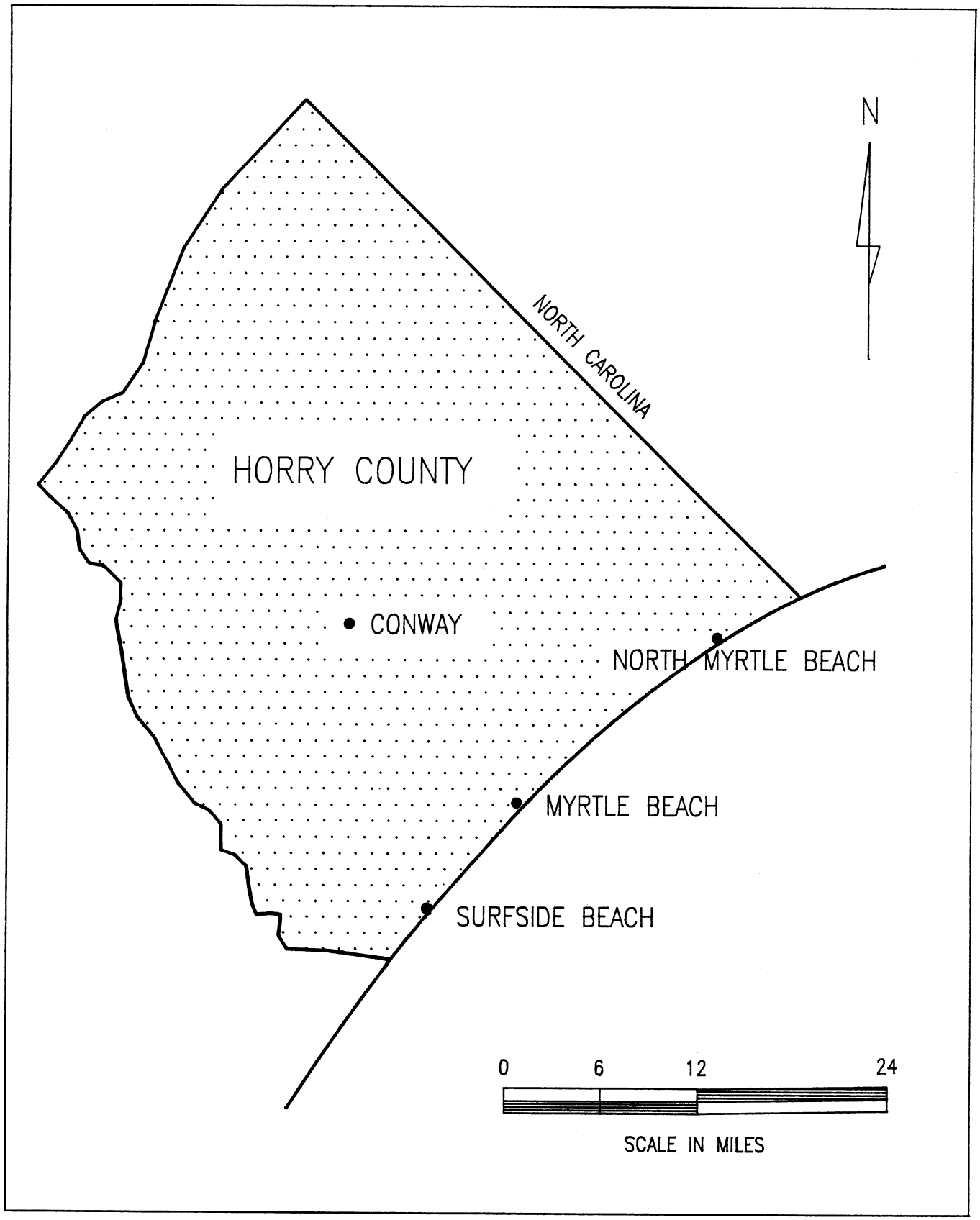


Figure 1. Location Map

Interim Hurricane Survey Report, Surfside and Garden City Beaches, South Carolina, November 1960, by the U.S. Army Corps of Engineers. This report summarizes the findings of a post-Hazel study of storm vulnerability. The Corps of Engineers concluded that storm protective measures were not justified at that time (note that the report was also published as House Document 337, 87th Congress, 2nd Session, 12 February 1962).

Beach Erosion Inventory of Horry, Georgetown and Beaufort Counties, South Carolina, December 1977, by D.K. Hubbard, J.H. Barwis, F. Lesesne, M.F. Stephen and M.O. Hayes. This report provided the first assessment of historic shoreline changes along Surfside Beach using historical charts and aerial photographs. The report classified the Surfside Beach shoreline (e.g., stations G-2 and G-3) as being relatively stable, with long-term erosion rates generally less than 2 ft/yr.

Myrtle Beach, Horry and Georgetown Counties, South Carolina, Reconnaissance Report on Beach Erosion Control and Hurricane Protection, August 1983, by the Charleston District, U.S. Army Corps of Engineers. This report presents the result of a preliminary investigation of the feasibility of beach nourishment along the Grand Strand. While the report did not recommend beach nourishment for the Surfside Beach shoreline, it did demonstrate a high benefit/cost ratio and recommend further study of nourishment projects at North Myrtle Beach, Lake Arrowhead/Dunes, Myrtle Beach and Garden City.

Horry County Shorefront Management Plan, from Briarcliffe Acres to Singleton Swash and from Springmaid Beach to Garden City, July 1986, by Applied Technology and Management, Inc. and Olsen Associates, Inc. This report summarized all available shoreline history and beach profile data, estimated storm impact zones and delineated 25- and 50-year setback lines. The baseline and erosion rates presented in the report formed the basis for the SCCC interim baseline and 40-year setback line adopted in June 1988 following passage of the Beachfront Management Act.

Myrtle Beach and Vicinity, Horry and Georgetown Counties, South Carolina, Final Feasibility Report on Storm Damage Reduction, June 1988, by the Charleston District, U.S. Army Corps of Engineers. This report presents the results of a more detailed study of the Grand Strand nourishment project originally outlined in the Corps' 1983 Reconnaissance Report. This study, however, recommended extending the nourishment project

to include Surfside Beach. The Charleston District is currently undertaking final design studies for the nourishment project, which is scheduled for construction during 1997.

Garden City - Surfside Beach, Interim Baseline and Setback Line Report, February 1990, by the South Carolina Coastal Council. This report resulted in the revision of the SCCC interim baseline and 40-year setback line. The baseline location originally presented in the 1986 Shorefront Management Plan was replaced by a baseline established using fall 1988 beach profile data; the 40-year setback line was revised to reflect a change in the adopted long-term erosion rate from -1.5 ft/yr to -0.9 ft/yr *(note that the SCCC has proposed further changes in the baseline location along Surfside Beach -- see Sec. 1.4.2)*

1.1.3 Prior Erosion Control Efforts

Prior erosion control efforts in the Surfside Beach area have generally been limited to post-storm dune and beach restoration and beach scraping. However, a few bulkheads and seawalls have been constructed in the past. The 1986 Horry County Shorefront Management Plan reported two 300 ft long seawalls along the Surfside Beach shoreline -- one at the pier and one at the Holiday Inn. The only erosion control structure visible during a April 1991 field inspection was the rock revetment at the Holiday Inn, which replaced the wall destroyed by Hugo.

No details are available regarding the post-Hazel beach and dune nourishment during the 1950s. However, it is safe to say that dune line in existence prior to hurricane Hugo was created, in part, following hurricane Hazel. The post-Hugo emergency beach nourishment project shown in Figure 2 extended over 1.3 miles of the Town's 2.1 mile shoreline and was funded by FEMA and the State of South Carolina (it should be pointed out that eligibility for emergency beach nourishment was determined by FEMA representatives following the storm). The Town of Surfside Beach funded additional post-Hugo dune reconstruction along the entire Town shoreline. The U.S. Soil Conservation Service (SCS) installed sand fence and dune plants.

1.1.4 Beach Profile Data

Repetitive beach profiles measured from fixed starting points provide the best means of quantifying erosion and accretion along ocean beaches. These data allow changes in

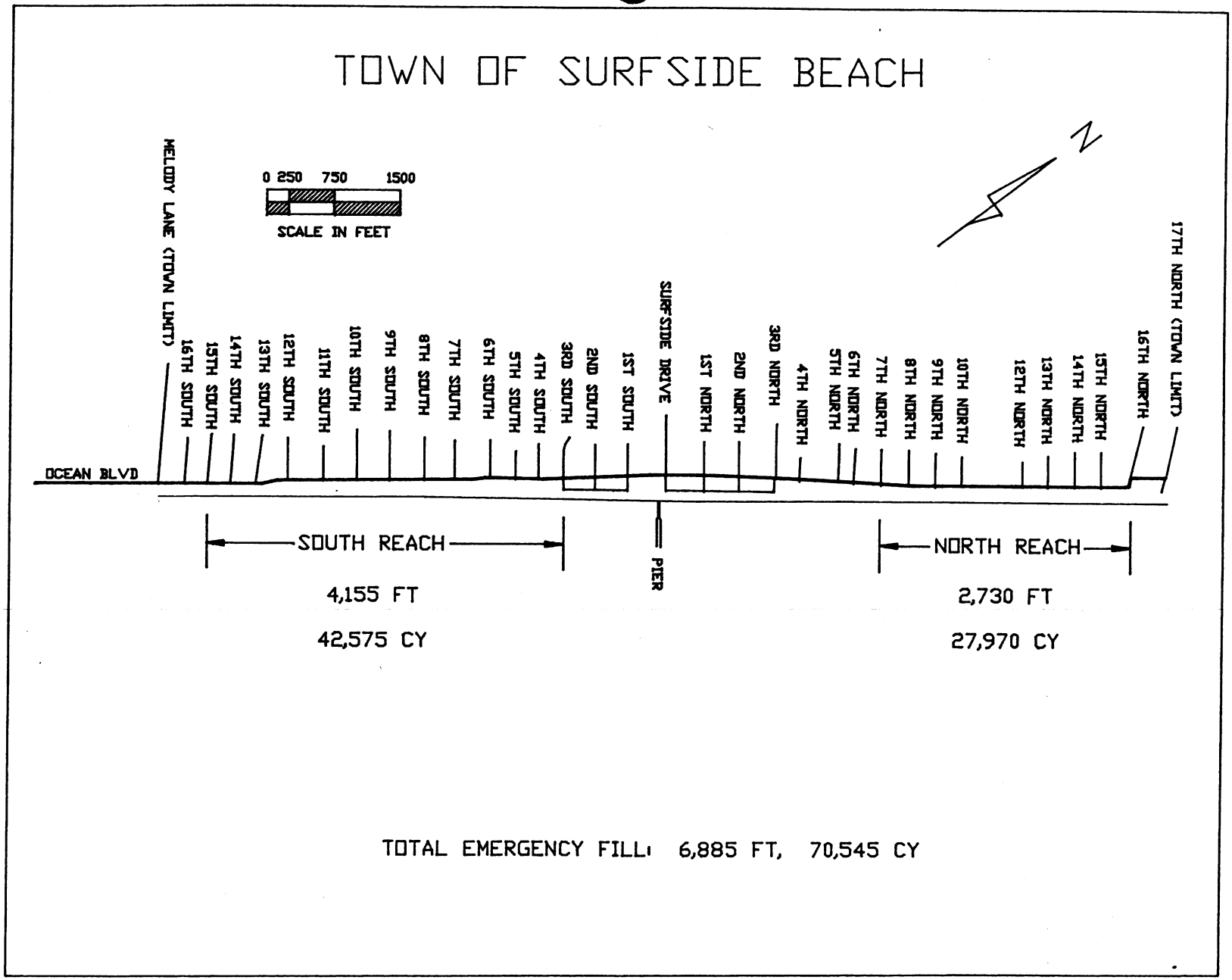


Figure 2. Post-Hugo emergency beach nourishment project location.

beach width (in feet) and beach volume (expressed in cubic yards per foot of shore length) to be assessed.

Beach profiles have been surveyed from at least five different sets of beach survey monuments in the Surfside Beach area in the past:

1) Corps of Engineers monuments established after hurricane Hazel and surveyed in 1958 and 1984 (hereafter referred to as 'COE' monuments).

2) Corps of Engineers monuments established in 1979 as part of the Murrells Inlet Navigation Project monitoring study, and surveyed between 1979 and 1982 (hereafter referred to as 'CERC' monuments).

3) Monuments established and surveyed by Applied Technology and Management, Inc. in 1986 during the Horry County Shorefront Management Study (hereafter referred to as 'SMP' monuments).

4) SCCC monuments established in 1987 and surveyed during fall 1987, spring 1988, fall 1988, fall 1989 and fall 1990 (hereafter referred to as 'SCCC' monuments). Please note that two of the original SCCC monuments were destroyed by hurricane Hugo; replacement monuments were set nearby.

5) Monuments established for the post-Hugo emergency beach nourishment project and surveyed during January and March 1990 (hereafter referred to as 'SS' monuments).

Some of the monuments were established to coincide with earlier station locations. For example, the SMP monuments established as part of the Horry County Shorefront Management Plan coincided with earlier COE stations, whenever possible; several of the post-Hugo SS stations coincided with SCCC monument locations. Unfortunately, none of the SCCC monuments coincide with the earlier COE stations, thereby precluding the ability to compare current beach profile data with data from the 1950s.

Table 1 shows the alongshore relationship between the various monument systems established along the Surfside Beach shoreline (monument locations are also referenced to the nearest street or point midway between streets). Figure 3 also shows relative station locations for the SCCC, SMP and SS monuments.

TABLE 1. Relative Alongshore Position of Beach Profile Monuments Established in Surfside Beach (monuments shown at closest street or mid-street locations)

Street	COE	CERC	SMP	SCCC	SS
Melody Ln			5105		17
16th Ave S				5100	16
15th Ave S					
14th Ave S					15
13th Ave S					
12th Ave S	93+33		5110		14
11th Ave S					
10th Ave S				5120	13
9th Ave S					
8th Ave S					
7th Ave S		291+50	5115		12
6th Ave S	71+08		5120		
5th Ave S				5140	11
4th Ave S					
3rd Ave S					10
2nd Ave S					9
1st Ave S			5125		
Surfside Dr					8
1st Ave N					
2nd Ave N			5130	5130	7
3rd Ave N					

(continued)

TABLE 1 (continued) Relative Alongshore Position of Beach Profile Monuments Established in Surfside Beach [bold text indicates replacement SCCC monuments installed after hurricane Hugo].

Street	COE	CERC	SMP	SCCC	SS
4th Ave N					6
5th Ave N					5
6th Ave N					
7th Ave N		341+50	5135		
8th Ave N					
9th Ave N				**5180B**	4
10th Ave N					
11th Ave N					3
12th Ave N					
13th Ave N					2
14th Ave N			5140		
15th Ave N					
16th Ave N				**5195B**	1
17th Ave N	650+00		5145		

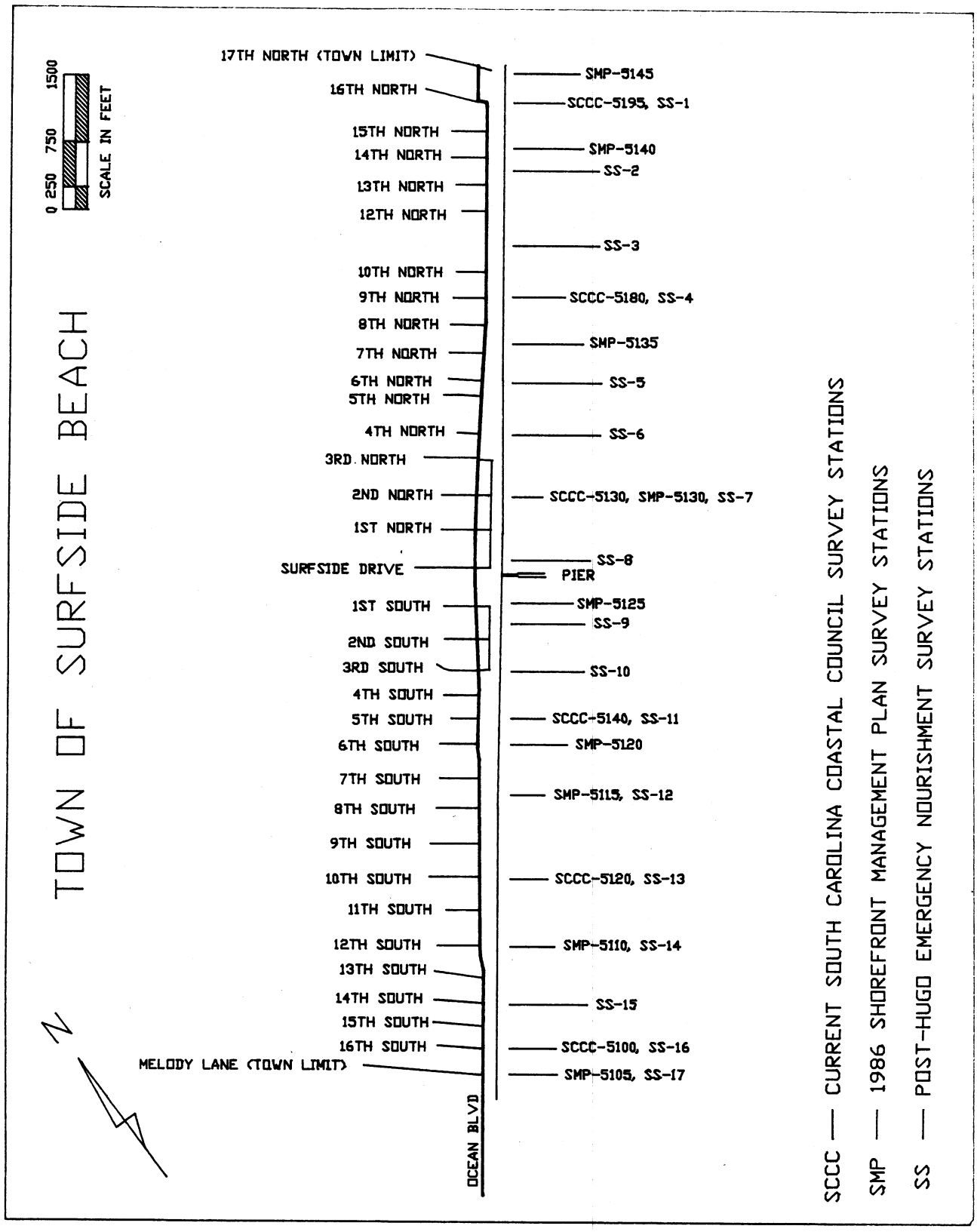


Figure 3. Beach profile monument locations along the Surfside Beach shoreline.

SCCC stations are the only stations from which beach profiles are measured at present. State plane coordinates and elevations for the six SCCC stations within Town limits are included in Table 2. Monument descriptions for the SCCC monuments are included in Appendix A. Two of the SCCC monuments listed in the Table (SCCC 5180B, SCCC 5195B) replace monuments that were destroyed by hurricane Hugo (SCCC 5180, SCCC 5195).

Figures 4a through 4f show plots of beach profiles measured at the SCCC stations between 1987 and 1990. The profiles show that substantial erosion took place during hurricane Hugo, but that post-Hugo nourishment and dune reconstruction have nearly reestablished the pre-storm profile at these locations. It should be pointed out, however, that additional dune building and revegetation (by natural or artificial means) will be required to reestablish pre-Hugo conditions.

1.1.5 Historic Shoreline Data

There are two principal sources of historic shoreline data: 1) historic maps and charts, and 2) historic aerial photographs. Both are available for Surfside Beach.

High water shoreline change maps covering the South Carolina coast were produced by the U.S. Department of Commerce, National Ocean Service (NOS) in 1984. The maps show shorelines for the years 1872, 1926, 1934, 1963, 1969/70 and 1983. These data were analyzed in detail during the Horry County Shorefront Management Plan study (ATM/OA, 1986).

Hubbard, et al. (1977) reviewed historic charts and aerial photographs for the period 1872-1963 to locate historic shorelines and to determine erosion rates. High water shoreline positions and erosion rates were determined near 12th Ave. N. (station G-2) and near 8th Ave. S. (station G-3).

The U.S. Army Corps of Engineers (1983) determined historic shoreline positions and erosion rates for the area based on the same historic charts for 1873, 1933, 1942 and 1962. High water shoreline positions and erosion rates were determined at four locations along the Surfside Beach shoreline: near 17th Ave. N. (station BA), near 6th Ave. N. (station BB), near 2nd Ave. S. (station BC), and near 11th Ave. S. (station BD).

The South Carolina Coastal Council (1990) reviewed aerial photographs for the years 1952, 1973 and 1988 to determine historic dune/vegetation line locations and trends.

TABLE 2. State Plane Coordinates and Elevations for SCCC Monuments in Surfside Beach

SCCC Station	NAD '83 Coordinates (ft) Northing	Easting	Elevation (ft NGVD)
5100	646,542.15	2,614,010.77	10.53
5120	648,120.86	2,615,143.63	10.04
5140	649,542.84	2,616,151.39	7.94
5130	651,519.32	2,617,722.55	8.17
5180B	653,224.04	2,619,104.30	7.87
5195B	654,959.08	2,620,462.16	12.57

Note: Monuments 5130 and 5140 were established in reverse order (see Figure 2)

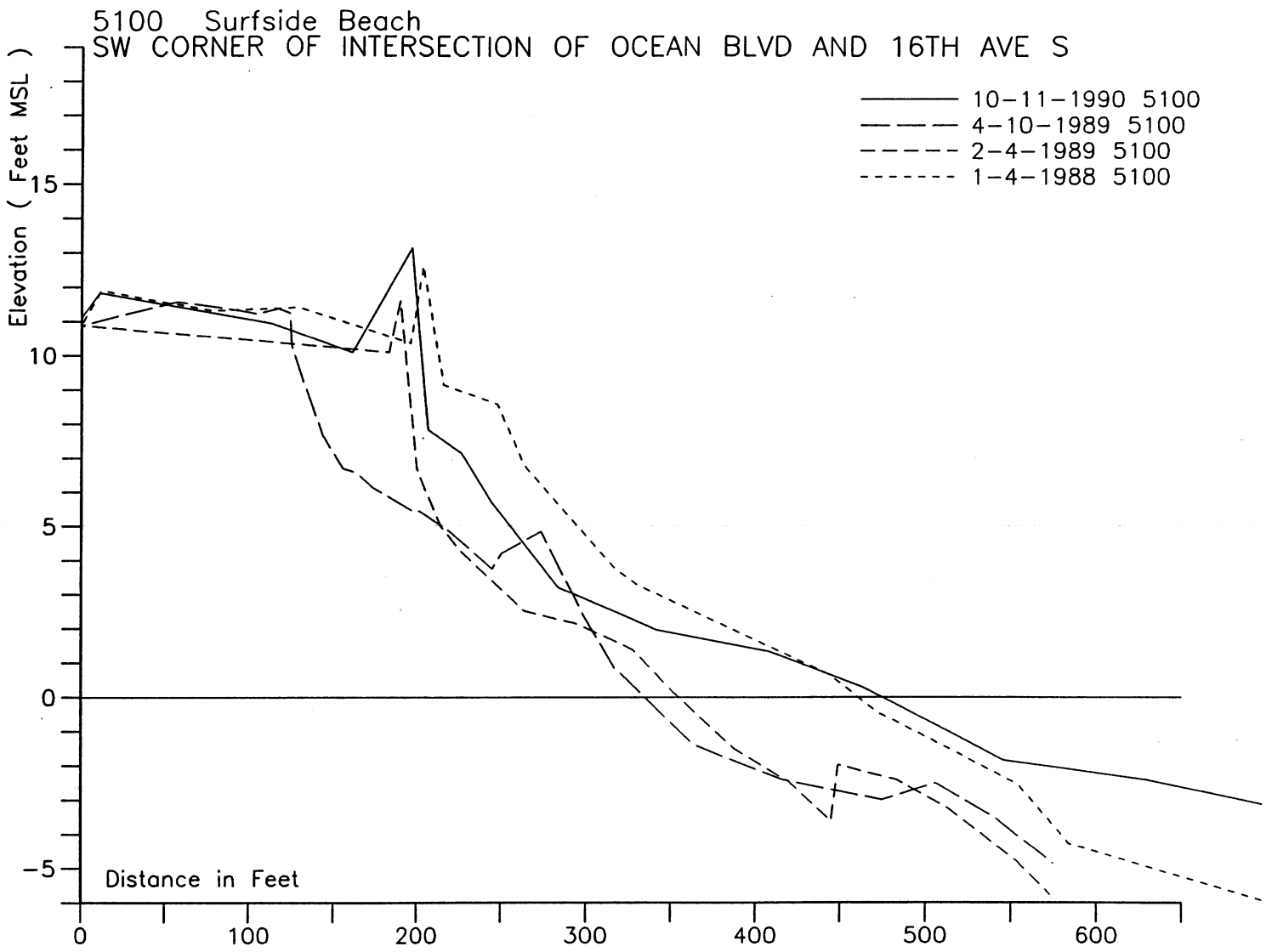


Figure 4a. Comparative beach profiles.

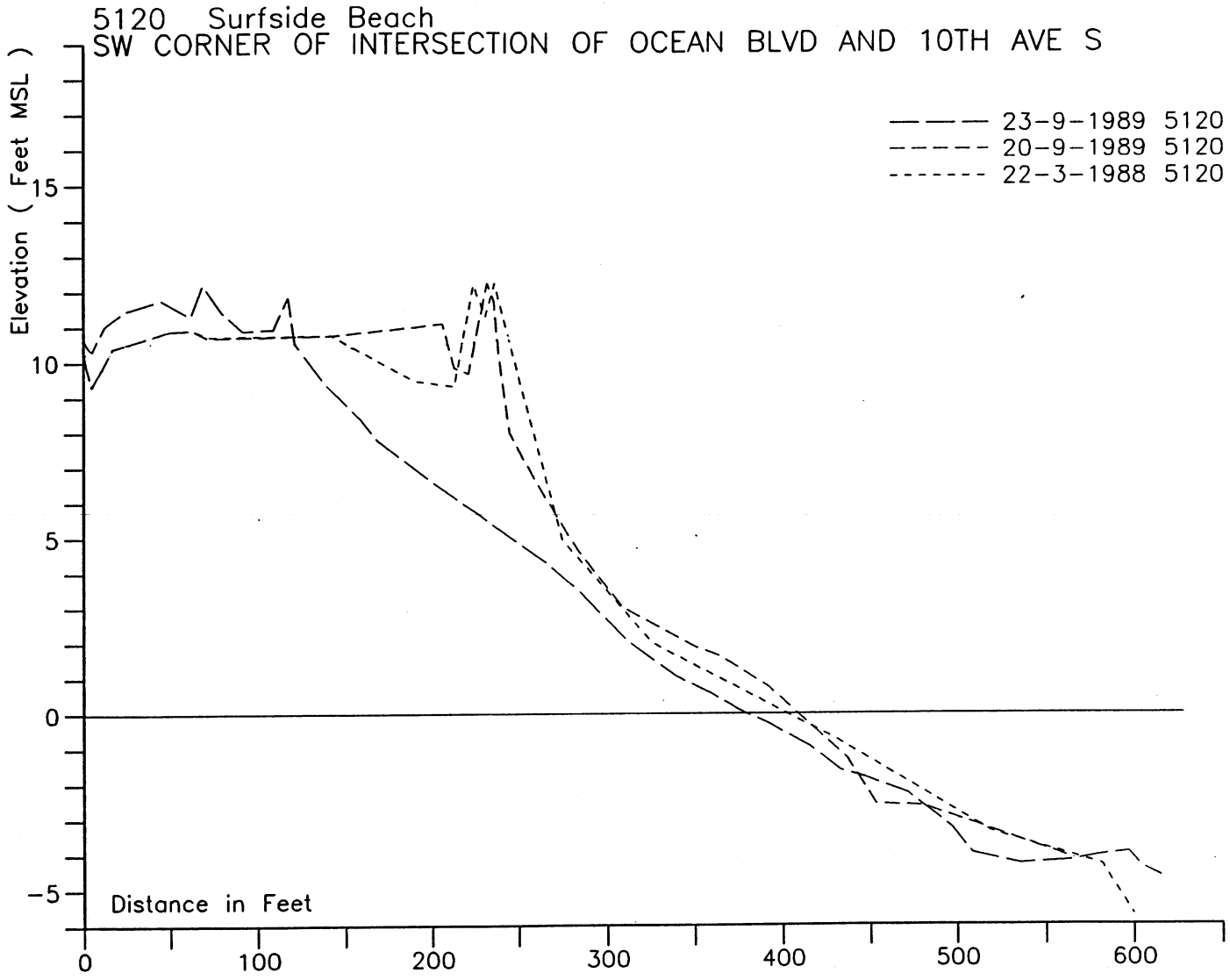


Figure 4b. Comparative beach profiles.

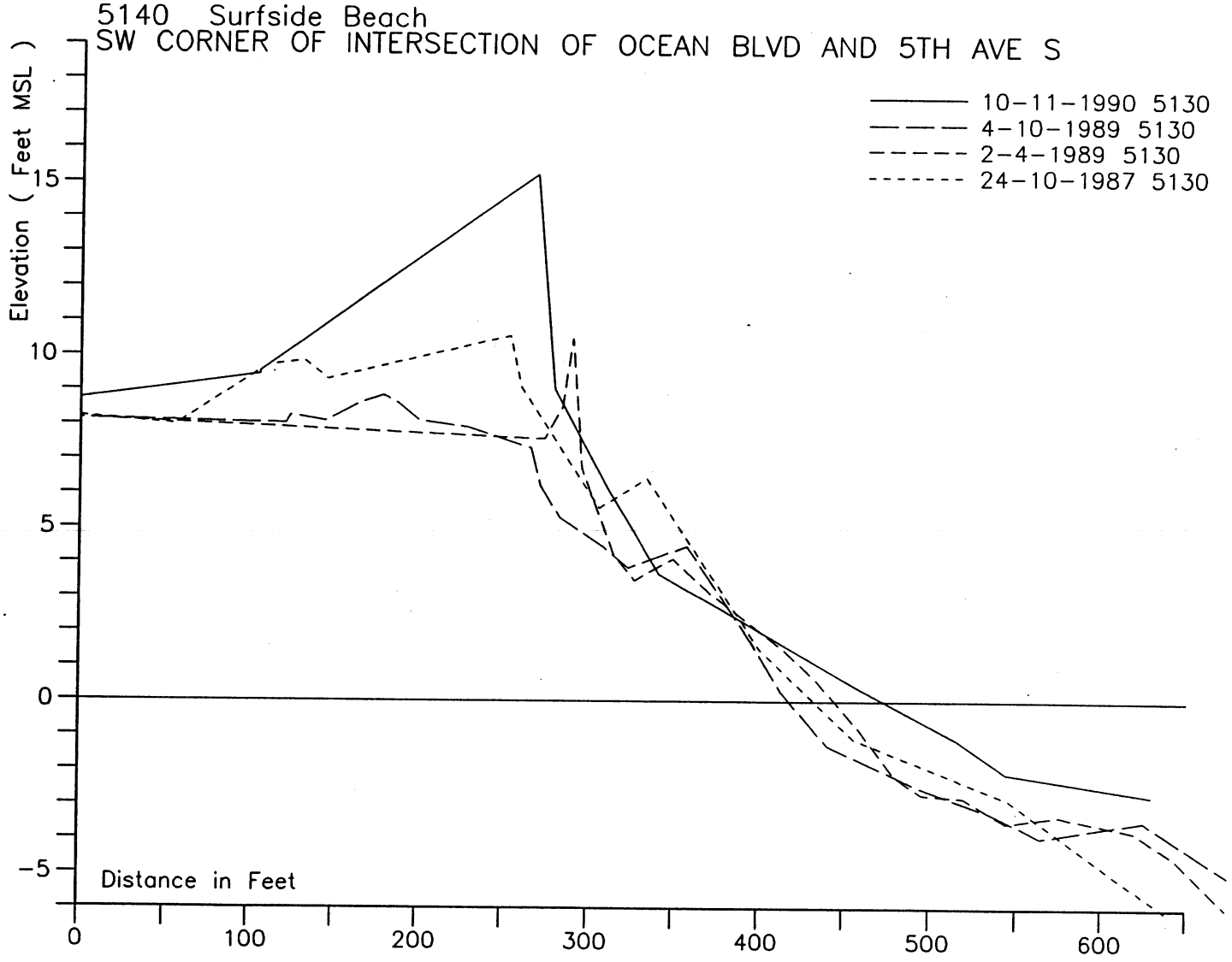


Figure 4c. Comparative beach profiles.

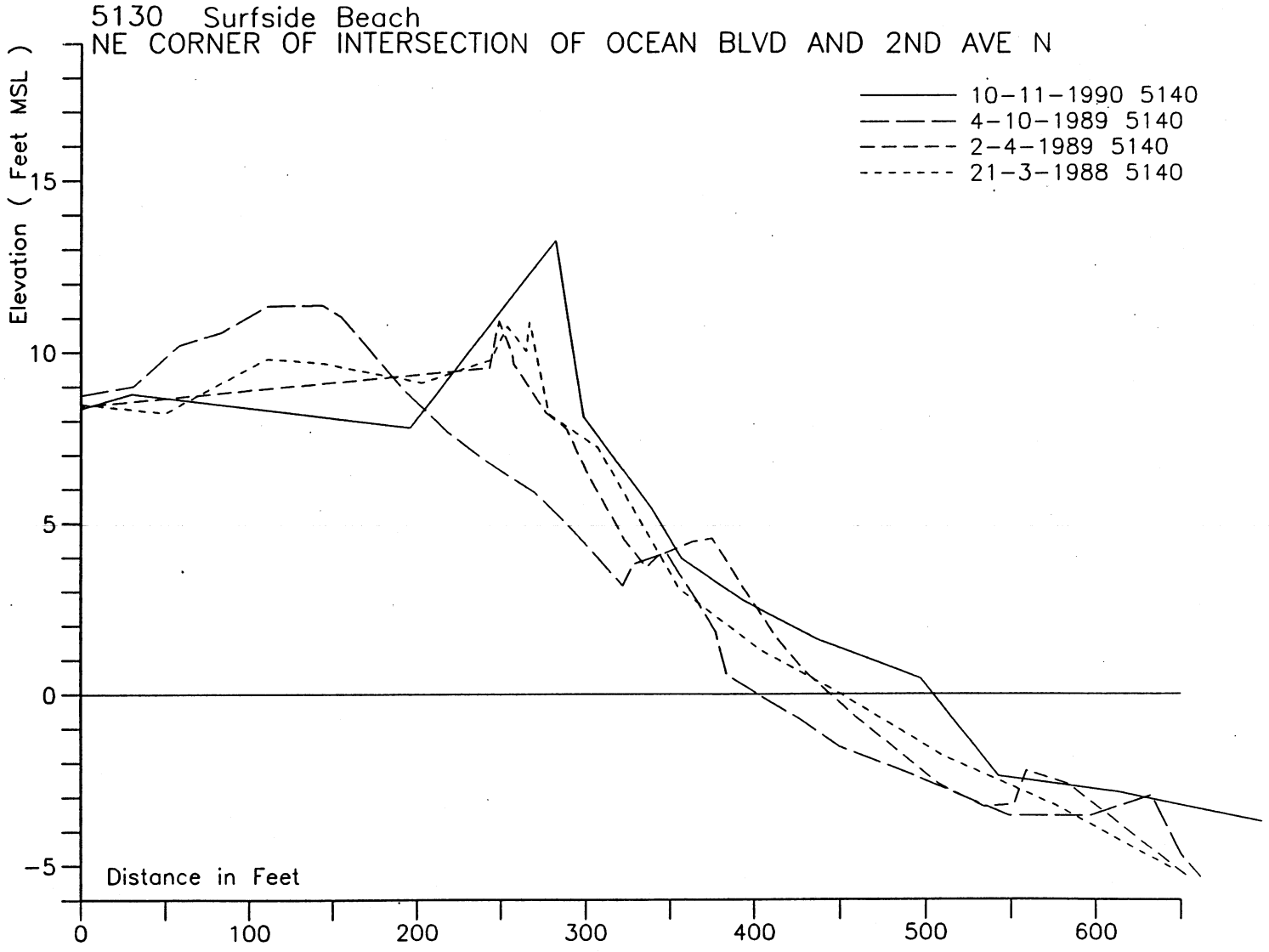


Figure 4d. Comparative beach profiles.

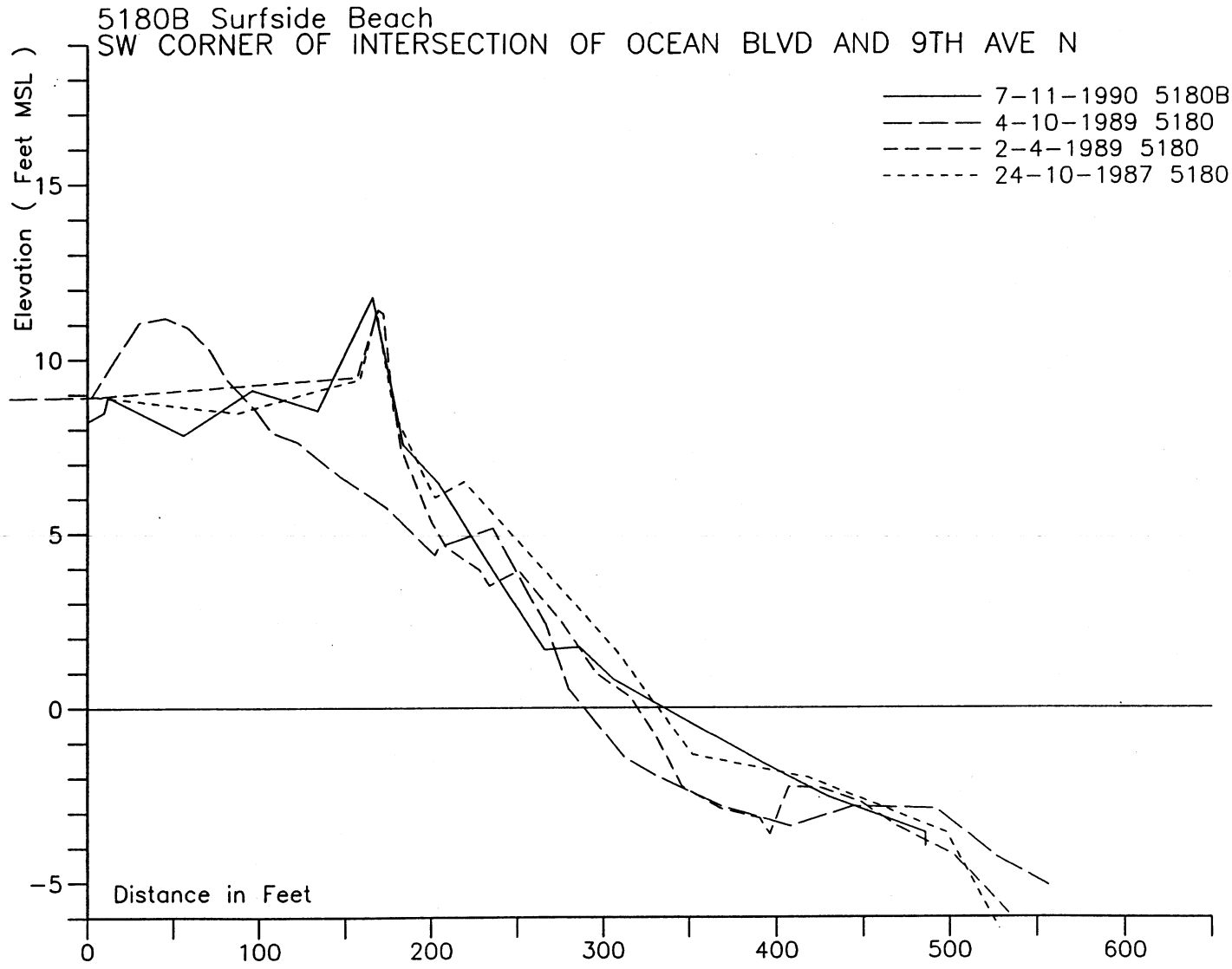


Figure 4e. Comparative beach profiles.

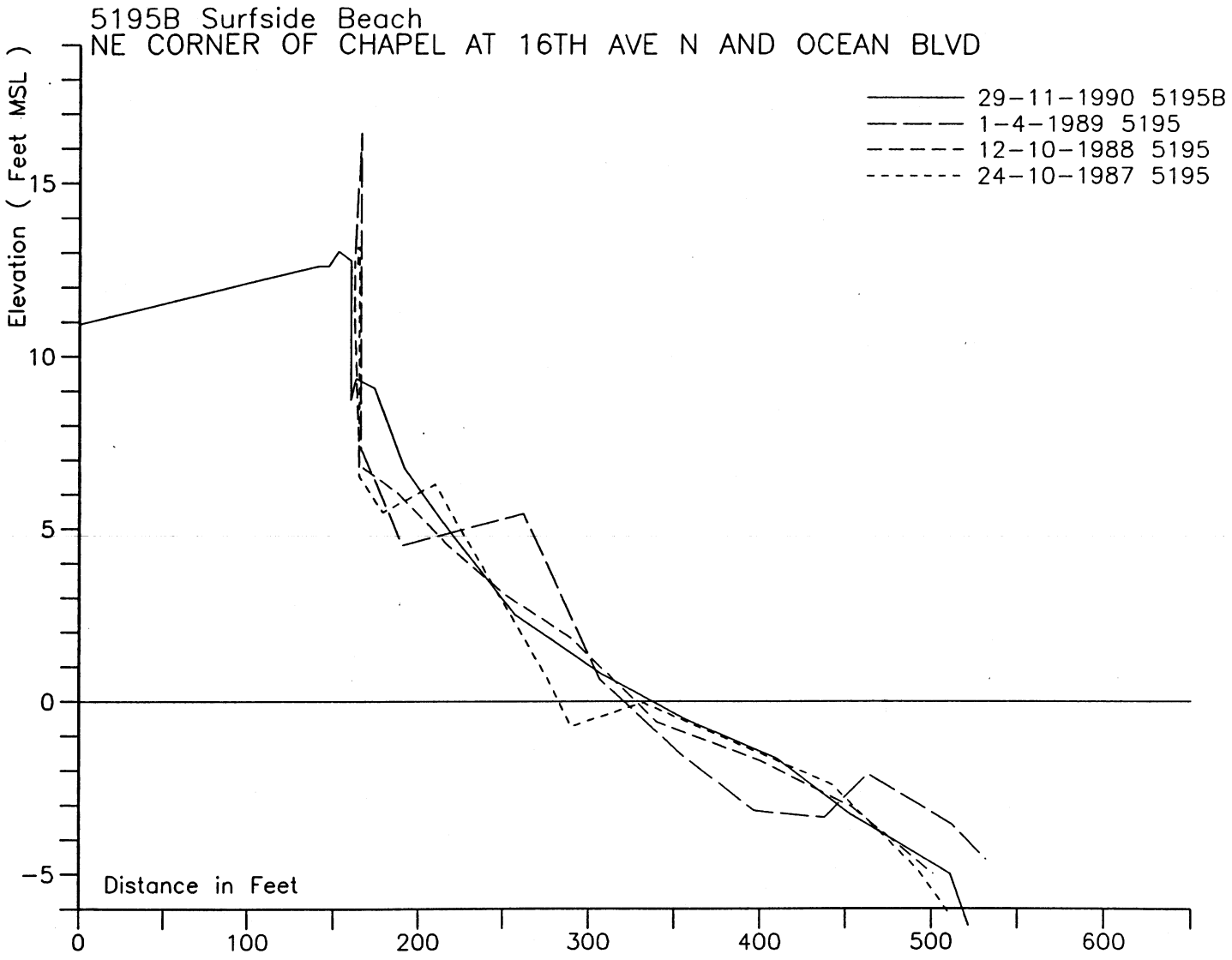


Figure 4f. Comparative beach profiles.

Shoreline positions and erosion rates determined by the SCCC are believed to be more accurate than those calculated by Hubbard, et al. (1977) and ATM/OA (1986), based on the data and procedures used.

1.1.6 Erosion Rates

Erosion rates determined by Hubbard, et al.(1977), U.S. Army Corps of Engineers (1983), ATM/OA (1986) and SCCC (1990) are included in Table 3 below. Note that rates determined by the first three sources should be similar since they relied in large part on a common data base.

The Horry County Shorefront Management Plan (ATM/OA, 1986) used an average erosion rate of -1.50 ft/yr for Garden City and Surfside Beach. This rate was adopted by the SCCC in June 1988, when the first interim baselines and setback lines were established. The erosion rate for Surfside Beach was revised to -0.90 ft/yr in February 1990, when the SCCC adopted a revised interim baseline and setback line. The revised interim erosion rate (-0.90 ft/yr) will become the final adopted erosion rate in June 1991.

1.1.7 Littoral Transport and Sediment Budgets

As was stated previously, the dominant direction of sediment transport along Surfside Beach is from north to south. However, there may be seasonal or other temporary reversals in the direction of sediment movement. Accurate estimates of littoral drift in the area have not been made, but an approximate estimate would be on the order of 50,000 to 100,000 cu yds/yr to the south.

1.1.8 Storms and Their Impact

There are several important reports that describe historic storm impacts and potential storm surge flood levels in the Surfside Beach area. Information about hurricanes and tropical storms that have affected the area is contained in several references (USACOE, 1960; Ludlum, 1963; Purvis and Landers, 1973; Myers, 1975; FEMA, 1983; Miller, 1990). Descriptions of some of the more significant storms are taken from these reports and are included below:

> <u>September 4-13, 1883</u>: After passing the Bahama Islands, the hurricane moved northward and its center entered the coast near Cape Fear, North Carolina, on September 11th. Maximum winds near Southport, North Carolina were reported at 93 mph.

TABLE 3. Comparison of Erosion Rates Calculated for the Surfside Beach area

Source	Mean Erosion Rate (ft/yr)	Erosion Rate Range (ft/yr)	Time Period
Hubbard (1977)	-1.61	-1.19 to -2.02	1872-1963
USACOE (1983)	-0.76	+0.22 to -1.35	1873-1962
ATM/OA (1986)	-0.42	0.00 to -1.26	1872-1983
"	-0.68	0.00 to -1.63	1926-1983
"	-1.08	+0.08 to -1.80	1934-1983
"	-2.22	0.00 to -4.65	1963-1983
SCCC (1990)	-0.90	--	1952-1988

October 23 - November 4, 1899: After forming in the Caribbean Sea, the storm moved northward and entered the coast near Myrtle Beach on October 31st. Very high tides were reported at Wrightsville Beach near Wilmington, North Carolina.

September 3-18, 1906: There was considerable damage to shipping along the coast from Charleston to Wilmington, North Carolina, as this hurricane entered the coast near Myrtle Beach on September 17th. A barometer reading of 944.8 mb (27.90 in) was reported at Cape Fear, North Carolina.

October 15, 1954 (Hurricane Hazel): Hurricane Hazel was first observed as it crossed the Windward Islands with winds of 100 mph. Its center entered the US coast just north of Myrtle Beach on October 15th. The lowest recorded barometric pressure of 938.0 mb (27.70 in) was reported at Little River, North Carolina. The lowest recorded barometric pressure at Myrtle Beach was 964.1 mb (28.47 in), where wind gusts reached 106 mph. Hurricane-force winds affected the coast between Georgetown and Cape Lookout, North Carolina. Storm tides devastated the immediate ocean front of this stretch of coast. High water marks at Myrtle Beach reached 15.5 ft msl; at Surfside Beach and Garden City Beach high water marks averaged 12.9 ft msl.

August 17, 1955 (Hurricane Diane): Hurricane Diane traveled along a north-northwest course, passing 50 miles offshore of Myrtle Beach, and moving inland close to Wilmington, North Carolina. The highest tide along the Horry County shoreline (four ft above normal) occurred at Surfside Beach and Garden City Beach on August 16th. Protective sand dunes constructed after hurricane Hazel were cut back several feet.

September 21, 1989 (Hurricane Hugo): Hurricane Hugo entered the coast near Charleston at midnight on September 21st. The hurricane was one of the most severe to strike the United States, and caused an estimated $7 billion in damages. Beach erosion and overwash were extensive from Folly Beach to the North Carolina line, as were flooding and damage to structures. Damage along the Surfside Beach shoreline was substantial. While flood insurance claims for Surfside Beach have not been tabulated, Miller (1990) states that windstorm insurance claims were assigned to approximately 73 percent of the policies in force in Surfside Beach.

Figure 5 shows storm tracks for memorable hurricanes that have passed near the Surfside Beach area during the last century. It is apparent from the figure that relatively few storms make landfall; most travel offshore of or over South Carolina, parallel to the coast. Fortunately, storms that parallel the coast or exit from land to sea will not cause as much damage as those making landfall.

Ho, et al. (1986) describes in detail the tropical storm and hurricane climatology for the gulf and east coasts of the United States. Selected information concerning storms affecting the Surfside Beach area have been extracted from the report and are included in Table 4.

A series of maps delineating anticipated flooding during various storm conditions (category 1, 2, 3, 4 and 5 hurricanes) are also available as part of the South Carolina hurricane evacuation study that was completed in 1986 (S.C. Water Resources Commission, 1986). The maps depict anticipated storm surge stillwater levels for hurricanes arriving or passing by the area at mid-tide.

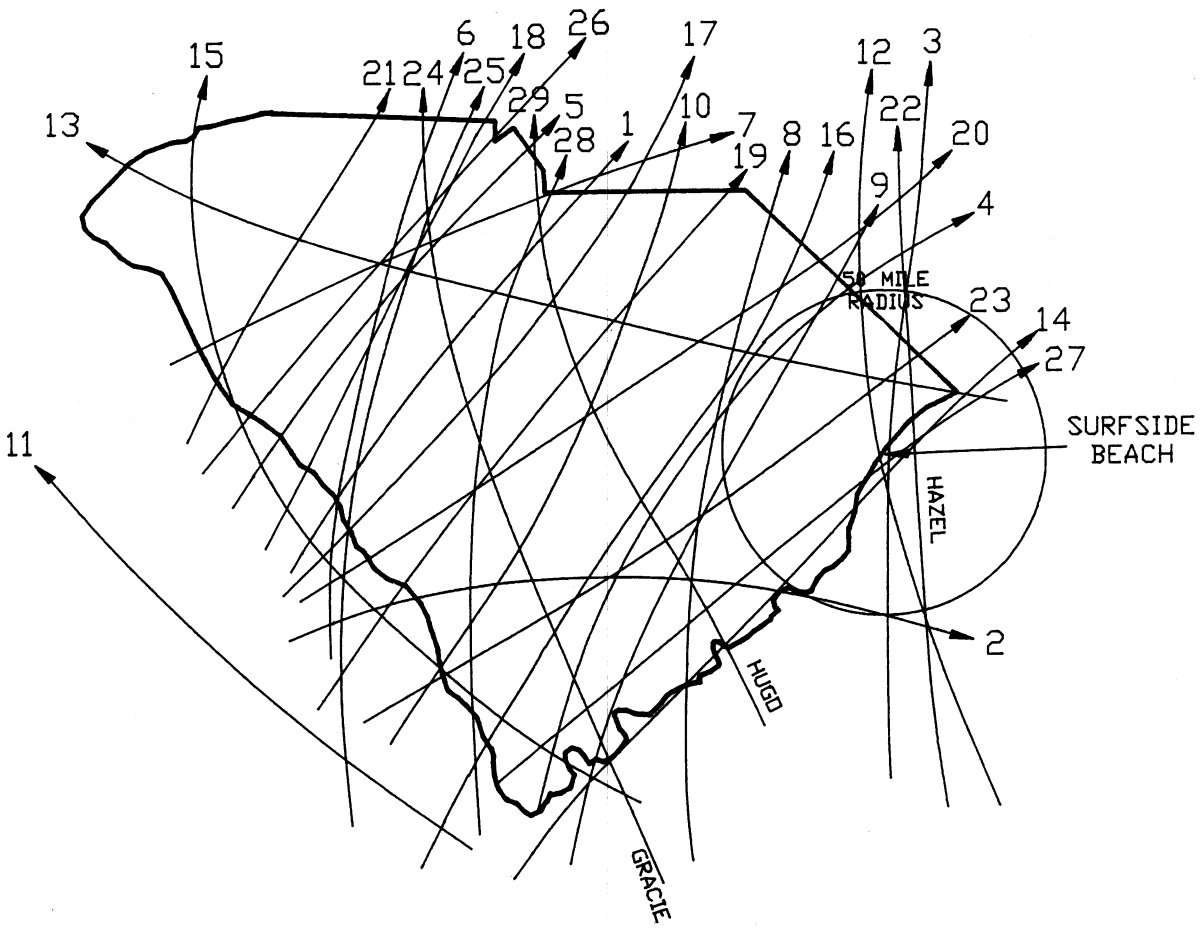
Actual flooding at Surfside Beach during hurricane Hugo reached an elevation of 12.0 to 12.9 ft NGVD (USGS, 1990). Figure 6 shows the limits of inundation caused by hurricane Hugo in 1989, and compares the flooding with that caused by hurricane Hazel in 1954.

Many northeast storms have also affected the Surfside Beach shoreline, although they have not been documented as well as hurricanes and tropical storms. One exception is the January 1, 1987 northeaster that affected the entire coastline of South Carolina. The storm caused extensive damage to seawalls, pools and decks in the Grand Strand, but limited damage elsewhere. Tides at Springmaid Pier during the storm were as much as 3.5 ft above normal.

1.2 Natural Resources

1.2.1 Endangered Species and Critical Habitat Inventory

The SCCC Guidelines for Protection of Endangered Species list a number of plant and animal species that have been classified by either state or federal agencies as endangered or threatened ("endangered species" include any species which is in danger of extinction throughout all, or a significant portion, of its range; "threatened species" include any species which is likely to become endangered within the foreseeable future). Other species have been identified as being of special concern to the SCWMRD because of diminished population, or because of loss of habitat, food sources or ranging area.



1. Oct. 3-4, 1877
2. Sept. 9, 1882
3. Sept. 11, 1883
4. Aug. 25, 1885
5. June 21-22, 1886
6. Aug. 27-28, 1893
7. Oct. 3, 1893
8. Oct. 13, 1893
9. Sept. 28, 1894
10. Sept. 29, 1896
11. Oct. 2, 1898
12. Oct. 31, 1899
13. Sept. 17, 1906
14. Oct. 19-20, 1910
15. Aug. 28, 1911
16. Sept. 18, 1928
17. Oct. 1, 1929
18. Sept. 6-7, 1933
19. Sept. 5, 1935
20. Oct. 7-8, 1941
21. Aug. 28, 1949
22. Oct. 15, 1954
23. Sept. 25-26, 1956
24. Sept. 29, 1959
25. Aug. 29, 1964
26. Sept. 12-13, 1964
27. June, 10, 1966
28. Sept. 4, 1979
29. Sept. 21, 1989

Figure 5. Memorable hurricanes affecting South Carolina, 1877-1990 (after Purvis and Landers, 1973)

TABLE 4. Climatological Characteristics of Hurricanes and Tropical Storms affecting the Surfside Beach Area.

Number of landfalling tropical storms and hurricanes per 10 nmi per 100 years	1.5
Number of exiting tropical storms and hurricanes per 10 nmi per 100 years	0.4
Number of alongshore tropical storms and hurricanes passing within 30 nmi offshore per 100 years	8
Probability that a landfalling storm will have a central pressure less than or equal to:	
980 mb (Category 2)	55%
965 mb (Category 3)	22%
945 mb (Category 4)	7%
920 mb (Category 5)	< 1%

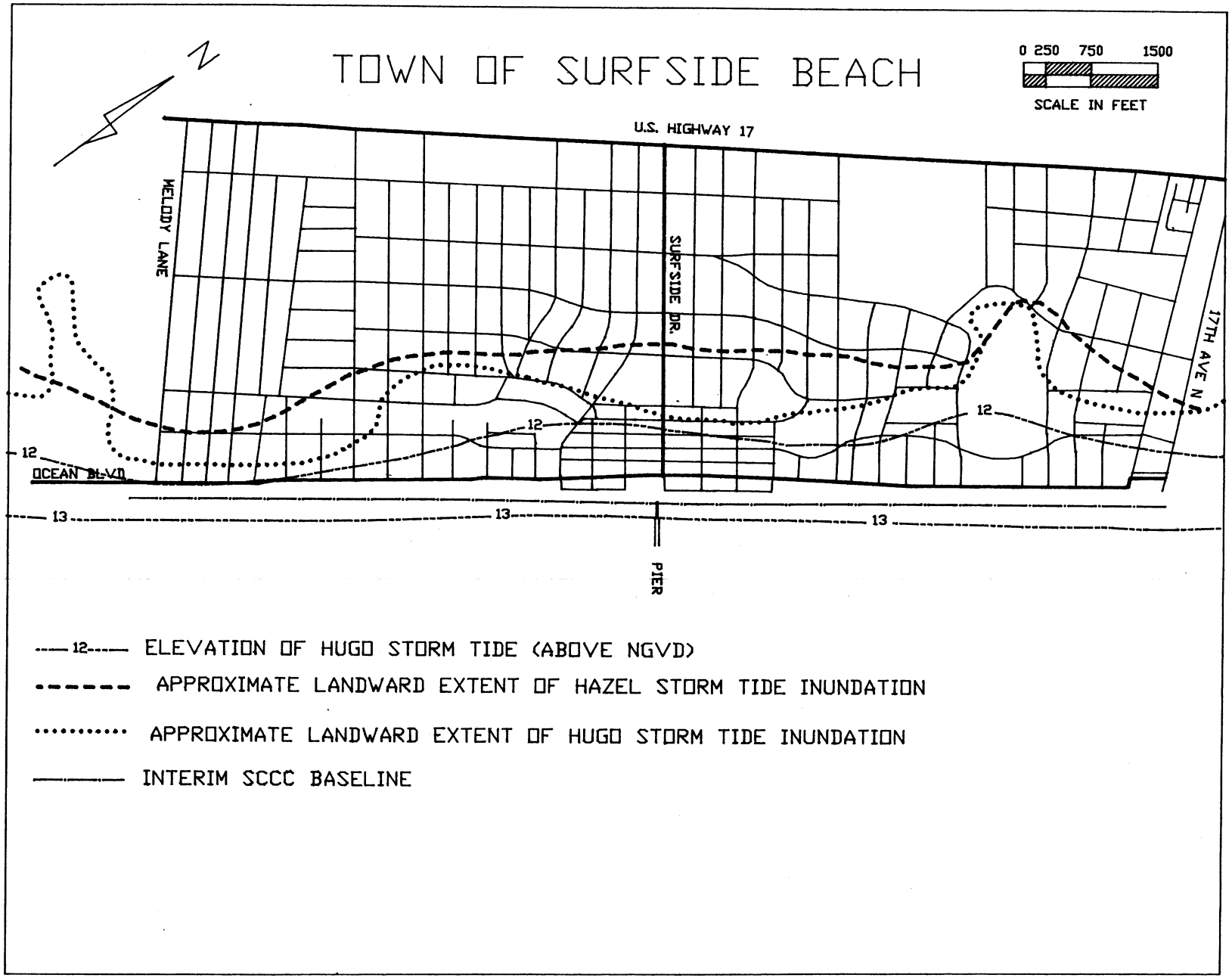


Figure 6. Comparison of storm tide innundation caused by hurricanes Hazel and Hugo [from USACOE (1960) and USGS (1990)].

Those species listed in Table 5 are either endangered, threatened or of special concern, and use the South Carolina beachfront for nesting, feeding or habitat purposes.

Conversations with agency staff during the development of this Plan reveal that the inventory and mapping (of endangered and threatened species, species of special concern and critical habitat areas) required by the Beachfront Management Act has not been completed. With the exception of the Loggerhead turtle, patterns of species distribution and habitat use are not well-documented along the South Carolina shoreline. The Town of should work closely with state and federal agencies to complete the necessary inventory/mapping work and to develop appropriate protection plans (see Section 2.6).

1.3 Present and Future Land Use

The SCCC Guidelines for the Development of Local Comprehensive Beach Management Plans require local governments to inventory and map the following: land use, zoning, structures, erosion control structures, drainage and beach access within and adjacent to the 40-year setback area. These inventories have been completed. Inventory sheets and page size maps are contained in Section 3 of this Plan; large overlay maps are also provided. A review of the inventory of existing development along Surfside Beach reveals the following:

1. There are 144 oceanfront parcels along the Surfside Beach shoreline, 126 parcels in the R-3 zoning district (High Density and Accommodations) and 18 parcels in the C-3 zoning district (Amusement-Commercial).

2. At the time of the April 1991 field inventory, 39 single family and 49 multi-family/commercial buildings existed on the oceanfront parcels; 52 of the structures are less than 5,000 ft^2 and 36 of the structures are more than 5,000 ft^2 in size; 35 oceanfront parcels were vacant.

3. Oceanfront habitable structures lie an average of 2 ft landward of the SCCC interim setback line (38 ft landward of the SCCC interim baseline).

4. Forty-seven habitable structures and 21 pools lie an average of 17 ft seaward of the SCCC interim setback line (19 ft landward of the SCCC interim baseline). Twelve habitable structures or pools

TABLE 5. Endangered, Threatened and Protected Species Along the South Carolina Shoreline

Name	Status*	Habitat/Activity
Loggerhead turtle	T (f,s)	beaches (nesting)
Eastern brown pelican	SC (s)	beaches
Ipswich sparrow	E (s)	beaches, dunes (wintering)
Least tern	T (s)	beaches, dunes (nesting)
Wilson's plover	T (s)	beaches, dunes (nesting)
Piping plover	E (f,s)	beaches, dunes (wintering)
Island glass lizard	SC (s)	dunes
Seabeach Amaranth	SC (s)	dunes (plant)

notes:
E = endangered
T = threatened
SC = special concern
f = federally protected species
s = South Carolina protected species

lie within 10 ft of the interim baseline; no pools or habitable structures lie seaward of the baseline (with the exception of the Surfside Pier). Another two pools and 34 habitable structures lie within 50 ft landward of the SCCC interim setback line.

5. Only one erosion control structure was visible during the field inventory, that being the rock revetment at the Holiday Inn. The crest of the revetment lies approximately five ft seaward of the interim baseline.

6. There are six locations where storm water drains onto the beach; all but one have been improved with six ft wide timber swashes. The drainage structure opposite Surfside Drive is a 24-in. diameter reinforced concrete pipe.

7. There are 33 public beach access structures along the Surfside Beach shoreline (29 dune walkovers and four vehicle ramps). There are 79 private dune walkover structures.

8. A total of 350 public, off-street parking spaces are available in eight parking areas; three planned parking areas will bring the total number of spaces to more than 410.

1.4 Zoning and Land Use Controls

1.4.1 Town of Surfside Beach Zoning

Figure 7 shows the March 1988 zoning districts that encompass the ocean shoreline of Surfside Beach. Development criteria for these districts are contained in the Chapter 17 of the Town Code, also known as the Zoning Ordinance of the Town of Surfside Beach (see Appendix B).

The C-3 district encompasses the central 0.35 miles of Town oceanfront shoreline. This district permits both accommodations and business uses; the minimum lot size is 5,000 ft^2; the minimum width of lots at the building line is 60 ft. Although the minimum rear yard setback is given as 10 ft for this district, the Town Shore Protection Ordinance (see Sec. 1.4.2) will require a building setback of at least 20 ft from the property line nearest the Atlantic Ocean.

The R-3 district encompasses all of the Town's ocean shoreline except that included in the C-3 district. This district permits high density residential and accommodations; the minimum lot size is 5,000 ft^2; the minimum width of lots at the building line is 50 ft. Although the minimum rear yard setback is given as 15 ft for

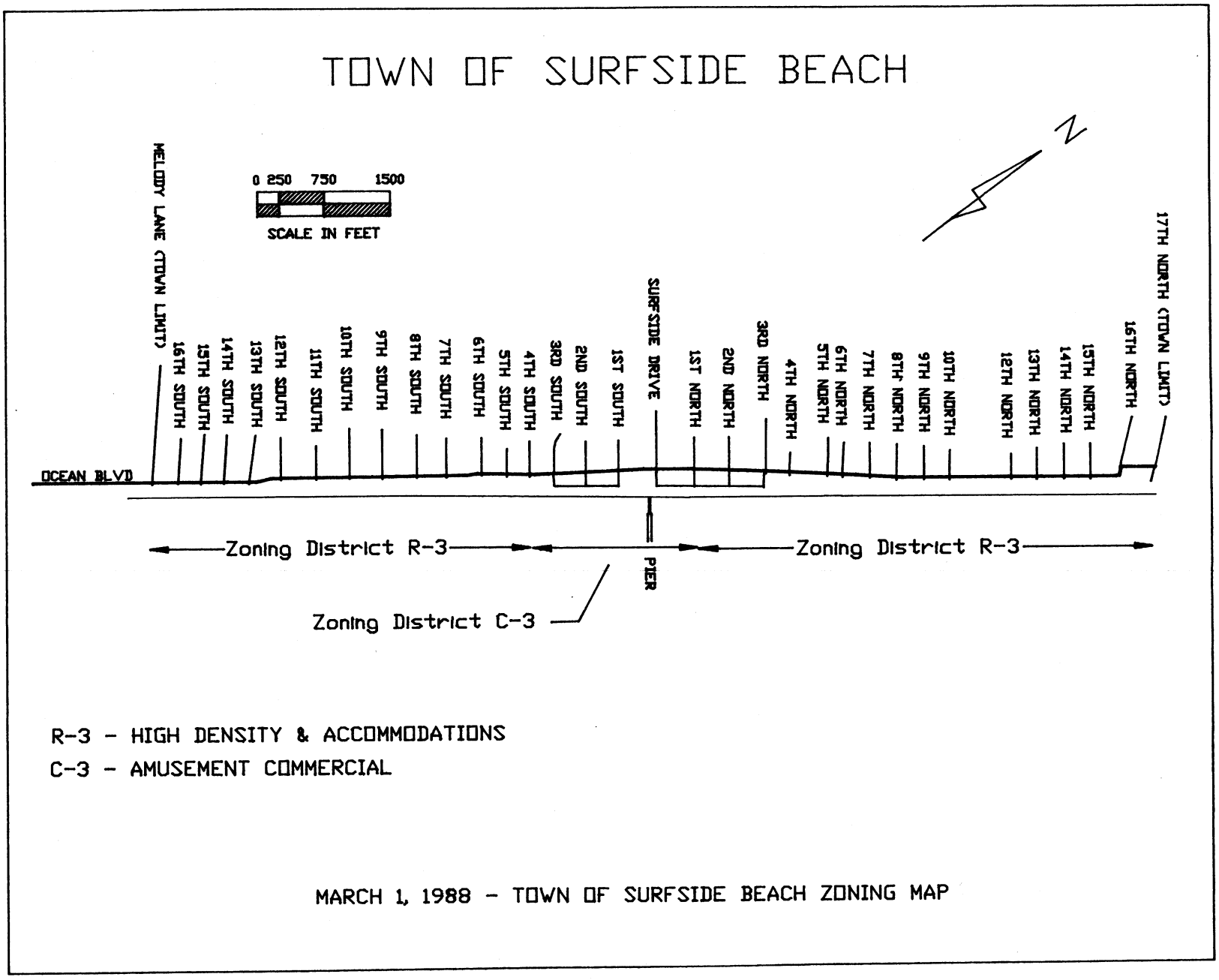


Figure 7. Zoning districts along the Surfside Beach shoreline.

this district, the Town Shore Protection Ordinance (see Sec. 1.4.3) will require a building setback of at least 20 ft from the property line nearest the Atlantic Ocean.

1.4.2 SCCC Oceanfront Setback Lines and Regulations

The 1990 Beachfront Management Act (see Appendix C) strictly regulates construction and reconstruction along the ocean shoreline of Surfside Beach. However, the law will have little impact on existing or future construction due to the presence of the Town's Shore Protection Line and regulation of the area seaward of the SPL (see Sec. 1.4.3). Table 6 summarizes the impacts of the Beachfront Management Act on various development activities. The table makes reference to sections of the Act and to various rules, administrative interpretations and general permits; these are contained in Appendix D.

The Surfside Beach shoreline has been classified by the SCCC as a standard erosion zone. The baseline in a standard erosion zone is set along the crest of the primary dune where a dune exists, and where scientific and historical data suggest the dune crest would be located in areas that have been altered to the point where a dune does not exist.

The SCCC has determined that the pre-Hugo dune crest, as determined from 1988 aerial photographs, will be the final baseline adopted during June 1991. The interim SCCC baseline currently in effect (and shown on the maps in Sec. 3 of this Plan) does not follow the dune crest exactly. The final baseline will follow the 1988 dune crest more precisely and will deviate from the interim baseline by approximately five to 10 ft along the Surfside Beach shoreline.

The SCCC has adopted a long-term erosion rate of -0.9 ft/yr for Surfside Beach. Hence, the SCCC 40-year setback line lies 36 ft landward of the baseline. When the interim baseline is revised and the final SCCC baseline takes effect, the setback line will shift as well.

1.4.3 Town of Surfside Beach Shore Protection Line

The Town has established a Shore Protection Line (SPL) seaward of which land and plants are protected (see Chapter 17, Article VIII of the Town Code). The existing SPL lies along the more landward of either, a line 20 ft landward of the property line nearest the Atlantic Ocean, or a line 20 ft landward of the trough of the primary oceanfront sand

Table 6. Summary of Activities Regulated by 1990 Beachfront Management Act

TYPE OF STRUCTURE	CONSTRUCTION BETWEEN THE SETBACK LINE AND BASELINE	CONSTRUCTION SEAWARD OF THE BASELINE
Habitable Structures		
New Construction	Allowed 48-39-290 (B) (l) R. 30-13 (B)	Not allowed without special permit 48-39-290 (D) R. 30-15 (F)
Normal Maintenance and Repair	Allowed 48-39-290 (B) (l) (b) (i) R. 30-13 (A)	Allowed 48-39-290 (B) (l) (b) (i)
Additions	Allowed 48-39-290 (B) (l) (B) (ii)	Not Allowed
Repair and Renovations	Allowed 48-39-290 (B) (l) (B) (iii) R. 30-13 (D)	Allowed 48-39-290 (B) (l) (B) (iii)
Replacement After Destroyed Beyond Repair By Natural Causes	Allowed 48-39-290 (B) (l) (B) (iv) R. 30-13 (E)	Not allowed without special permit R. 30-15 (F)
Replacement After Destroyed Beyond Repair by Man-Made Causes	Allowed 48-39-290 (B) (l) (B) (v) R. 30-13 (E)	Not allowed without special permit R. 30-15 (F)
Pools		
New Pools	Allowed if behind existing erosion control structures 48-39-290 (B) (3) (a) R. 30-16 (A) (1) (d)	Not allowed 48-39-290 (B) (3) (a)
Normal Maintenance and Repair	Allowed 48-39-290 (B) (3) (b) R. 30-5 (D)	Allowed 48-39-290 (B) (3) (b) R. 30-5 (D)
Additions	Not applicable	Not applicable
Repair and Renovation	Allowed 48-39-290 (B) (3) (d) R. 30-5 (A) (10)	Allowed 48-39-290 (B) (3) (d) R. 30-5 (A) (10)
Replacement After Destroyed Beyond Repair By Natural Causes	Allowed 48-39-290 (B) (3) (c) R. 30-16 (A) (1) (e) R. 30-16 (A) (2) (c)	Allowed if behind existing erosion control structure or by special permit 48-39-290 (B) (3) (c) R. 30-15 (G)
Replacement After Destroyed Beyond Repair by Man-Made Causes	Allowed 48-39-290 (B) (3) (c) R. 30-16 (A) (1) (e) R. 30-16 (A) (2) (c)	Allowed if behind existing erosion control structure or by special permit 48-39-290 (B) (3) (c) R. 30-15 (G)

Table 6. Summary of Activities Regulated by 1990 Beachfront Management Act (Continuation)

TYPE OF STRUCTURE	CONSTRUCTION BETWEEN THE SETBACK LINE AND BASELINE	CONSTRUCTION SEAWARD OF THE BASELINE
Decks		
New	Allowed (144 square feet) 48-39-290 (A) (2) GP 90-E R. 30-13 (H)	Allowed (144 square feet) 48-39-290 (A) (2) GP-90-E R. 30-15 (B)
Normal Maintenance	Allowed GP-90-E R. 30-13 (H)	Allowed GP-90-E R. 30-15 (B)
Repair and Replacement or Reconstruction	Allowed GP-90-E R. 30-13 (H)	Allowed GP-90-E R. 30-15 (B)
Walkways		
New	Allowed 48-39-290 (A) (I) R. 30-13 (H)	Allowed 48-39-290 (A) (I) R. 30-15 (A)
Normal Maintenance and Repair	Allowed R.30-5 (D)	Allowed R.30-5 (D)
Repair and Replacement or Reconstruction	Allowed 48-39-290 (A) (I)	Allowed 48-39-290 (A) (I)
Drainage Structures		
New	Allowed GP-90-B R. 30-13 (K)	Allowed GP-90-B R. 30-13 (K)
Normal Maintenance and Repair	Allowed GP-90-B Section 48-39-130 (D) (7) R. 30-13 (K)	Allowed GP-90-B Section 48-39-130 (D) (7) R. 30-13 (K)
Repair and Replacement or Reconstruction	Allowed GP-90-B Section 48-39-130 (D) (7) R. 30-13 (K)	Allowed GP-90-B Section 48-39-130 (D) (7) R. 30-13 (K)
Utilities		
New	Allowed GP-90-A R. 30-13 (J)	Allowed GP-90-A R. 30-13 (J)
Normal Maintenance and Repair	Allowed GP-90-A Section 48-39-130 (D) (7) R. 30-13 (J)	Allowed GP-90-A Section 48-39-130 (D) (7) R. 30-13 (J)
Repair and Replacement or Reconstruction	Allowed GP-90-A Section 48-39-130 (D) (7) R. 30-13 (J)	Allowed GP-90-A Section 48-39-130 (D) (7) R. 30-13 (J)

Table 6. Summary of Activities Regulated by 1990 Beachfront Management Act (Continuation)

TYPE OF STRUCTURE	CONSTRUCTION BETWEEN THE SETBACK LINE AND BASELINE	CONSTRUCTION SEAWARD OF THE BASELINE
Fences, Lighting, Trash Receptacles, Sidewalks, and Signs		
New	Allowed GP-90-D R. 30-13 (G)	Allowed GP-90-D
Normal Maintenance and Repair	Allowed GP-90-D Section 48-39-130 (D) (7) R. 30-13 (G)	Allowed GP-90-D Section 48-39-130 (D) (7)
Repair and Replacement or Reconstruction	Allowed GP-90-D Section 48-39-130 (D) (7) R. 30-13 (G)	Allowed GP-90-D Section 48-39-130 (D) (7)
Sand Fences, Minor Beach Renourishment and Dune Revegetation		
New	Allowed GP-90-F R. 30-13 (L)	Allowed GP-90-F R. 30-13 (L)
Normal Maintenance and Repair	Allowed GP-90-F Section 48-39-130 (D) (7) R. 30-13 (L)	Allowed GP-90-F Section 48-39-130 (D) (7) R. 30-13 (L)
Repair and Replacement or Reconstruction	Allowed GP-90-F Section 48-39-130 (D) (7) R. 30-13 (L)	Allowed GP-90-F Section 48-39-130 (D) (7) R. 30-13 (L)
Golf Courses		
New	Allowed 48-39-290 (A) (4) GP-90-C R. 30-13 (Q)	Allowed 48-39-290 (A) (4) GP-90-C R. 30-15 (D)
Normal Maintenance and Repair	Allowed GP-90-C R. 30-13 (Q)	Allowed GP-90-C R. 30-15 (D)
Repair and Replacement or Reconstruction	Allowed GP-90-C R. 30-13 (Q)	Allowed GP-90-C R. 30-15 (D)

Table 6. Summary of Activities Regulated by 1990 Beachfront Management Act (Continuation)

TYPE OF STRUCTURE	CONSTRUCTION BETWEEN THE SETBACK LINE AND BASELINE	CONSTRUCTION SEAWARD OF THE BASELINE
Erosion Control Devices		
New Construction	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)
Normal Maintenance and Repair	Allowed R.30-5 (D)	Allowed R. 30-5 (D)
Additions	Not allowed	Not allowed
Repair and Renovation	Allowed if not more than 80%, 66 2/3%, 50% destroyed 48-39-290 (B) (2) (b) R. 30-13 (N) (4)	Allowed if not more than 80%, 66 2/3%, 50% destroyed 48-39-290 (B) (2) (b) R. 30-13 (N) (4)
Replacement After Destroyed Beyond Repair By Natural Causes	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)
Replacement After Destroyed Beyond Repair by Man-Made Causes	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)	Not allowed 48-39-290 (B) (2) (a) R. 30-13 (N) (4)

dune. As will be seen below and in Sec. 4 of this Plan, it is recommended that the method of establishment of the SPL be revised.

Given the fact that both the SCCC and Town now regulate oceanfront development, it is appropriate to redefine the Town SPL location so that it is measured from the SCCC baseline (dune crest) rather than the dune trough (neglecting for the moment those few instances where the 20 ft setback from the property line is more landward). In that way, the Town SPL will be parallel to the SCCC baseline and setback line.

An examination of pre-Hugo beach profiles for the area revealed that the dune trough was approximately nine to 15 ft landward of the dune crest prior to the storm. Thus, the pre-Hugo SPL was approximately 29 to 35 ft landward of the dune crest. Dune construction following Hugo reestablished a dune at or near the SCCC interim baseline, with a width of the landward side of the dune of approximately 10 to 20 ft. An SPL established based on post-Hugo conditions would generally lie 30 to 40 ft landward of the dune crest. Based on this information, it seems reasonable to redefine the SPL location to be 36 ft landward of the SCCC baseline -- coincident with the SCCC setback line. This revised SPL definition remains generally consistent with the original Town ordinance and the physical shape of dunes in the area, yet will simplify the administration and enforcement of oceanfront setback regulations. Figure 8 shows a comparison of the existing and proposed SPL definitions.

The current Town regulations pertaining to the Shore Protection Area (i.e., the area seaward of the SPL) prohibit any construction or alteration except for: dune construction; construction of dune crossings and walkways; placement of sand fence; placement of light poles, garbage receptacles, lifeguard stands, etc. to provide for public health, safety and welfare; and emergency erosion control measures (beach nourishment, sand bagging and sand scraping). Recommended revisions to the regulations will be will be made in Sec. 4 of this Plan.

Inasmuch as the Town SPL lies at least 20 ft landward of the trough of the primary dune, the SPL is considerably landward of the SCCC interim baseline. Town regulations will generally be more restrictive than SCCC regulations governing construction seaward of the 40-year setback line.

1.4.4 National Flood Insurance Program (NFIP)

The most recent Flood Insurance Study to include the Town of Surfside Beach was the 1988 study of Horry County (FEMA, 1988). Unlike earlier flood studies that separated incorporated areas from unincorporated areas, the 1988 study

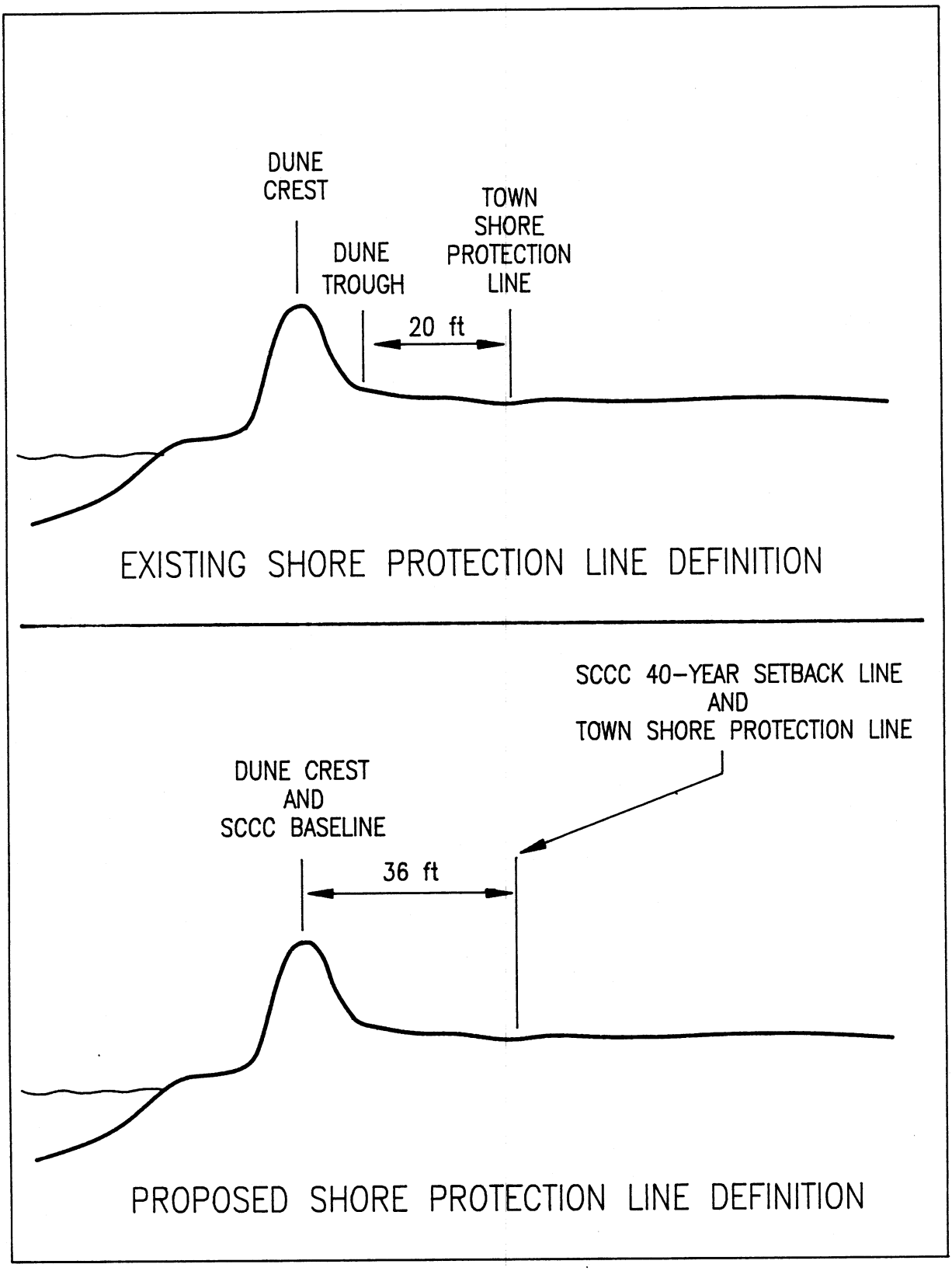


Figure 8. Comparison of existing and revised Town shore protection line definitions.

encompassed the entire county, including Surfside Beach. Figure 9, taken from Flood Insurance Rate Map 308, shows the limits of A and V flood zones along the Surfside Beach shoreline.

Table 7, also taken from the FEMA (1988) report, lists the stillwater flood levels expected during storms with varying return periods. Note that actual, 100-year base flood elevations mandated by FEMA and enforced by the Town will exceed the level in Table 10 due to the impact of waves close to the shoreline.

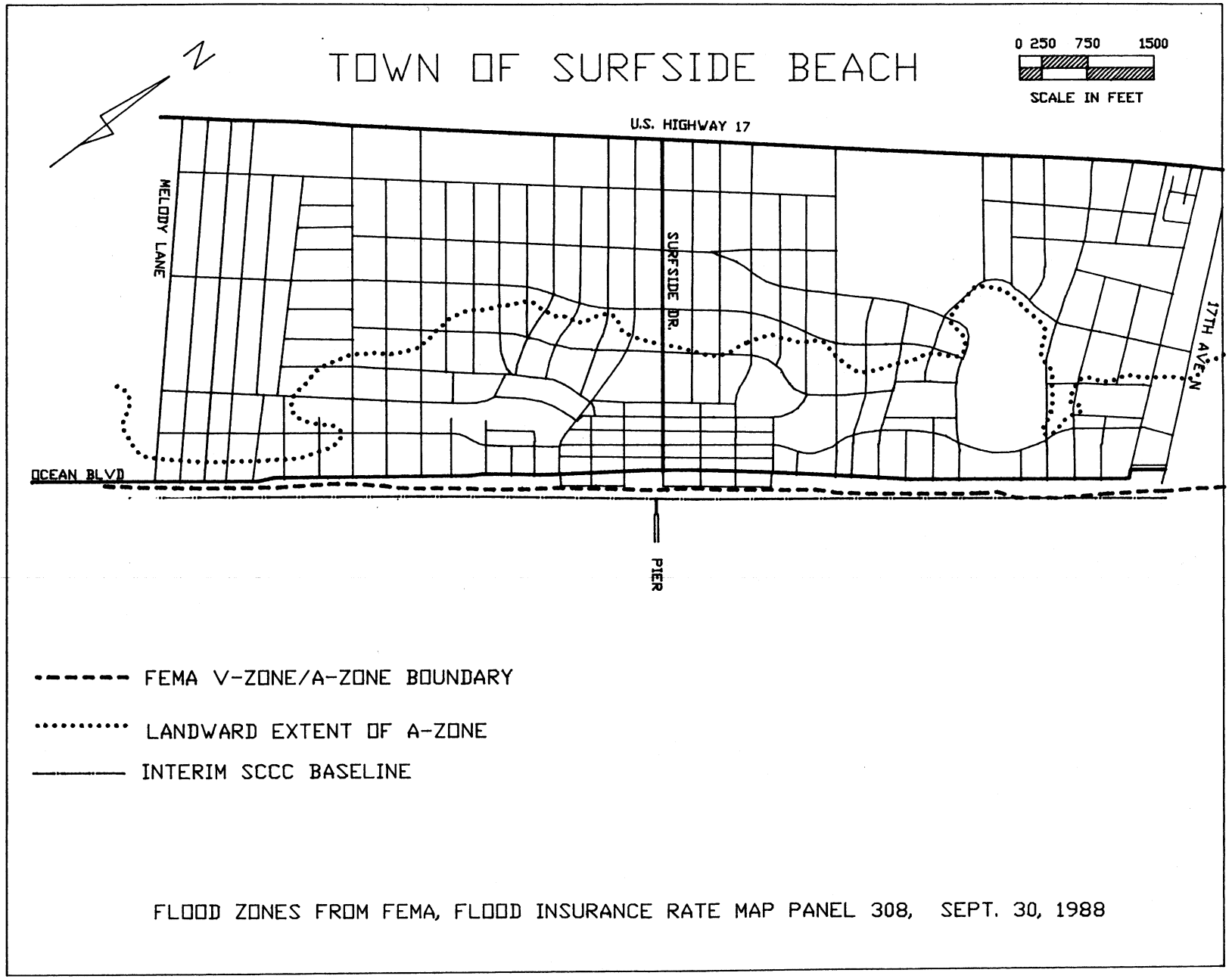


Figure 9. FEMA (1988) A and V flood zone boundaries.

Table 7. Stillwater Flood Elevations for Surfside Beach (FEMA, 1988)

Recurrence Interval	Stillwater Elevation ft NGVD
10-year	7.3
50-year	11.5
100-year	15.0
500-year	16.4

SECTION 2. BEACH MANAGEMENT PLAN COMPONENTS

SECTION 2. BEACH MANAGEMENT PLAN COMPONENTS

2.1. Town Policies for Beachfront Management

The Town of Surfside Beach will:

adopt and implement policies, procedures and ordinances to protect, preserve, restore and enhance the natural character of Surfside Beach's beach/dune system.

encourage full and complete public access to its beaches.

work closely with property owners and government agencies to maintain the protective, ecological and recreational functions of the beach/dune system.

develop strategies for erosion control and beach/dune restoration that will minimize potential adverse environmental impacts.

develop strategies for protecting critical habitats and threatened/endangered species.

develop strategies for improving, protecting and/or relocating structures and facilities along the shoreline.

periodically collect and/or review beach profile and other data to assess changing conditions along the shoreline.

periodically revise this Plan to take into consideration changes in shoreline conditions and oceanfront development.

periodically update the structure, drainage, access and parking inventories contained in this Plan.

2.2 Town Beach Management Strategy

The Beachfront Management Act states very clearly that the policy of South Carolina is to protect, preserve, restore and enhance the beach/dune system. As such, the State seeks to encourage wise development of the shoreline, including the adoption of appropriate management strategies to deal with existing and future development. These strategies

shall include, where necessary, selective beach/dune restoration and/or relocation of oceanfront structures and facilities. The Town of Surfside Beach shares the objectives of the State, and will accomplish those objectives through its Local Comprehensive Beach Management Plan. The Town will rely in large part on its Shore Protection Ordinance (Chapter 17, Article VIII of the Surfside Beach Code) to implement its Plan.

2.2.1 Conflicts Between Development and Oceanfront Setbacks

One of Surfside Beach's greatest assets is its natural beach/dune system. Prudent planning and development practices have protected this natural environment. The Town of Surfside Beach recognizes the importance of maintaining the natural beach/dune system in the future, and will work cooperatively with property owners and other government agencies to minimize and eliminate conflicts between development and the oceanfront environment. The Town shall employ appropriate erosion control and land use measures to insure this outcome.

2.3 Erosion Control

2.3.1 Identification of Potential Problem Areas

Front row development along the Surfside Beach shoreline is generally set back a modest distance behind the dune and the SCCC interim baseline. There are no areas along the shoreline where development encroaches onto the active beach. The April 1991 structural inventory data contained in Section 3 and summarized in Section 1.3 show that all front row habitable structures lie an average of 2 ft landward of the interim 40-year setback line (38 ft landward of the interim baseline).

Forty-seven habitable structures and 21 pools lie seaward of the interim setback line; these structures lie an average of 17 ft seaward of the setback line (19 ft landward of the interim baseline). Twelve habitable structures or pools lie within 10 ft of the interim baseline. Those structures closest to the interim baseline are concentrated in the following areas: between Melody Lane and 16th Ave S; between 2nd Ave S and 1st Ave S; between Surfside Dr and 1st Ave N; between 10th Ave N and 13th Ave N; between 16th Ave N and 17th Ave N.

These data, coupled with the relatively uniform erosion rate along the Surfside Beach shoreline, suggest that there are a few areas that are *slightly* more at risk. However, structure location alone does not determine storm damage vulnerability -- structure design, construction and condition also affect potential storm damage. Comparison of

pre-Hugo aerial photographs with the April 1991 ground inspection reveals approximately 30 front row habitable structures were destroyed by the hurricane (20 have not yet been rebuit). These destroyed structures lay between 10 ft seaward and 85 ft landward of the interim baseline (average pre-Hugo setback was 21 ft landward of the interim baseline).

For the purposes of this Plan, the vulnerability of all portions of the Surfside Beach shoreline shall be considered equal. Any erosion control measures considered and implemented should treat the entire Town shoreline as a single reach.

2.3.2 Erosion Control Strategies

Given the natural setting that exists along the beaches of Surfside Beach, the Town will encourage erosion control strategies that work in concert with local coastal processes, and will prohibit erosion control strategies that harden the shoreline. The Town of Surfside Beach has adopted a prohibition of seawall/bulkhead/revetment construction (see Appendix B: Surfside Beach Code, Chapter 17, Sec. 17-391). This prohibition is consistent with the 1990 Beachfront Management Act, which prohibits the construction of bulkheads, seawalls and revetments (except to protect public highways that existed on the effective date of the Act -- June, 25, 1990).

It should be pointed out, however, that the Municipal Code and the 1990 Act do not explicitly prohibit the construction of groins or offshore breakwaters. The Town will consider these structures as available erosion control strategies only if the structures are constructed as part of a beach nourishment project and are used to reduce beachfill losses.

The Town hereby declares that **preferred erosion control strategies** for the protection of habitable and other structures along the Surfside Beach shoreline will consist of:

dune restoration and revegetation

beach nourishment using approved borrow sources

sand bagging (under emergency conditions)

Sediment borrow sources and methods of transportation and placement must be approved in advance by the SCCC, other appropriate agencies, and the Town. The Town shall consider the following as preferred borrow sources and transportation/placement methods (note that this preference does not constitute Town, SCCC or other agency approval for specific projects):

upland sources of beach-compatible sand, hauled to the site by truck, conveyor or other approved means

offshore borrow sources whose use will not adversely affect the Town shoreline by exposing it to increased wave energy

beach scraping from the low tide beach using land-based equipment, provided other borrow sources cannot be used and provided the scraping will not adversely affect the shoreline.

SCCC rules pertaining to beach nourishment/dune restoration, and SCCC guidelines for sand scraping and sand bagging are included in Appendix D and Appendix E.

2.4 Protection and Restoration of Sand Dunes

The Town of Surfside Beach recognizes the important protective and ecological functions that a healthy dune system provides. The Town also recognizes that the dune system along the oceanfront must be carefully managed to insure these important functions are not lost.

The Town has adopted a Shore Protection Ordinance (see Chapter 17, Article VIII of the Surfside Beach Code, contained in Appendix B of this Plan). All activities related to the alteration, destruction, restoration or enhancement of dune areas shall be governed by this ordinance and by those guidelines set forth in Sec. 2.4.1.

Further, the Town incorporates the following policies related to dune protection and restoration into its Local Comprehensive Beach Management Plan:

The Town shall work with property owners and other government agencies to protect, enhance and restore the dune system along Surfside Beach.

Dune construction, restoration, revegetation, fencing and walkover/deck construction must be carried out in accordance with Town-approved procedures contained in this Plan and the Surfside Beach Code, Sec. 17-389

Any activity, construction or alteration of sand dunes seaward of the SCCC 40-year setback line must be approved, in advance, by the SCCC; any activity, construction or alteration of sand dunes seaward of the Town Shore Protection Line must be approved, in advance, by the Town.

Sand dunes seaward of the Shore Protection Line or SCCC 40-year setback line must not be altered unless there

is no feasible alternative. Permanent alterations must be carried out in such a way that the disturbance to the dune system is minimized. In the case of temporary alterations, the dune system must be restored to its pre-existing condition.

The Town may, at its discretion, require mitigation for the permanent alteration or destruction of dune areas seaward of the Shore Protection Line or SCCC 40-year setback line. Such mitigation may include: creation of new dune habitat, enhancement of existing dune habitat, installation of protective fencing or walkover structures, dedication of land or easements for access to the beach, or contribution to the Town's Beach and Dune Restoration Fund.

Sand dunes designated as critical habitat areas must not be altered, except for those activities allowed in Section 2.7.

Despite post-Hugo emergency beach and dune restoration, some areas of the Surfside Beach dune system need repair or enhancement. The Town will develop a dune restoration plan and will apply for state funding assistance (see Sec. 2.5).

2.4.1 Dune Restoration and Revegetation Guidelines

The Town of Surfside Beach will use the following guidelines in reviewing proposed dune restoration and revegetation projects:

Dunes should be constructed or restored along an alignment consistent with nearby dunes. In instances where natural dunes do not form a well-developed line or where they have been destroyed by storms, dunes should be built above the normal limit of wave uprush and not on the active beach.

Dunes can be constructed by actively placing sand in the desired location and configuration (this method is useful for post-storm dune construction), or by allowing windblown sand to deposit naturally. Sand for use in active dune construction and restoration shall be clean sand, obtained from an approved upland source, or from beach scraping per Town and SCCC guidelines (Appendix E). Dunes shall be built in such a way that existing dunes and dune vegetation are not damaged.

Sand fencing should be used to assist natural dune building, provided the fencing does not block access to the beach. Sand fencing can also be used as a means of eliminating uncontrolled pedestrian/bicycle/vehicle traffic that destroys dunes and dune vegetation. The recommended sand fencing configuration for Surfside Beach incorporates a double row of fencing. The landward row of fencing should

be a continuous row of fencing, placed along the Shore Protection Line, unless the Town authorizes placement in a more seaward location; however, the landward row of fence shall not be placed any farther seaward than the landward trough of the primary oceanfront sand dune. The landward row of sand fence is intended to prevent uncontrolled access and damage to the dune system. The seaward row of fence should be placed along or in front of the seaward dune face, but above the limit of normal wave runup. The seaward row of fence should be either a discontinuous series of short, straight segments of fence, or a discontinuous series of inverted "V" segments, with a minimum 5 ft gap between fence segments to allow free movement of nesting sea turtles, as shown in Figure 10. The Town shall be responsible for maintaining the seaward row of fence; upland property owners shall install and maintain the landward fence.

Vegetation should be planted on newly constructed or repaired dunes, once the dune side slopes are stable. Vegetation should not be planted on slopes steeper than 1 on 2 (vertical to horizontal) since there is a greater likelihood that the roots will be exposed as the sand shifts to a more stable slope, and the vegetation will not survive. Vegetation that is planted to restore or repair damaged dune areas should be native to the local dune system. Native dune grasses or ground covers can be used successfully, although the former are preferred because of their extensive root systems and soil binding abilities. Two dune grasses are recommended for use along Surfside Beach: sea oats and beach panicgrass. American beach grass is not native to the area and is not recommended, contrary to recently published SCCC and SCS guidelines. There are two principal sources of dune grasses -- field grown stock and nursery grown stock -- and each should be planted using different techniques. The field grown stock should be planted during the winter months, while the nursery grown stock should be planted between late spring and early fall.

Survival of newly planted dune grasses can be increased with watering and fertilization programs, as appropriate (note that too much water or fertilizer can lead to disease problems or to other non-native plants crowding out the dune grasses). Specific planting and maintenance guidelines for these two dune grasses have been developed, based on similar guidelines from Florida (Barnett and Crewz, 1989). These guidelines, developed for use at Surfside Beach, are contained in Appendix F.

2.5 Funding for Beach/Dune Restoration and Nourishment

Federal funds for beach nourishment along Surfside Beach have not been appropriated at this time. However, the Surfside Beach shoreline has been recommended for nourishment as part of the Myrtle Beach and Vicinity federal

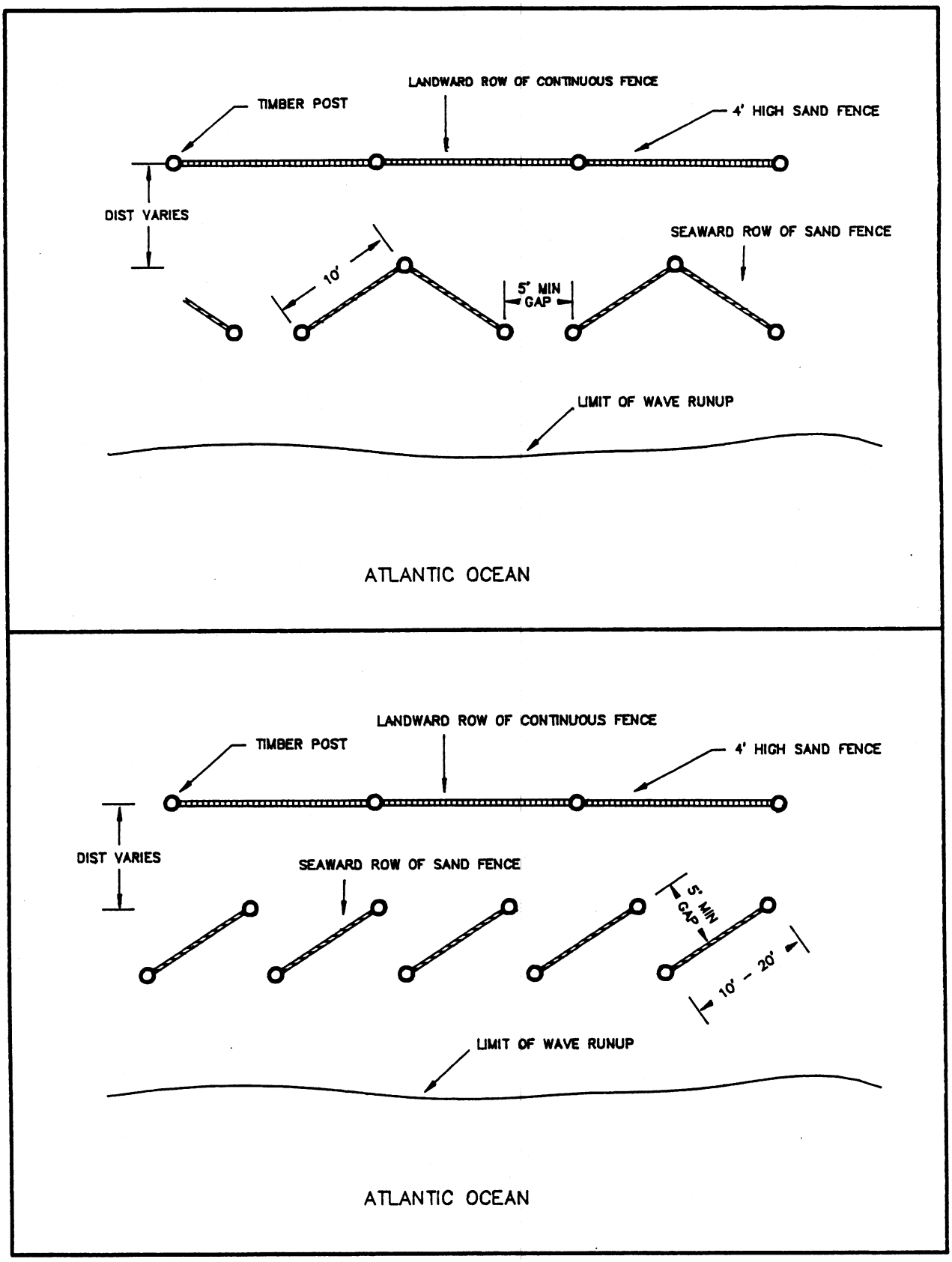


Figure 10. Suggested sand fence configurations for Surfside Beach.

project. When appropriated by the U.S. Congress, federal funding will available for the project provided non-federal matching funds are pledged by the Town and/or State.

State funding assistance for beach/dune restoration and nourishment along Surfside Beach will depend on the adoption of a Local Comprehensive Beach Management Plan, the availability of State funds and the ranking assigned to local projects. State funds will be available during the next few years, if a funding request receives support during the 1991 General Assembly. Currently, a request for $20 million in bond funds has been submitted. Ten million dollars in bond money made available by the 1988 General Assembly has been spent, most of it in support of emergency dune and beach restoration projects following hurricane Hugo.

Future funding assistance to local governments will be provided by the SCCC, as more funds become available. The SCCC will consider the following topics in ranking and funding projects: public access and recreation benefits; anticipated project life; environmental impacts; storm protection benefits; local support for the project. Appendix G contains draft SCCC evaluation criteria for nourishment projects (note that these evaluation criteria have not yet been adopted by the SCCC).

The Town will remain in contact with the U.S. Army Corps of Engineers and the SCCC to insure any available funds for beach nourishment are obtained. As a matter of policy, the Town will also apply for state funding assistance for dune restoration and other related activities.

2.6 Maintenance of a Dry Sand and Ecologically Stable Beach

The Town of Surfside Beach recognizes the importance of maintaining a dry sand and ecologically stable beach. The beach affords habitat to a variety of species, protection to upland development and space for recreational activities. In an effort to insure the continued existence of a natural beach along Surfside Beach, the Town will work closely with property owners and other government agencies to accomplish the following:

to encourage property owners to site oceanfront buildings and structures as far landward as possible. Where appropriate, the Town shall approve variances to reduce front yard (street) setbacks and increase rear yard (oceanfront) setbacks [see Sec. 17-24(b) of the Surfside Beach Code].

to encourage oceanfront property owners to reduce lot coverage by impervious surfaces and control stormwater

discharge. The Town currently requires development activities which exceed 0.35 acres or exceed 40 percent impervious coverage to prepare a stormwater management plan (see Sec. 14-50 of the Surfside Beach Code).

to require nonconforming structures in the Shore Protection Area that are destroyed or damaged 51 percent or more (based on structure value) to be removed [see Sec. 17-392(a) of the Surfside Beach Code]. Rebuilt structures must conform to all provisions of the Surfside Beach Code and the Local Comprehensive Beach Management Plan.

to facilitate the relocation and/or abandonment and removal of structures which, because of erosion, encroach onto the active beach. In cases where such encroachment is a result of severe storms or other short-term phenomena not expected to persist, the Town shall work with affected parties to carry out erosion control efforts consistent with Sec. 2.3.2 of this Plan and Sec. 17-389(3) of the Surfside Beach Code. In cases where long-term erosion and encroachment are likely to persist, and where erosion control efforts are not feasible or successful, the Town shall work with affected parties to remove the structures.

The Town shall not approve construction of buildings or other structures, except for dune walkways and temporary sand bagging, seaward of the Shore Protection Line. Furthermore, the Town shall not approve construction which results in unnecessary destruction of dunes and dune vegetation seaward of the Shore Protection Line. The Town may, at its discretion, allow limited landscaping of areas between the landward trough of the primary oceanfront sand dune and the Shore Protection Line. The Town may require mitigation for construction or permanent alteration of dune areas (see Sec. 2.4).

2.7 Protection of Endangered Species and Critical Habitats

Background information in Sec. 1.2 of this Plan indicates that several species in South Carolina have been classified as threatened, endangered or of special concern by state and federal agencies. Thus far, census and management efforts have concentrated on the loggerhead turtle. State and federal agencies have not identified or mapped other critical habitats. In order to protect threatened, endangered and protected species, and valuable habitat areas, the Town of Surfside Beach shall:

assist the SCWMRD and other agencies with the identification and mapping of critical habitat areas along the Surfside Beach shoreline.

adopt and enforce ordinances that prohibit trespassing into designated areas during certain seasons (nesting areas, for example).

adopt a leash law restricting free roaming dogs and other domestic pets on the beach during the period May 15 through October 31.

encourage beachfront property owners to eliminate or reduce lighting that shines directly onto the beach, since artificial lighting can interfere with nesting sea turtles and turtle hatchlings.

regulate vehicular traffic on the beach.

regulate erosion control and activities according to the guidelines and requirements in Sec. 2.3.2 of this Plan. Where possible, such approved activities will be restricted to wintertime.

limit acquisition of nourishment sand from areas that have been designated as critical habitat areas.

2.7.1 Town Cooperation with Natural Resource Agencies

The Town of Surfside Beach stands ready to work with appropriate state and federal agencies to insure the continued existence of natural communities and habitats along the ocean shoreline. Inasmuch as critical habitat areas have not yet been identified and mapped by the SCWMRD, the Town will contact that agency and offer its assistance.

The Town declares as a matter of policy that its representatives shall be fully involved in assisting natural resource agencies with the identification, mapping and management of critical habitat areas. Specifically, designated Town representatives will be available to assist agency personnel during site visits to the Town's beaches, and to assist the agencies during the critical habitat designation process. Town representatives will also assist agencies by monitoring usage of critical habitat areas, and will make recommendations to the agencies when such areas can be delisted.

Education of property owners, guests and other affected groups will be a necessary part of any natural resource management strategies for Surfside Beach. The Town will work closely with the property owners, the SCCC, the SCWMRD and other interested groups to develop and implement effective education programs.

2.7.2 Regulation of Activities Affecting Protected Species and Habitats

The Surfside Beach Code provides a mechanism to regulate activities which may affect protected species and habitats. The Town shall supplement the existing regulations and guidelines, where necessary, with ordinances to satisfy the provisions of the Beachfront Management Act.

The Town currently prohibits dogs and other domestic pets on the public beach between May 15th and September 15th; The Town shall modify its Municipal Code to extend the prohibition until October 31st of each year.

The Town shall also adopt an ordinance prohibiting trespassing into designated critical habitat areas, taking into consideration both temporal and spatial usage of those critical habitat areas (see Sec. 4.2). The Town shall work with appropriate agencies to post signs designating these restricted use areas, and to educate property owners and the public about the importance of observing these restrictions.

Section 12-71 of the Surfside Beach Code restricts vehicle access to and traffic on the beach (see Appendix H) allows only emergency and law enforcement vehicles on the beach. Although this section of the code will be revised, the changes will only permit those vehicles on the beach that the Town deems essential.

Loggerhead turtle nesting along the Surfside Beach shoreline has been sporadic in the past. In an effort to maintain and enhance turtle nesting along the shoreline, the Town shall encourage property owners to eliminate or reduce artificial lighting that shines directly onto the beach.

All erosion control and activities shall be subject to Town approval and shall take into consideration seasonal and other special restrictions described above (see Sec. 2.7). Specifically, the Town will encourage completion of erosion control projects between November 1 and May 14, and will discourage the use of borrow and fill sites that provide critical habitat area.

2.8 Beach Access and Beach Use

Public access to beaches is a major concern of the Town of Surfside Beach . The Town has constructed 33 dune walkover/access structures and eight parking areas (providing 350 off-street public parking spaces) along the shoreline. Three planned parking areas will provide an additional 60 public parking spaces. The existing and planned access and parking facilities are sufficient to classify the entire Surfside Beach shoreline as having full

and complete access (see Table 8). The Town has installed temporary signs marking public parking areas, and will install permanent signs prior to the 1992 summer season. In addition to the Town access facilities, there are 79 private dune walkover structures. The Town encourages all private property owners that have not constructed a walkover to do so. Guidelines and specifications for walkover construction can be found in Chapter 17 of the Surfside Beach Code and in the SCCC regulations; a sketch of the standard walkover design approved by the Town is shown in Figure 11.

The Town wishes to encourage property owners and others to use the beach for those recreational uses allowed in Chapter 12, Article IV of the Surfside Beach Code (see Appendix H).

2.9 Regulation of Vehicular Traffic

Vehicular traffic on the beach is prohibited, except for those uses contained in Sec. 12-71 of the Surfside Beach Code. However, there may be other vehicular uses which are essential to public health, welfare and safety. The following uses shall be permitted, subject to Town approval, provided the vehicles use designated vehicle access points:

emergency and law enforcement vehicles

Town and other government vehicles

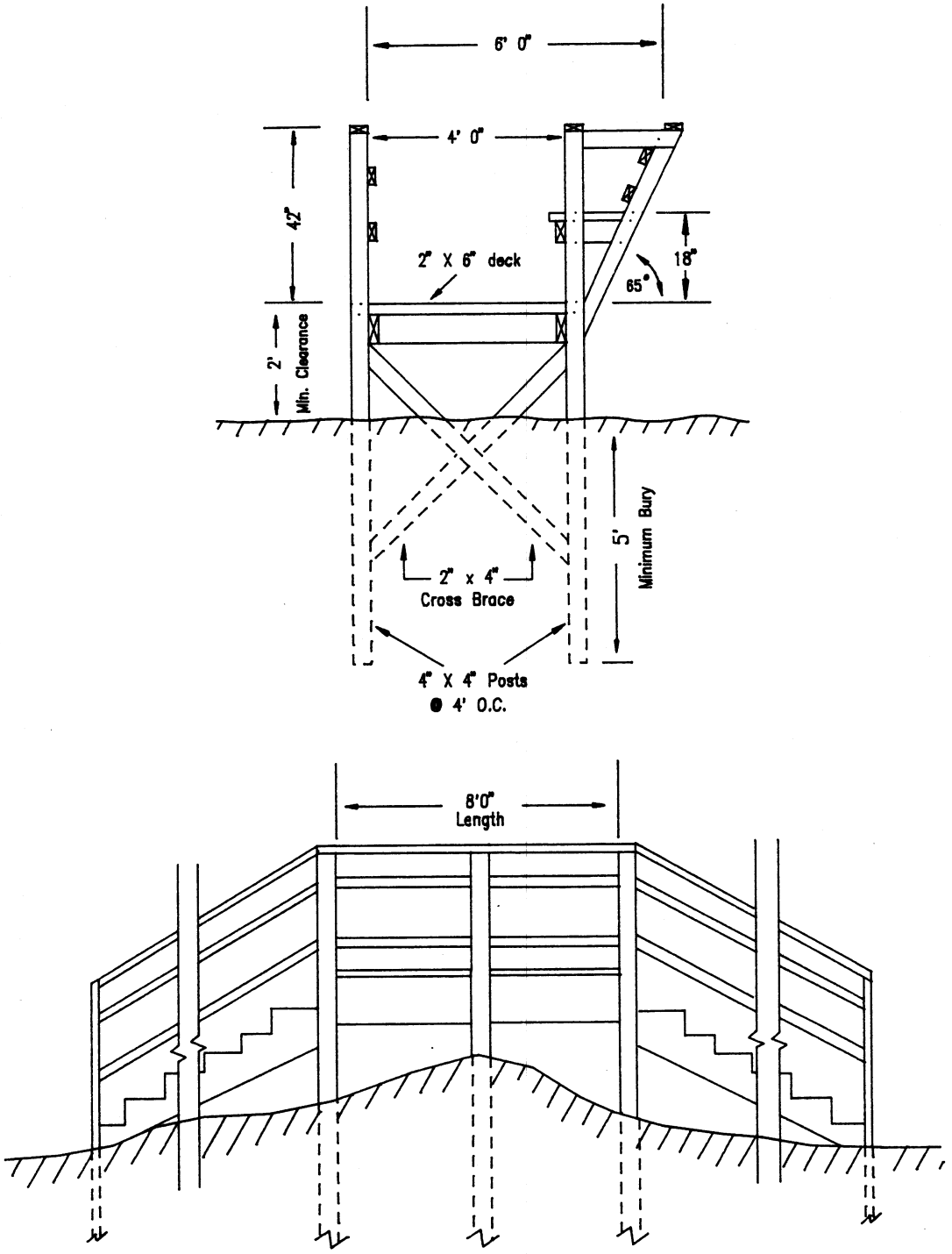
vehicles used to conduct beach surveys

other vehicle uses deemed essential by the Town

Vehicles using the beach shall be operated in such a manner that pedestrians and other beachgoers are not endangered or harmed. Further, vehicles shall be driven on the wet sand beach whenever possible and shall not travel on the dry sand or upper beach; vehicles shall not disturb nesting or other sensitive areas.

2.10 Permits and Mitigation for Construction Occurring Seaward of the 40-Year Setback Line

The Town of Surfside Beach requires a permit be obtained for any destruction, removal or alteration of sand dunes or vegetation seaward of the Shore Protection Line. Sections 48-39-310 and 48-39-320 of the Beachfront Management Act require mitigation for any destruction of dune vegetation or construction seaward of the 40-year setback line. Any activities carried out seaward of the Shore Protection Line or the 40-year setback line will require appropriate permits and mitigation, unless the SCCC and the Town determine no adverse impacts will result and no mitigation is required. Mitigation activities shall be subject to the approval of the SCCC and the Town of Surfside Beach, and shall be



NOTES: All Wood Products to be Wolmanized, 0.25 pcf Retention
All Nails and Fasteners to be Hot Dipped Galvanized
See Town Engineer for Detailed Design

Figure 11. Recommended dune walkover design for Surfside Beach.

consistent with the provisions outlined in this Plan and the Surfside Beach Code. The Town shall work closely with the SCCC to implement and administer mitigation programs.

In determining whether or not activities will result in adverse impacts and require mitigation, the SCCC and Town will consider the following: beach access; beach movement and erosion; dunes and dune vegetation; protected species and critical habitats.

The Town shall consider the following as acceptable mitigation activities, and may require at its discretion one or more of the following:

1. creation of new dunes and dune habitat

2. revegetation, fencing or enhancement of existing dune habitat

3. beach nourishment with compatible sand from an approved source

4. dedication of new access ways

5. construction of walkover structures or parking areas

6. contribution to the Town's Beach and Dune Restoration Fund

7. participation in programs to protect endangered species and critical habitats

The Town will work closely with developers and property owners seeking to alter areas seaward of the Shore Protection Line or 40-year setback line, in order to minimize impacts to that area and to coordinate any required mitigation. The Town will administer the mitigation program in order to protect and restore a healthy and productive dune system along the Surfside Beach shoreline. As such, there are several general guidelines that the Town will follow in reviewing development and mitigation activities.

Destruction of dune vegetation by construction and other activities shall be prohibited unless there is no feasible alternative; in cases where destruction is permitted, it shall be held to a minimum. Destroyed dune vegetation shall be replaced at an approved location on a minimum two-to-one basis. Creation or enhancement of dune areas shall be carried out in accordance with the guidelines in Sec. 2.4.1 of this Plan. The location of any dune creation or enhancement must be approved in advance by the Town; off-site placement may be allowed if it is in the best interest of the Town.

Mitigation in the form of beach nourishment shall require a minimum of two cubic yards of beach compatible sand per foot of shoreline subject to this requirement. The location of sand placement shall be determined by the Town; off-site placement may be allowed if it is in the best interest of the Town.

New access ways that are dedicated shall be at least 10 ft wide, and shall extend from an upland road or path allowing similar use to the mean high water line. New access ways shall be drawn on plats and recorded in Horry County records. These access ways shall be clearly marked at both ends.

New walkover structures and parking areas created for mitigation purposes shall be designed, constructed and maintained in accordance with Town and State standards. The location of these structures shall be subject to approval by the Town.

In certain instances, the Town may decide that mitigation will best serve the Town's interest if it is in the form of a contribution to the Beach and Dune Restoration Fund. The Town shall develop guidelines for determining when such contributions are appropriate and the required contribution levels. Money from the Beach and Dune Restoration Fund shall only be spent to enhance and restore the beach/dune system, to enhance or increase public access to the beach, and to improve the condition and safety of the beache. Purchase or acquisition of land and structures for beach access purposes with money from the Fund will be permitted.

Mitigation may also take the form of financial or other contribution to programs designed to protect and manage endangered species and critical habitats. Contributions to similar programs that promote public education would also be considered appropriate.

2.11 Stormwater Management and Drainage

The Town, as a matter of policy, shall encourage all property owners to use those guidelines and best management practices outlined in the SCCC report, Storm Water Management Guidelines. The Town shall also work closely with property owners and the SCCC to control drainage and stormwater discharges by enforcement of the Town Stormwater Management and Floodplain Management ordinances (see Appendix I).

Controlling stormwater and other discharges along the beachfront areas of Surfside Beach is a priority of the Town. Uncontrolled, direct discharge to the beach can not only lead to erosion of dune and beach areas, but can also

affect water quality. The Town of Surfside Beach has recently completed a shoreline drainage project and adopts as part of this Plan a policy to prohibit any additional outfalls or other means of direct discharge to the beach.

In the event that erosion of dune areas takes place and the potential for direct discharge of stormwater, pool overflow or other runoff to the beach increases, the Town shall require property owners to redirect any potential discharges away from the beach. The Town shall work in conjunction with all affected groups to restore and maintain natural dune areas along the shoreline as a means of reducing or eliminating the potential for direct discharge to the beach. However, property owners should not rely only on the Town's dune program to control discharge.

2.12 Post-Disaster Recovery and Redevelopment

The Town shall work with all appropriate agencies, prior to and after a severe storm or natural disaster, to minimize potential injury and damage, and to expedite recovery and redevelopment. The Town shall, on an annual basis, carry out certain readiness and coordination tasks described below:

1. By May 15th of each year (at least two weeks prior to the official beginning of hurricane season) designated Town representatives and/or officials shall meet to review the status of Town preparations for evacuation, return, response and recovery.

2. Before the beginning of hurricane season Town representatives and/or officials shall contact the following to verify current agency contacts, communications and coordination procedures: Horry County, the SCCC, FEMA and other appropriate agencies.

3. The Town shall work to inform property owners and residents of any important evacuation or disaster-related procedures that should be followed.

4. The Town shall, in the event of a disaster, coordinate its actions, and those of residents and property owners, with all appropriate agencies involved in response and recovery actions.

All recovery and redevelopment shall be consistent with Town regulations, this Local Comprehensive Beach Management Plan, and the requirements of the Beachfront Management Act.

Following a severe storm, one of the first priorities of the Town shall be to assess damage to beaches, dunes and upland

development, and to institute emergency protective measures to prevent further damage. Town representatives shall work closely with representatives of the SCCC, FEMA and the Corps of Engineers to complete any damage assessments quickly.

If necessary, the Town shall issue appropriate emergency orders allowing property owners to undertake emergency sand scraping and sand bagging (see Appendix E). The Town shall serve as local sponsor and coordinate any state or federal emergency protection projects; if state or federal funds are available for emergency protection and post-storm renourishment, the Town shall make application for such funds. Emergency orders and protective works shall be consistent with the Town's erosion control plan (see Sec. 2.3).

The Town shall make provisions to control and coordinate a variety of post-disaster activities in beachfront and non-beachfront areas. In addition to actions mentioned above, these shall include:

1. coordination with state and FEMA officials during damage inspections and during the administration of DSRs

2. access for residents, inspectors, utility crews, contractors and others after the disaster

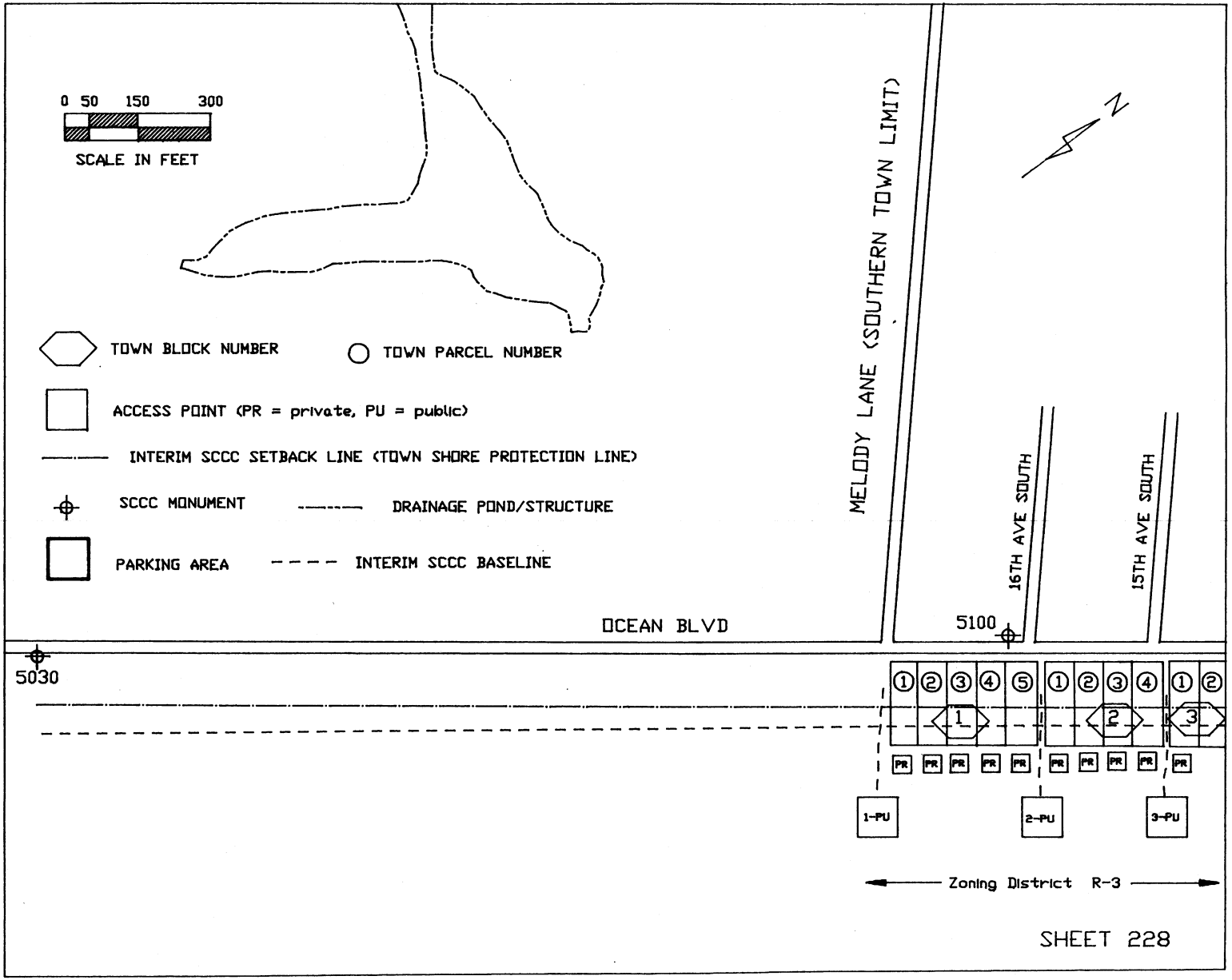
3. debris removal and restoration of essential services

More details on the above actions and responsibilities can be found in the Town's Emergency Operations Plan.

SECTION 3. INVENTORIES AND OVERLAYS

SECTION 3. INVENTORIES AND OVERLAYS

The SCCC requires local governments to inventory and map a variety of structures, beach access facilities, land use, drainage and critical habitats. These inventories and maps have been completed for the Town of Surfside Beach. Full size overlays (at a scale 1" = 100') are enclosed separately from this text. The overlays prepared for the Town of Surfside Beach Managment Plan are based on interim lines adopted by the SCCC in February 1990.


0 50 150 300
SCALE IN FEET
TOWN BLOCK NUMBER
TOWN PARCEL NUMBER
ACCESS POINT (PR = private, PU = public)
INTERIM SCCC SETBACK LINE (TOWN SHORE PROTECTION LINE)
SCCC MONUMENT
DRAINAGE POND/STRUCTURE
PARKING AREA
INTERIM SCCC BASELINE
MELODY LANE (SOUTHERN TOWN LIMIT)
16TH AVE SOUTH
15TH AVE SOUTH
OCEAN BLVD
5100
5030
1-PU
2-PU
3-PU
Zoning District R-3
SHEET 228

TOWN OF SURFSIDE BEACH

SHEET NO. 228

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
MELODY LANE							
	24	17	1	1	A	-26'	--
	"	16	"	2	A	- 6'	--
	"	18-21	"	3	A	+26'	--
	"	22-25	"	4	B	+28'	--
	"	13	"	5	A	+31'	--
16TH AVE S							
	24	12	2	1	--	--	--
	"	53-58	"	2	B	+ 6'	--
	"	10	"	3	A	- 6'	--
	"	9	"	4	A	-21'	--
15TH AVE S							
	24	54-64	3	1	B	-12'	--
	"	7	"	2	--	--	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 228

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE*	FACILITIES**
MELODY LANE			1	PU	W
	1	1	--	PR	W
	"	2	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
	"	5	--	PR	W
16TH AVE S			2	PU	W
	2	2	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
15TH AVE S			3	PU	W
	3	1	--	PR	W

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 228

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE*	DISTANCE (FT) TO ACCESS PT.
--	NONE	--	--	---

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

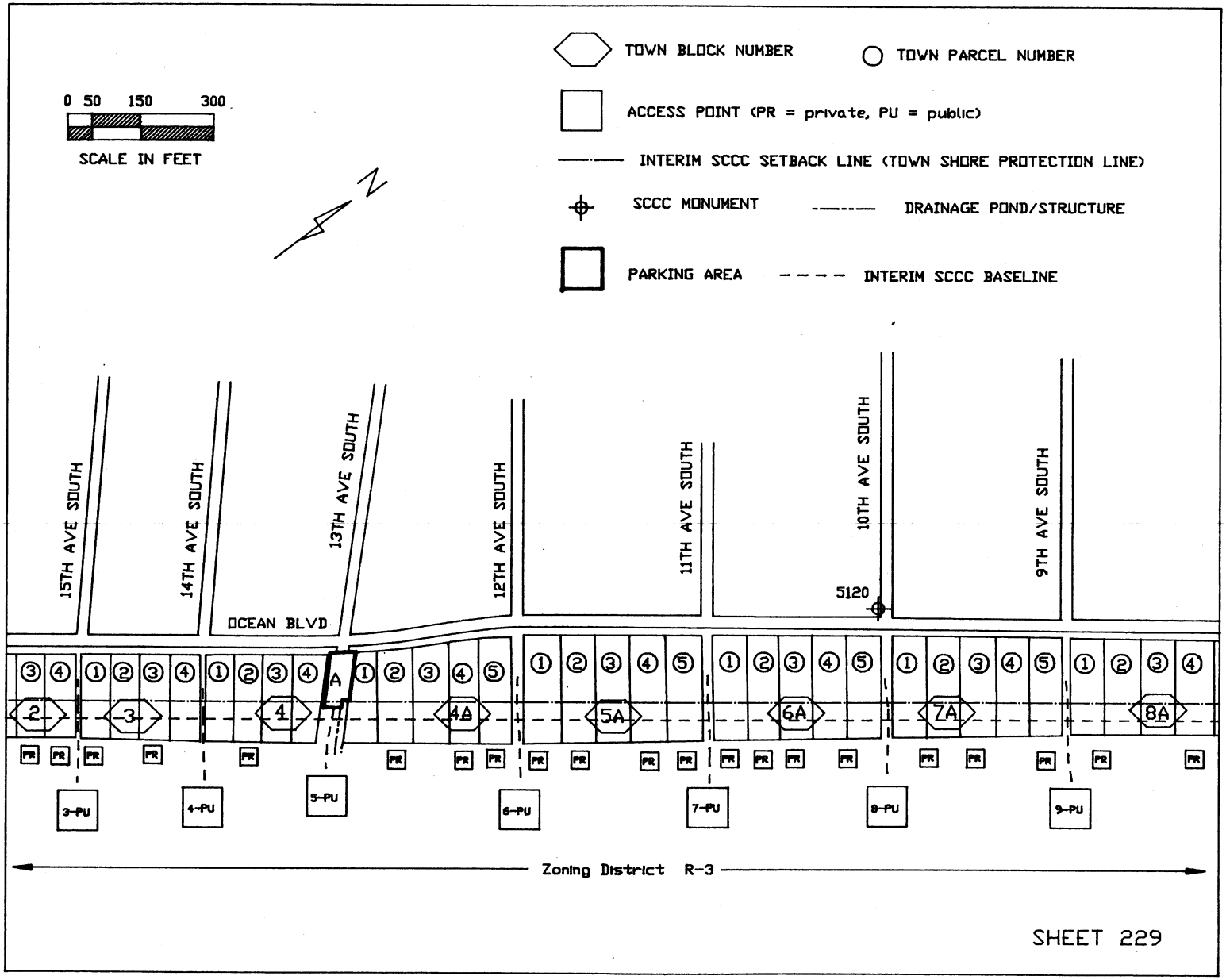
SHEET NO. 228

DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
NONE	---	---	---

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD



Prepared by Applied Technology and Management, Inc.
Charleston, SC

TOWN OF SURFSIDE BEACH

SHEET NO. 229

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
	24	10	2	3	A	- 6'	--
	"	9	"	4	A	-21'	--
15TH AVE S							
	24	59-64	3	1	B	-12'	--
	"	7	"	2	--	--	--
	"	47-52	"	3	B	- 1'	--
	"	5	"	4	A	-19'	--
14TH AVE S							
	24	26-46	4	1-3	B	+ 3'	--
	"	"	"	"	P	+23'	--
	"	1	"	4	--	--	--
13TH AVE S					D	+19'	--
	25	5-19	4A	1-2	B	+20	--
	"	"	"	3	B	+17'	--
	"	20-27	"	4	B	- 6'	--
	"	"	"	"	P	+19'	--
	"	1	"	5	A	- 3'	--
12TH AVE S							
	26	12-19	5A	1	B	-18'	--
	"	"	"	"	P	+ 5'	--
	"	20-34	"	2-3	B	+14'	--
	"	"	"	"	P	+14'	--
	"	6-11	"	4	B	+10'	--
	"	5	"	5	A	-19'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT. **
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 229 (CONTINUED)

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
11TH AVE S							
	27	1	6A	1	A	-57'	--
	"	2	"	2	A	+ 5'	--
	"	21-32	"	3	B	-15'	--
	"	"	"	"	P	+12'	--
	"	6-20	"	4-5	B	+ 5'	--
10TH AVE S							
	28	26-45	7A	1-2	B	-17'	--
	"	"	"	"	P	+ 9'	--
	"	3	"	3	A	-38'	--
	"	6-25	"	4-5	B	-16	--
	"	"	"	"	P	+ 6'	--
9TH AVE S							
	29	15-28	8A	1-2	B	-20'	--
	"	"	"	"	P	+15'	--
	"	3	"	3	--	--	--
	"	6-14	"	4	B	-11'	--
	"	"	"	"	P	+14'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 229

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE*	FACILITIES**
	2	3	--	PR	W
	"	4	--	PR	W
15TH AVE S			3	PU	W
	3	1	--	PR	W
	"	3	--	PR	W
14TH AVE S			4	PU	W
	4	2	--	PR	W
13TH AVE S			5	PU	W
	4A	2	--	PR	W
	"	4	--	PR	W
	"	5	--	PR	W
12TH AVE S			6	PU	W
	5A	1	--	PR	W
	"	2	--	PR	W
	"	4	--	PR	W
	"	5	--	PR	W
11TH AVE S			7	PU	W
	6A	1	--	PR	W
	"	2	--	PR	W
	"	3	--	PR	W
	"	4-5	--	PR	W
10TH AVE S			8	PU	W
	7A	1-2	--	PR	W
	"	3	--	PR	W
	"	5	--	PR	W
9TH AVE S			9	PU	W
	8A	1-2	--	PR	W
	"	4	--	PR	W

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 229

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE*	DISTANCE (FT) TO ACCESS PT.
13TH AVE S	(A)	16	3	0'

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

SHEET NO. 229

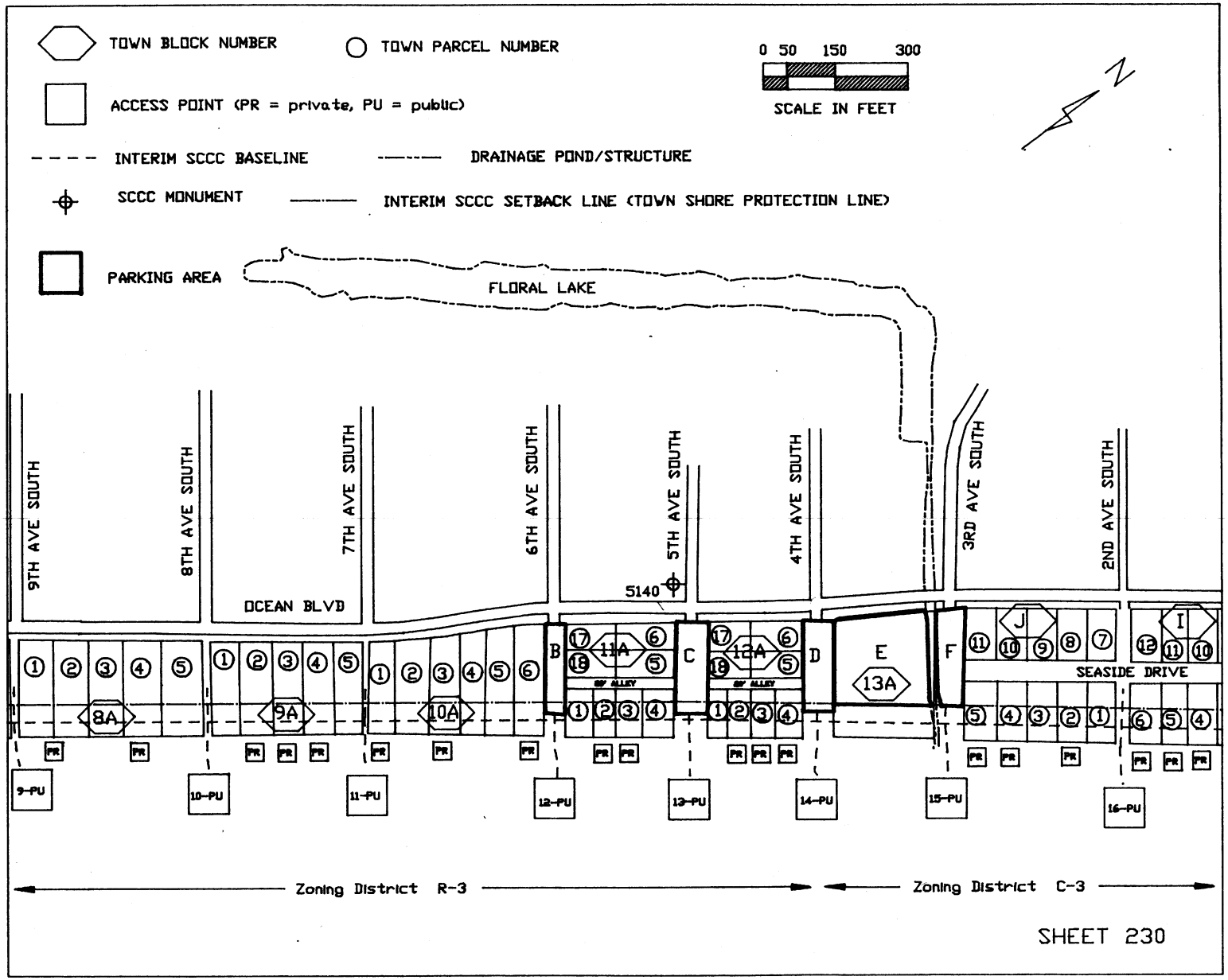
DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
MELODY LANE BASIN	13TH AVE S	6' TS	+65'
"	"	24" CMP	- 7'

---

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD


TOWN BLOCK NUMBER
TOWN PARCEL NUMBER
0 50 150 300
SCALE IN FEET
ACCESS POINT (PR = private, PU = public)
INTERIM SCCC BASELINE
DRAINAGE POND/STRUCTURE
SCCC MONUMENT
INTERIM SCCC SETBACK LINE (TOWN SHORE PROTECTION LINE)
PARKING AREA
FLORAL LAKE
9TH AVE SOUTH
8TH AVE SOUTH
7TH AVE SOUTH
6TH AVE SOUTH
5TH AVE SOUTH
4TH AVE SOUTH
3RD AVE SOUTH
2ND AVE SOUTH
OCEAN BLVD
5140
SEASIDE DRIVE
8A
9A
10A
11A
12A
13A
9-PU
10-PU
11-PU
12-PU
13-PU
14-PU
15-PU
16-PU
Zoning District R-3
Zoning District C-3
SHEET 230

TOWN OF SURFSIDE BEACH

SHEET NO. 230

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
9TH AVE S							
	29	15-28	8A	1-2	B	-20'	--
	"	"	"	"	P	+15'	--
	"	3	"	3	--	--	--
	"	6-14	"	4	B	-11'	--
	"	"	"	"	P	+14'	--
	"	5	"	5	--	--	--
8TH AVE S							
	9A	1	9A	1	A	Temp Trailer	--
	"	2	"	2	A	+18'	--
	"	3	"	3	A	+ 7'	--
	"	4	"	4	B	+14	--
	"	5	"	5	--	--	--
7TH AVE S							
	3	1	10A	1	B	-21'	--
	"	2	"	2	--	--	--
	"	3	"	3	B	-28'	--
	"	4	"	4	--	--	--
	"	5	"	5	--	--	--
	"	6	"	6	A	+30'	--
6TH AVE S					D	+25'	--
	15	1	11A	1	--	--	--
	"	2	"	2	A	+17'	--
	"	3	"	3	A	+21	--
	"	4	"	4	--	--	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 230 (CONTINUED)

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
5TH AVE S					D	+27'	--
	14	1	12A	1	--	--	--
	"	2	"	2	A	+17'	--
	"	3	"	3	A	+25'	--
	"	4	"	4	A	+ 8'	--
4TH AVE S					D	+14'	--
	13	--	13A	--	D	+ 1'	--
3RD AVE S					D	+ 1'	--
"					C	+17'	--
	7	51-52	J	5	A	+18'	--
	"	4	"	4	A	+11'	--
	"	3	"	3	A	- 5'	--
	"	2	"	2	A	+32'	--
	"	1	"	1	--	--	--
2ND AVE S							
	8	6	I	6	A	+30'	--
	"	5	"	5	A	+25'	--
	"	4	"	4	A	+26'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 230

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE*	FACILITIES**
9TH AVE S			9	PU	W
	8A	1-2	--	PR	W
	"	4	--	PR	W
8TH AVE S			10	PU	W
	9A	2	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
7TH AVE S			11	PU	W
	10A	1	--	PR	W
	"	3	--	PR	W
	"	6	--	PR	W
6TH AVE S			12	PU	W
	11A	2	--	PR	W
	"	3	--	PR	W
5TH AVE S			13	PU	W
	12A	2	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
4TH AVE S			14	PU	W,V
3RD AVE S			15	PU	W
	J	5	--	PR	W
	"	4	--	PR	W
	"	2	--	PR	W
2ND AVE S			16	PU	W
	I	6	--	PR	W
	"	5	--	PR	W
	"	4	--	PR	W

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 230

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE*	DISTANCE (FT) TO ACCESS PT.
6TH AVE S	B	21	3	0'
5TH AVE S	C	34	3	0'
4TH AVE S	D	29	3	0'
	E	112	3	0'
3RD AVE S	F	26	3	0'

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

SHEET NO. 230

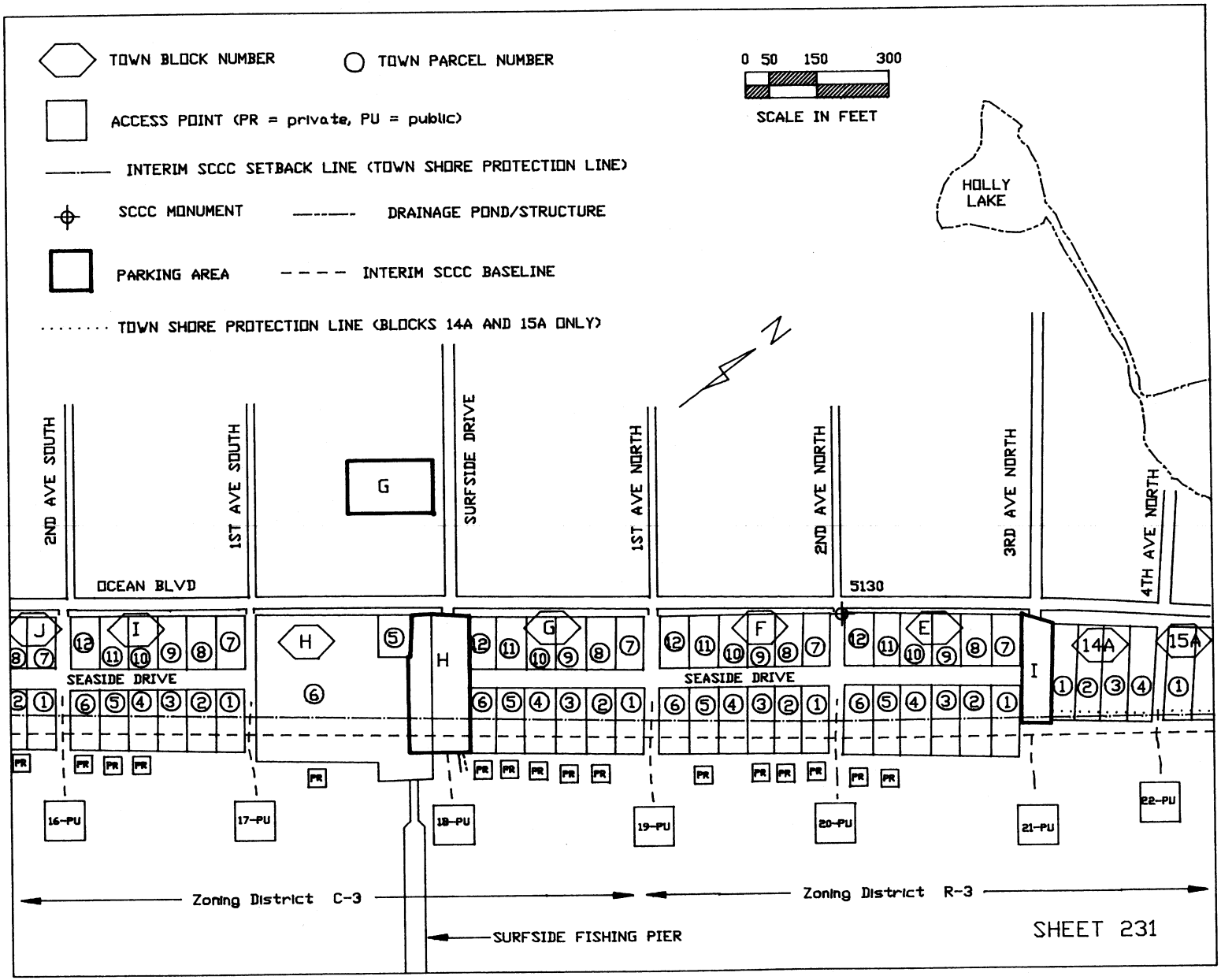
DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
FLORAL LAKE BASIN	3RD AVE S	6' TS	+51'
"	"	6' X 4' CBC	-215'

---

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD



TOWN OF SURFSIDE BEACH, BEACH MANAGEMENT PLAN

Prepared by Applied Technology and Management, Inc.
Charleston, SC

TOWN OF SURFSIDE BEACH

SHEET NO. 231

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE	
	7	1	J	1	--	--	--	
2ND AVE S								
	8	6	I	6	A	+30'	--	
	"	5	"	5	A	+25'	--	
	"	4	"	4	A	+26'	--	
	"	3	"	3	--	--	--	
	"	2	"	2	--	--	--	
	"	1	"	1	A	+22'	--	
1ST AVE S								
	9	4	H	6	B	+12'	--	
	"	"	"	"	P	+12'	--	
	"	"	"	"	D	+12'		
	"	3	"	5	A	-164'	--	
	"	"	"	6	A	+107'	--	PIER
SURFSIDE DR					D	+12'	--	
	10	6	G	6	A	+24'	--	
	"	5	"	5	A	+24'	--	
	"	4	"	4	A	- 6'	--	
	"	3	"	3	A	+23'	--	
	"	2	"	2	A	- 5'	--	
	"	1	"	1	--	--	--	
1ST AVE N								
	11	6	F	6	--	--	--	
	"	5	"	5	A	+19'	--	
	"	4	"	4	--	--	--	
	"	3	"	3	A	+ 4'	--	
	"	2	"	2	A	- 3'	--	
	"	1	"	1	A	-11'	--	

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 231 (CONTINUED)

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
2ND AVE N							
	12	29-32	E	6	B	- 2'	--
	"	19-22	"	5	B	- 5'	--
	"	4	"	4	--	--	--
	"	3	"	3	--	--	--
	"	2	"	2	--	--	--
	"	1	"	1	--	--	--
3RD AVE N					D	+14'	--
	10	4	14A	4	--	--	--
	"	3	"	3	--	--	--
	"	2	"	2	--	--	--
	"	1	"	1	A	-135'	--
4TH AVE N							
	9	4	15A	1	A	-18'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 231

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE*	FACILITIES**
2ND AVE S			16	PU	W
	I	6	--	PR	W
	"	5	--	PR	W
	"	4	--	PR	W
1ST AVE N			17	PU	W
	H	6	--	PR	W
SURFSIDE DRIVE			18	PU	V U
	G	6	--	PR	W
	"	5	--	PR	W
	"	4	--	PR	W
	"	3	--	PR	W
	"	2	--	PR	W
1ST AVE N			19	PU	W
	F	5	--	PR	W
	"	3	--	PR	W
	"	2	--	PR	W
	"	1	--	PR	W
2ND AVE N			20	PU	W
	E	6	--	PR	W
	"	5	--	PR	W
3RD AVE N		--	21	PU	W,H
4TH AVE N			22	PR	W

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 231

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE*	DISTANCE (FT) TO ACCESS PT.
1ST AVE S	--	--	--	--
	(G)	--	3	500'
SURFSIDE DRIVE	H	60	2	0'
3RD AVE N	I	40	3	0'

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

SHEET NO. 231

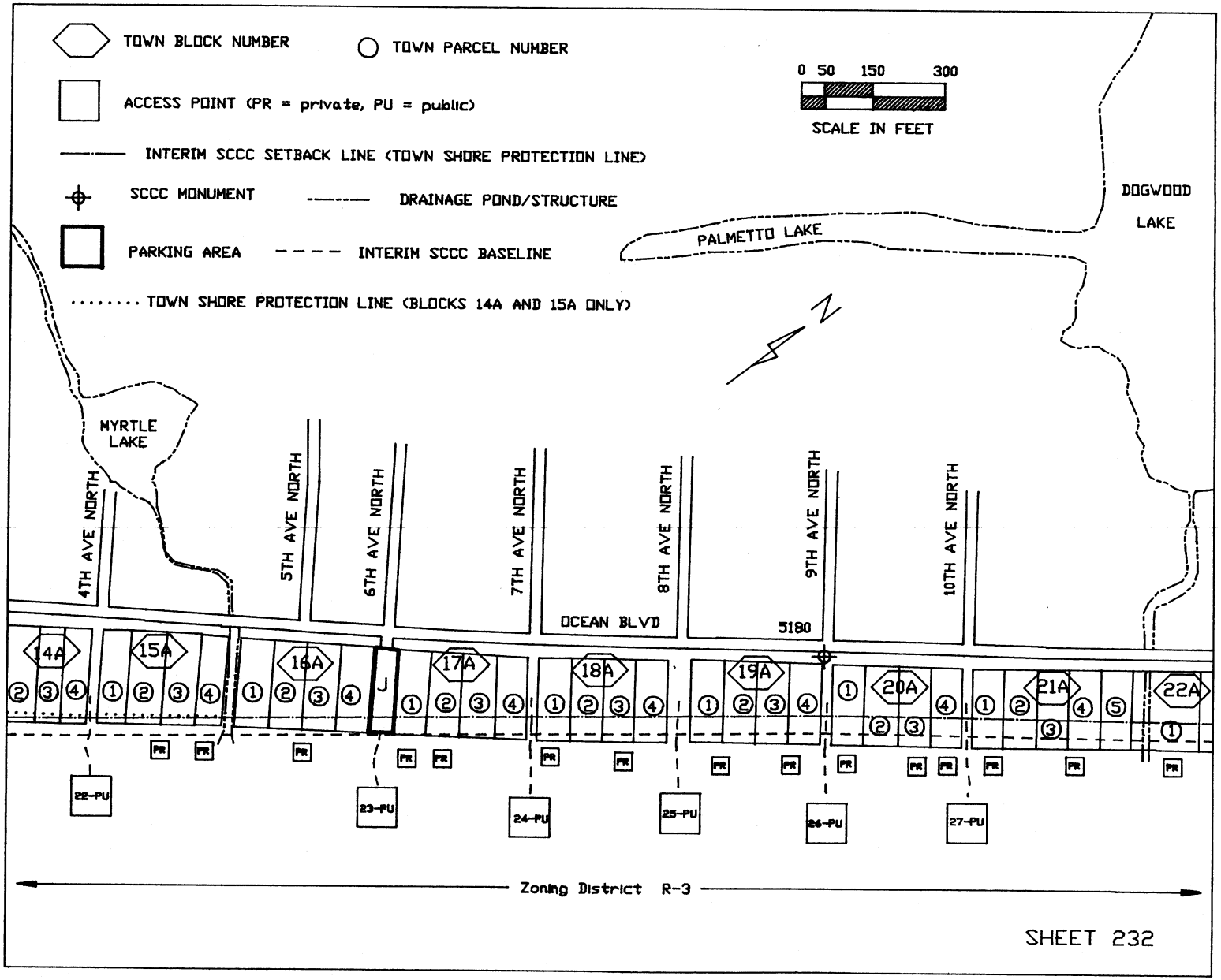
DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
MYRTLE LAKE BASIN	SURFSIDE DR	24" RCP	+112'

---

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD



TOWN OF SURFSIDE BEACH, BEACH MANAGEMENT PLAN

Prepared by Applied Technology and Management, Inc.
Charleston, SC

TOWN OF SURFSIDE BEACH

SHEET NO. 232

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
	10	2	14A	3	--	--	--
	"	1	"	4	A	-135'	--
4TH AVE N							
	9	4	15A	1	A	-18'	--
	"	5-16	"	2-3	B	-46'	--
	"	"	"	"	P	- 8'	--
	"	1	"	4	B	-38'	--
	"	"	"	"	P	-17'	--
	8	5-34	16A	1-4	B	+11'	--
	"	"	"	"	P	+11'	--
6TH AVE N					D	+33'	--
	7	4	17A	1	A	-16'	--
	"	3	"	2	A	-27'	--
	"	2	"	3	--	--	--
	"	1	"	4	--	--	--
7TH AVE N							
	6	4	18A	1	A	+10'	--
	"	5-25	"	2-4	B	+17'	--
	"	"	"	"	P	+17'	--
8TH AVE N							
	5	2-24	19A	1-3	B	-17'	--
	"	"	"	2-3	P	+11'	--
	"	29-32	"	4	B	+16'	--
9TH AVE N							
	4	4	20A	1	A	-58'	--
	"	"	"	"	A	+12'	--
	"	3	"	2	--	--	--
	"	2	"	3	B	- 7'	--
	"	2	"	3	P	+16'	--
	"	1	"	4	B	+35'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 232 (CONTINUED)

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL STRUCTURE
10TH AVE N							
	3	9-35	21A	1-4	B	+13'	--
	"	4	"	5	--	--	--
	"	59-69	22A	1	B	+ 7'	--
	"	"	"	"	P	+27'	--

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

TOWN OF SURFSIDE BEACH

SHEET NO. 232

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE*	FACILITIES**
4TH AVE N			22	PU	W
	15A	2-3	--	PR	W
	"	4	--	PR	W
	16A	2-3	--	PR	W
6TH AVE N			23	PU	W
	17A	1	--	PR	W
	"	2	--	PR	W
7TH AVE N			24	PU	V
	18A	1	--	PR	W
	"	3	--	PR	W
8TH AVE N			25	PU	W
	19A	1-2	--	PR	W
	"	3-4	--	PR	W
9TH AVE N			26	PU	W
	20A	1	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
10TH AVE N			27	PU	W
	21A	1	--	PR	W
	"	4	--	PR	W
	22A	1	--	PR	W

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 232

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE	DISTANCE (FT) TO ACCESS PT.
6TH AVE N	J	28	3	0'

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

SHEET NO. 232

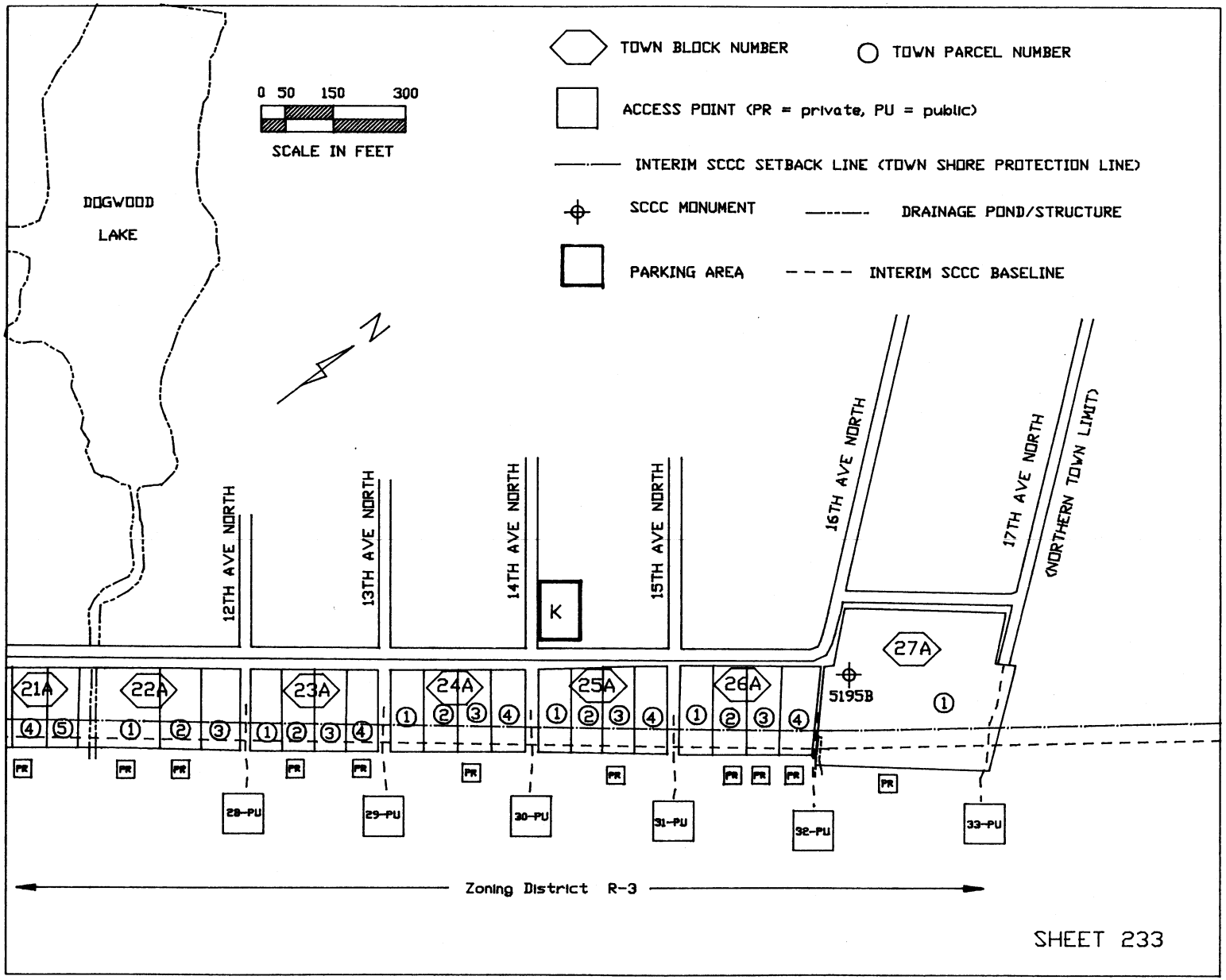
DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
MYRTLE LAKE BASIN	B'TWN 4TH & 5TH AVE N	6' TS	+65'
DOGWOOD LAKE BASIN	B"TWN 10TH & 12TH AVE N	6' TS	+82'

---

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD



TOWN OF SURFSIDE BEACH, BEACH MANAGEMENT PLAN

Prepared by Applied Technology and Management, Inc.
Charleston, SC

TOWN OF SURFSIDE BEACH

SHEET NO. 233

STRUCTURAL INVENTORY

STREET	COUNTY BLOCK	COUNTY PARCEL	TOWN BLOCK	TOWN PARCEL	STRUCTURE* INVENTORY	STRUCTURE** LOCATION	EROSION CONTROL*** STRUCTURE	
	3	4	21A	5	--	--	--	
	"	59-69	22A	1	B	+ 7'	--	
	"	"	"	"	P	+27'	--	
	"	36-49	"	2-3	B	+21'	--	
	"	"	"	"	P	+21'	--	
12TH AVE N								
	2	4	23A	1	--	--	--	
	"	5-18	"	2-3	B	+20'	--	
	"	"	"	"	P	+27'	--	
	"	1	"	4	A	+ 7'	--	
13TH AVE N								
	1	4	24A	1	--	--	--	
	"	3	"	2	--	--	--	
	"	2	"	3	A	+ 6'	--	1315
	"	1	"	4	--	--	--	
14TH AVE N								
	1	1	25A	1	--	--	--	1411
	"	2	"	2	--	--	--	
	"	4	"	3	A	-23'	--	
	"	3	"	4	A	+ 1'	--	
15TH AVE N								
	4	4-31	26A	1-2	B	+11'	--	
	"	"	"	"	P	+17'	--	
	"	2	"	3	A	+ 0'	--	
	"	3	"	4	A	-93'	--	
	"	"	"	"	A	+ 0'	--	
16TH AVE N								
	3	1	27A	1	B	+ 0'	--	
	"	"	"	"	P	+26'	--	
	"	"	"	"	--	+41'	R, Co (D)	
			"	"	D	+41'		
17TH AVE N								

Note * A = HABITABLE STRUCTURE < 5,000 SQ. FT.
B = HABITABLE STRUCTURE > 5,000 SQ. FT.
P = POOL
C = OTHER RECREATIONAL AMENITIES
D = PARKING LOTS
E = ANCILLARY BUILDINGS

** MEASURED FROM INTERIM SETBACK LINE
(- indicates LANDWARD; + indicates SEAWARD)

*** R = ROCK REVETMENT
T = TIMBER WALL
Co = CONCRETE WALL
(D) = DAMAGED

TOWN OF SURFSIDE BEACH

SHEET NO. 233

BEACH ACCESS INVENTORY

STREET	TOWN BLOCK	TOWN PARCEL	ACCESS SITE	TYPE	FACILITIES
	21A	4	--	PR	W
	22A	1	--	PR	W
	"	2	--	PR	W
12TH AVE N			28	PU	W
	23A	2	--	PR	W
	"	4	--	PR	W
13TH AVE N			29	PU	V, W
	24A	3	--	PR	W
14TH AVE N			30	PU	W
	25A	3	--	PR	W
15TH AVE N			31	PU	W
	26A	2	--	PR	W
	"	3	--	PR	W
	"	4	--	PR	W
16TH AVE N			32	PU	--
17TH AVE N			33	PU	V, U

NOTE * PR = PRIVATE ACCESS STRUCTURE
PU = PUBLIC ACCESS STRUCTURE

** W = DUNE WALKOVER
V = VEHICLE ACCESS
H = HANDICAPPED ACCESS
R = RESTROOMS
S = SHOWERS
L = LIFEGUARD
U = UNIMPROVED ACCESS

TOWN OF SURFSIDE BEACH

SHEET NO. 233

PARKING INVENTORY

STREET	PARKING# AREA	NO. OF SPACES	TYPE*	DISTANCE (FT) TO ACCESS PT.
14TH AVE N	(K)	??	3	227'

NOTE * 1 = ON STREET PUBLIC PARKING
2 = OFF STREET PRIVATE PARKING
3 = OFF STREET PUBLIC PARKING
# = () PROPOSED SPACE

TOWN OF SURFSIDE BEACH

SHEET NO. 233

DRAINAGE STRUCTURE INVENTORY

DRAINAGE/ STRUCTURE	BEACH DISCHARGE LOCATION	TYPE*	DISTANCE FROM SETBACK LINE**
DOGWOOD LAKE BASIN	B'TWN 10TH & 12TH AVE N	6' TS	+82'
MAGNOLIA LAKE BASIN	16TH AVE N	6' TS	+67'
"	"	24" RCP	+51'

* RCP = REINFORCED CONCRETE PIPE
TS = TIMBER SWASH
HDPE = HIGH DENSITY POLYETHYLENE
CBC = CONCRETE BOX CULVERT
CMP = CORRUGATED METAL PIPE

** - INDICATES LANDWARD
+ INDICATES SEAWARD

SECTION 4. TOWN ORDINANCES AND REGULATIONS

SECTION 4. TOWN ORDINANCES AND REGULATIONS

4.1 Introduction

The Beachfront Management Act and SCCC regulations require local governments to adopt a number of ordinances to protect and enhance physical and natural resources along the shoreline. This portion of the Town of Surfside Beach Local Comprehensive Beach Management Plan contains recommended revisions to the Municipal Code to bring it into compliance with the Act.

4.2 Recommended Revisions to Town Beach Regulations (Chapter 12, Article IV)

1. Revise Sec. 12-69. Dogs and other Domestic Pets to state the following:

   "It shall be unlawful to allow any dog or domestic pet on the public beach within the town limits during the calendar period from May 15 through October 31. Dogs and other domestic pets shall not be permitted in designated critical habitat areas prohibiting their presence."

2. Revise Sec. 12-71. Vehicles to state the following:

   "The operation of motor vehicles on the beaches of the town is prohibited, but this prohibition shall not apply to those vehicle uses deemed essential by the town. Essential vehicle uses shall include: emergency and law enforcement vehicles; town and other government vehicles; vehicles used to conduct beach surveys; any other vehicle uses deemed essential by the town."

3. Create a new section Sec. 12-73. Critical habitat areas as follows:

   "Pedestrian, vehicle and other traffic in critical habitat areas designated along the ocean shoreline by the South Carolina Wildlife and Marine Resources Department shall be subject to certain restrictions. When critical habitat areas are designated the town shall post appropriate signs, as recommended by the SCWMRD, and enforce traffic restrictions."

4.3 Recommended Revisions to Town Shore Protection Regulations (Chapter 17, Article VIII)

1. Revise Sec. 17-388(a). Shore protection line and area established to state the following:

   "On lots lying contiguous to the Atlantic Ocean, the shore protection line shall be determined to be the line thirty-six (36) linear feet landward of the South Carolina Coastal Council final baseline adopted in June 1991. The area bounded by the shore protection line, as determined in this subsection, and the Atlantic Ocean shall be known as the shore protection area."

2. Revise Sec. 17-388(b). Shore protection line and area established as follows:

   Delete the last sentence (Upon completion.....of this section). Since the shore protection line will have already been established, there is no need to reference the line to a newly constructed dune.

   Add a new sentence at the end of this subsection, "Upon completion of construction of a continuous, identifiable primary oceanfront sand dune in accordance with this subsection, property owners are encouraged to vegetate the dune with native plants in accordance with Section 2.4.1 and Appendix F of the town's Local Comprehensive Beach Management Plan."

3. Revise Sec. 17-389(2). Permitted uses by deleting the first two sentences of the section and inserting the following:

   "*Sand fence*. Every owner of a lot lying contiguous to the Atlantic Ocean shall maintain, repair, protect and encourage the development of the primary oceanfront sand dune by installing sand fence along the primary oceanfront sand dune in accordance with Section 2.4.1 of the town's Local Comprehensive Beach Management Plan. Owners shall install and maintain a continouous row of sand fence along the Shore Protection Line, or if permitted by the code enforcement official, in a more seaward location. However, the owner shall not be permitted to install sand fence any farther seaward than the landward trough of the primary oceanfront sand dune."

4. Create a new subsection Sec. 17-389(3). Permitted uses to state the following:

"*Vegetation.* Property owners along the oceanfront are encouraged to install and maintain native dune grasses, ground covers and shrubs in the shore protection area. Vegetation on the seaward and landward sides of the primary oceanfront sand dune shall be selected, installed and maintained in accordance with Section 2.4.1 and Appendix F of the town's Local Comprehensive Beach Management Plan. The town may, at its discretion, allow property owners to landscape the area between the landward trough of the primary oceanfront sand dune and the shore protection line with non-native vegetation. Non-native vegetation shall not be allowed seaward of the landward trough of the primary oceanfront sand dune. The town may require mitigation for any landscaping seaward of the shore protection line using non-native vegetation. Mitigation requirements are set forth in Section 2.10 of the town's Local Comprehensive Beach Management Plan."

5. Renumber existing section 17-389(3) as Sec. 17-389(4) *Emergency temporary erosion control* and renumber existing section 17-389(4) as Sec. 17-389(5) *Other permitted uses*.

6. Revise Sec. 17-392. Nonconforming uses; removal of destroyed or damaged structures as follows:

Insert the sentence, "Damaged nonconforming uses can be continued only after permission for such continuance has been received from both the town and the South Carolina Coastal Council" following the second sentence in paragraph (a).

SECTION 5. REFERENCES

SECTION 5. REFERENCES

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APPENDIX A

SCCC Monument Descriptions

SOUTH CAROLINA COASTAL COUNCIL
CONTROL SURVEYS
THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5130

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'30".1 SCALE FACTOR : 0.9997942

HORIZONTAL ORIGIN : VERTICAL ORIGIN :

NORTHING : 198583.032 (M) EASTING : 797881.823 (M)

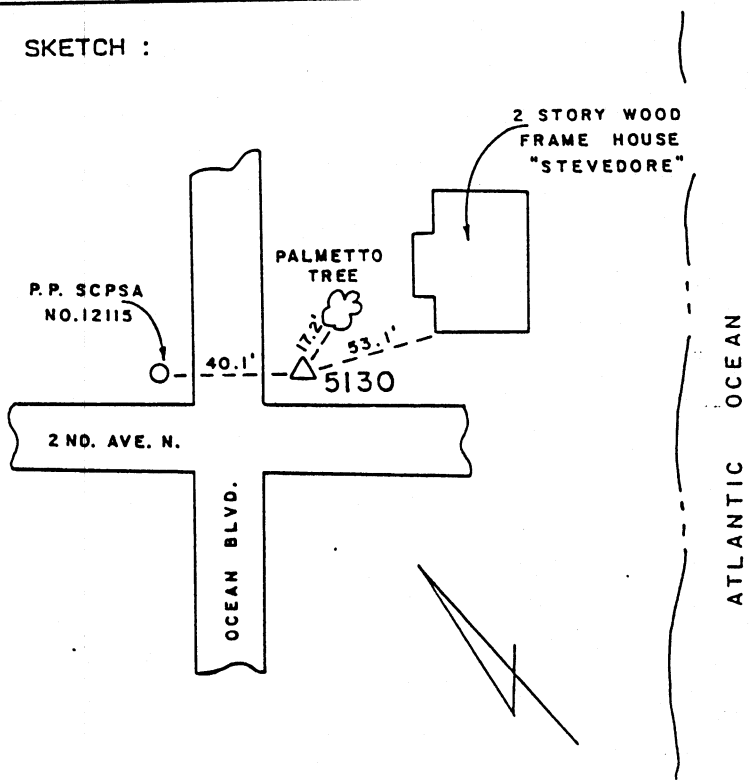
LATITUDE : 33°36'26".55586 LONGITUDE : 78°58'14".59370

ELEVATION (NGVD 29) 8.421 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
5180	220°12'56".91	N 39°05'27"E	662.719 (M)
5140	39°36'34".35	S 38°29'04"W	769.738 (M)

DESCRIPTION :
LOCATED IN TOWN OF SURFSIDE BEACH IN EAST QUADRANT OF INT. OF 2nd AVE. N. & OCEAN BLVD., 40.1' SE OF SCPSA PP#° 12115, 17.2' WSW OF PALMETTO TREE, 53.1' NW OF W. COR. HOUSE. A STANDARD BRASS CAP FIXED ON 2" PVC PIPE INSIDE OF 6" PVC PIPE SURROUNDED BY CONC. 0.3' ABOVE SURFACE OF GROUND

SKETCH :



SOUTH CAROLINA COASTAL COUNCIL

CONTROL SURVEYS

THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5180

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'39".3 SCALE FACTOR : 0.9997942

HORIZONTAL ORIGIN : VERTICAL ORIGIN :

NORTHING : 199097.294 (M) EASTING : 798299.615 (M)

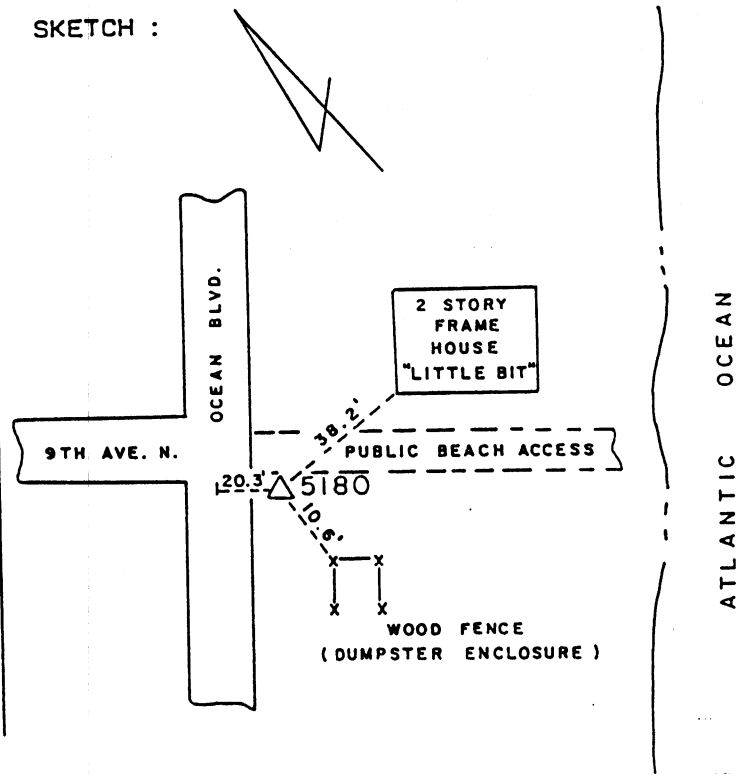
LATITUDE : 33°36'42".98095 LONGITUDE : 78°57'57".99477

ELEVATION (NGVD 29) 8.940 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
5195	223°23'58".59	N 42°16'19"E	667.640 (M)
5130	40°13'06".11	S 39°05'27"W	662.719 (M)

DESCRIPTION :
LOCATED IN TOWN OF SURFSIDE BEACH NEAR THE INT. OF 9th AVE. N. & OCEAN BLVD., 38.2' WNW OF W. COR. HOUSE, 10.6' NW OF N. COR. WOOD FENCE COR., 20.3' SE OF C/L OCEAN BLVD., A STANDARD BRASS CAP FIXED ON 2" PVC PIPE SET INSIDE OF 6" PVC PIPE SURROUNDED BY CONC. 0.3' ABOVE SURFACE OF GROUND

SKETCH :



SOUTH CAROLINA COASTAL COUNCIL

CONTROL SURVEYS

THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5195

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'49".2 SCALE FACTOR : 0.9997941

HORIZONTAL ORIGIN : VERTICAL ORIGIN :

NORTHING : 199591.219 (M) EASTING : 798748.611 (M)

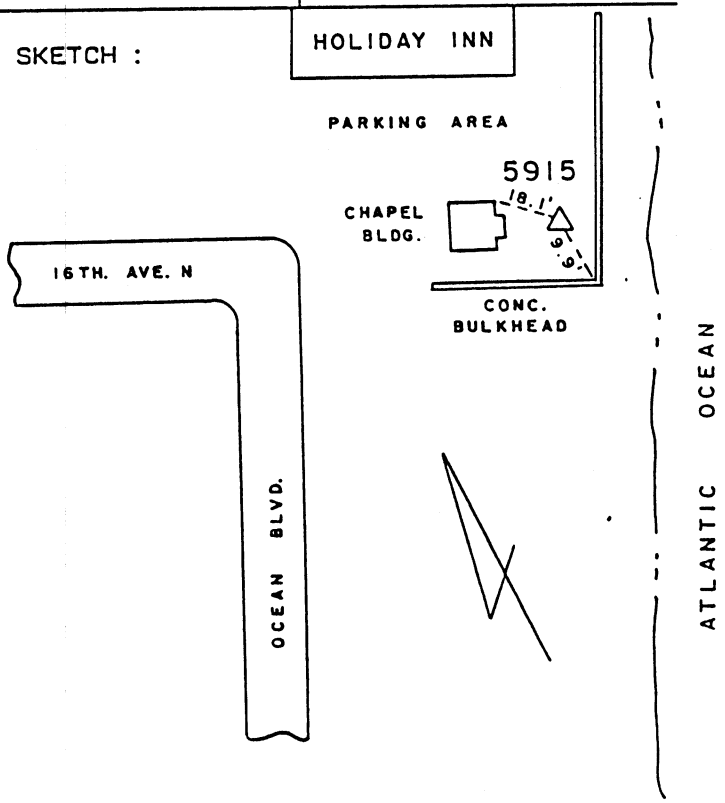
LATITUDE : 33°36'58".72535 LONGITUDE : 78°57'40".19908

ELEVATION (NGVD 29) 12.660 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
5200	216°30'48".91	N 35°23'00"E	638.713 (M)
5180	43°24'08".46	S 42°16'19"W	667.640 (M)

DESCRIPTION :
LOCATED IN TOWN OF SURFSIDE BEACH NEAR THE INTS. OF 16th AVE. N. & OCEAN BLVD. ON PROPERTY OF HOLIDAY INN HOTEL. 18.1' SSE OF COR. CHAPEL BLDG., 9.9' NNE OF COR. CONC. BULKHEAD. A STANDARD BRASS CAP FIXED ON 2" PVC PIPE SET INSIDE OF 6" PVC PIPE SURROUNDED BY CONC. 0.1' ABOVE SURFACE OF GROUND

SKETCH :



SOUTH CAROLINA COASTAL COUNCIL

CONTROL SURVEYS

THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5100

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'05".1 SCALE FACTOR : 0.9997945

HORIZONTAL ORIGIN : _____ VERTICAL ORIGIN : _____

NORTHING : 197065.935 (M) EASTING : 796750.477 (M)

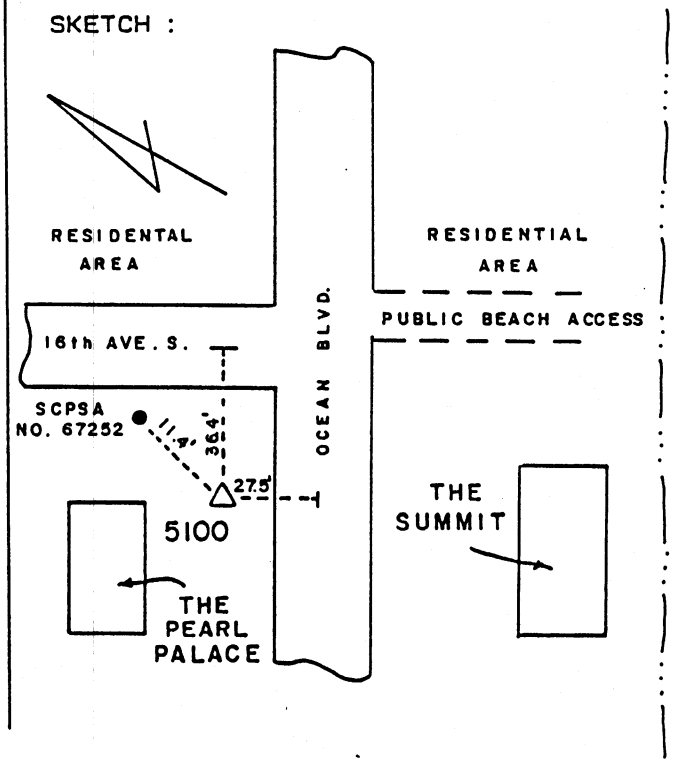
LATITUDE : 33°35'38".03331 LONGITUDE : 78°58'59".62773

ELEVATION (NGVD 29) 10.889 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
5120	216°47'02".14	N 35°39'57"E	592.384 (M)
5030	36°58'05".50	S 35°51'00"W	605.469 (M)

DESCRIPTION :
LOCATED IN THE TOWN OF SURFSIDE BEACH IN WEST QUADRANT OF INTS. OF 16th AVE. S. & OCEAN BLVD., 11.4' S OF SCPSA PP#' 67252, 36.4' SW OF C/L 16th AVE. S., 27.5' NW OF C/L OCEAN BLVD, A STANDARD BRASS CAP FIXED ON 2" PVC PIPE SET INSIDE OF 6" PVC PIPE SURROUNDED BY CONC.
0.1' ABOVE SURFACE OF GROUND

SKETCH :



SOUTH CAROLINA COASTAL COUNCIL

CONTROL SURVEYS

THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5120

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'12".8 SCALE FACTOR : 0.9997944

HORIZONTAL ORIGIN : _____ VERTICAL ORIGIN : _____

NORTHING : 197547.108 (M) EASTING : 797095.800 (M)

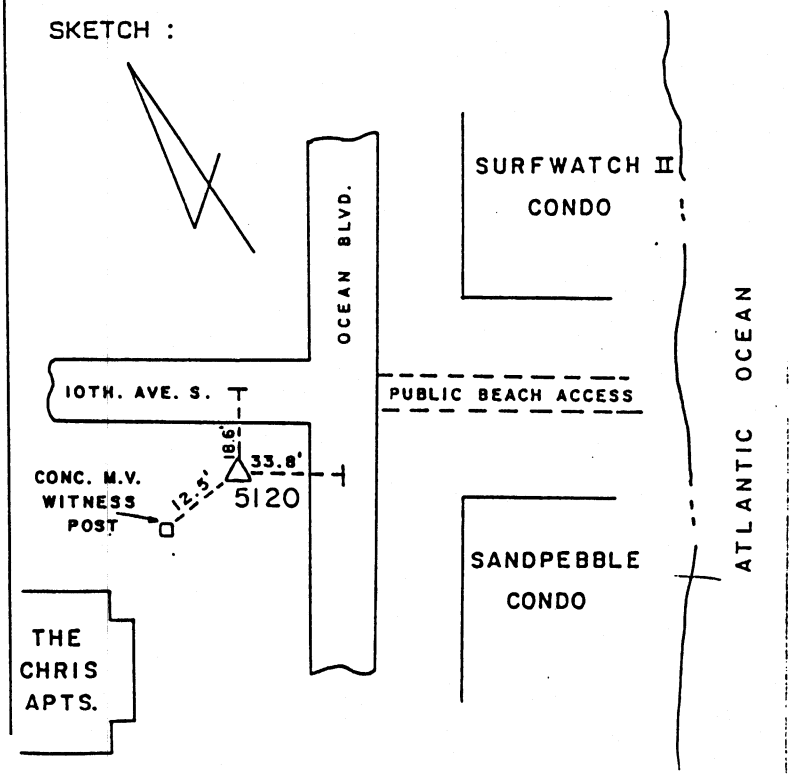
LATITUDE : 33°35'53".43213 LONGITUDE : 78°58'45".86967

ELEVATION (NGVD 29) 10.249 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
ROCH 2 AZ	223°31'11".12	N 42°23'58"E	297.205 (M)
5100	36°47'09".77	S 35°39'57"W	592.384 (M)

DESCRIPTION :
LOCATED IN TOWN OF SURFSIDE BEACH IN WEST QUADRANT OF INT. OF 10th AVE. S. & OCEAN BLVD., 12.5' ENE OF CONC. METER VALVE WITNESS POST, 18.6' SW OF C/L 10th AVE. S., 33.8' NW OF C/L OCEAN BLVD. A STANDARD BRASS CAP FIXED ON 2" PVC PIPE SET INSIDE OF 6" PVC PIPE SURROUNDED BY CONC.
0.2' ABOVE SURFACE OF GROUND

SKETCH :



SOUTH CAROLINA COASTAL COUNCIL

CONTROL SURVEYS

THIRD-ORDER, CLASS I HORIZONTAL - THIRD-ORDER VERTICAL

PROJECT : SCCC BEACH MONITORING BASELINE STATION NO. : 5140

STATE : SOUTH CAROLINA COUNTY : HORRY EST. BY : SUR-TECH, INC.

NAD 83 - SINGLE ZONE SPC - MAPPING ANGLE : 1°07'19".6 SCALE FACTOR : 0.9997943

HORIZONTAL ORIGIN : VERTICAL ORIGIN :

NORTHING : 197980.624 (M) EASTING : 797402.911 (M)

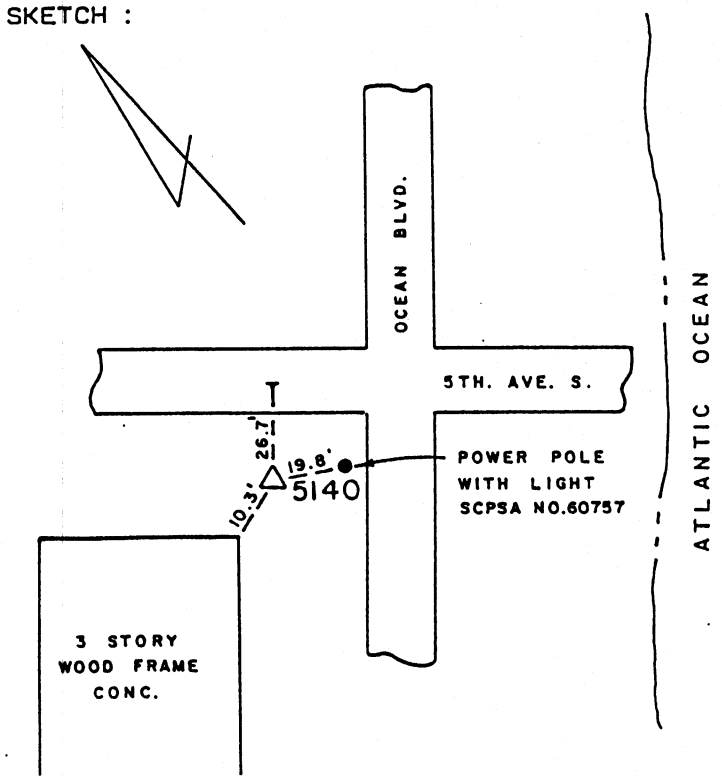
LATITUDE : 33°36'07".30796 LONGITUDE : 78°58'33".62860

ELEVATION (NGVD 29) 8.174 FEET M.S.L. DATE : OCT. 1987 - FEB. 1988

OBJECT	GEODETIC AZIMUTH	GRID BEARING	HORIZONTAL DISTANCE
5130	219°53'13".55	N 38°45'54"E	1432.436 (M)
ROCH 2 AZ	27°37'26".63	S 26°30'07"W	239.274 (M)

DESCRIPTION :
LOCATED IN TOWN OF SURFSIDE BEACH IN WEST QUADRANT OF INT. OF 5th AVE. S. & OCEAN BLVD., 10.3' NE OF E. COR. BLDG., 26.7' SSW OF C/L 5th AVE. S., 19.8' NW OF SCPSA PP#° 60757, A STANDARD BRASS CAP FIXED ON 2" PVC PIPE SET INSIDE OF 6" PVC PIPE SURROUNDED BY CONC. 0.2' ABOVE SURFACE OF GROUND

SKETCH :



APPENDIX B

Town of Surfside Beach Zoning Regulations

(c) In order to protect undeveloped land where a building permit or subdivision approval has not been issued, the removal within any five-year period of more than twenty-five (25) percent of the existing trees on any one (1) parcel of real property without prior approval of the code enforcement official is prohibited.
(Ord. of 2-5-80, § 1605; Ord. No. 88-0255, § 1605, 3-15-88)

Sec. 17-368. Plot and planting plan.

All applications for building permits, except for single-family residences, shall be accompanied by a plot and planting plan. Said plan must be approved by the code enforcement official prior to the issuance of a building permit. The plot and planting plan shall be drawn to scale and shall include all pertinent dimensions and indicate clearly proposed parking, driveways and other vehicular use areas, all proposed buildings and structures, and locations of proposed landscaped areas and materials to be used in landscaping.
(Ord. of 2-5-80, § 1606.3; Ord. No. 88-0252, § 1606.3, 3-1-88)

Sec. 17-369. Continuance of nonconforming land uses.

Nonconforming land uses will be in accordance with Article V of this chapter. This article encourages nonconforming land users, in the spirit of this chapter's intent, to bring their property within conforming standards wherever possible.
(Ord. of 2-5-80, § 1607; Ord. No. 88-0252, § 1607, 3-1-88)

Secs. 17-370—17-385. Reserved.

ARTICLE VIII. SHORE PROTECTION*

Sec. 17-386. Intent.

It is the intent of this article to protect public and private coastal property in the town from damage caused by flooding, erosion and hurricanes as much as is reasonably possible. It is the further intent of this article to allow the reasonable use of coastal property that is subject to hurricanes, floods and erosion while promoting public health and safety by protecting the natural beach and dune system from alterations that restrict its natural and dynamic changes or that impair its ability to provide a natural buffer from wind, water and wave action.
(Ord. No. 82-0164, § 1502, 8-3-82; Ord. No. 88-0252, § 1502, 3-1-88)

Sec. 17-387. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

***Cross reference**—Beaches, § 12-61 et seq.

Dune, sand shall mean a hill or ridge or loose, windblown sand with or without vegetation.

Primary ocean front sand dunes shall mean those dunes which constitute the front row of dunes adjacent to the Atlantic Ocean.

Shore protection area (SPA) shall mean that area bounded by the Atlantic Ocean and the shore protection line.

Shore protection line (SPL) shall mean a line seaward of which land and plants are protected under the provisions of this article.

(Ord. No. 82-0164, §§ 1503.2—1503.5, 8-3-82; Ord. No. 88-0252, §§ 1503.2—1503.5, 3-1-88)

Cross reference—Definitions and rules of construction generally, § 1-2.

Sec. 17-388. Shore protection line and area established.

(a) On all lots lying contiguous to the Atlantic Ocean, the shore protection line shall be determined to be the line twenty (20) linear feet landward of the property line nearest the Atlantic Ocean (rear property line) or the line twenty (20) linear feet landward of the landward trough of the primary ocean front sand dune, as determined by the South Carolina Coastal Council, whichever such line is further from the Atlantic Ocean. The area bounded by the shore protection line, as determined in this subsection, and the Atlantic Ocean shall be known as the shore protection area.

(b) Prior to the issuance of a building permit for any new construction, development, or change of the primary use upon a lot lying contiguous to the Atlantic Ocean, and upon the determination by the South Carolina Coastal Council that there is no continuous, identifiable primary ocean front sand dune situate upon or immediately seaward of such lot, the owner of such lot or the agent of such owner shall be required to construct a continuous, identifiable primary ocean front sand dune which shall be the same height and width and shall be in line with the adjacent primary ocean front sand dunes. Every primary ocean front sand dune which is required to be constructed by this subsection shall be composed of sand which is compatible in grain size with the sand which comprises adjacent primary ocean front sand dunes and every primary ocean front sand dune constructed pursuant to this section shall be constructed in accordance [with the requirements of the permit issued for such construction] by the code enforcement official. Upon completion of the construction of a continuous, identifiable primary ocean front sand dune in accordance with this subsection, a shore protection line shall be determined in accordance with subsection (a) of this section.

(c) Notwithstanding anything contained in sections 17-73, 17-92, 17-116, 17-136, 17-161, 17-180, or 17-201, to the contrary, all lots lying contiguous to the Atlantic Ocean upon which a shore protection line is established in accordance with subsection (a) of this section shall be subject to a fifteen-foot front yard setback requirement.

(Ord. No. 82-0164, § 1504, 8-3-82; Ord. No. 88-0252, § 1504, 3-1-88)

Sec. 17-389. Permitted uses.

Permitted uses allowed within the shore protection area, after having obtained a permit from the code enforcement official, are as follows:

(1) *Dune crossing and walkways.* Dune crossings shall be permitted on all lots lying contiguous to the Atlantic Ocean. Dune crossings shall be built on pilings and must be constructed of wood planking elevated not less than two (2) feet above the surface of the sand dune. The boardwalk shall be no more than four (4) feet wide, leaving at least three-fourths of an inch between each plank or board to permit partial transfer of sand, wind, rain, and sunlight. The dune crossing shall not be covered, and in no event shall the dune crossing be enclosed in any form on any side except by a safety guard rail. A dune crossing permitted by this section may be connected to the main building or structure situate upon a lot lying contiguous to the Atlantic Ocean by means of an elevated walkway. Elevated walkways shall be permitted by this section only as a means of access between a main building or structure and a dune crossing. Elevated walkways shall be built on pilings and must be constructed of wood planking elevated not less than two (2) feet above ground level. The boardwalk shall be no more than four (4) feet wide, leaving at least three-fourths of an inch between each plank or board to permit partial transfer of sand, wind, rain, and sunlight. The walkway shall not be covered and in no event shall the walkway be enclosed in any form on any side except by a safety guard rail.

(2) *Sand fence.* Every owner of a lot lying contiguous to the Atlantic Ocean shall maintain, repair, protect and encourage the development of the primary ocean front sand dune by installing and maintaining a sand fence along the entire length of the rear property line (as defined in section 17-272) of such lot. Sand fences shall be situate and located upon the seaward side of an identifiable primary ocean front sand dune. In the absence of an identifiable primary ocean front sand dune or in the event of a breach or blowout in an identifiable primary ocean front sand dune, the sand fence shall be situate and located in accordance with guidelines set forth in the building permit issued by the code enforcement official. Every owner of a lot lying contiguous to the Atlantic Ocean shall, within nine (9) months of the adoption of this amended section, obtain a building permit from the code enforcement official which shall specifically prescribe the location where the sand fence is to be installed, the materials of which the sand fence is to be constructed and the procedures for the installation of the sand fence. Sand fences shall be connected from lot to lot so that a continuous line of sand fence shall be maintained in place to protect and encourage the development of the primary ocean front sand dune.

(3) *Emergency temporary erosion control:*

a. In emergency situations, temporary erosion control measures including but not limited to sandbagging or sand scraping may be permitted for the protection of endangered improved real property. Only those temporary erosion control measures which do not impair the long term development and continuation of the natural dune system shall be permitted by this section. Permanent seawalls and/or other erosion control measures which impair or inhibit the development and continuation of the natural dune system are specifically prohibited by this article. All temporary erosion control measures must be removed within a rea-

sonable time following the termination of the emergency situation. Post emergency measures to aid the rebuilding of damaged or destroyed dunes shall be permitted and such measures may include sand scraping, dune renourishment and sand fencing.

b. If improved real property within or immediately adjacent to the shore protection area is endangered by an emergency situation, and if the owner of such endangered improved real property fails to undertake appropriate temporary erosion control measures to protect such endangered improved real property within a reasonable time after the onset of the emergency situation, then the town, acting by and through its agents and employees, shall have the authority but not the obligation to undertake appropriate temporary erosion control measures to protect such endangered improved real property. If the town elects to undertake temporary erosion control measures to protect endangered improved real property in accordance with this subsection, the town shall assess the owner of such improved real property for the expense of such temporary erosion control measures.

(4) *Other permitted uses.* Other structures and uses including but not limited to light poles, garbage receptacles, lifeguard stands, etc., necessary to provide for the public health, safety, and welfare shall be permitted when such improvement or use will not reduce the effectiveness of nor alter sand dunes and vegetation, and when such improvement or use does not violate the intent of this article.

(Ord. No. 82-0164, § 1505.4, 8-3-82; Ord. No. 88-0252, § 1505.4, 3-1-88)

Sec. 17-390. Construction.

(a) *Shore protection line to be determined prior to construction.* No construction or development shall be permitted on any lot lying contiguous to the Atlantic Ocean until such time as a shore protection line has been determined on such lot pursuant to section 17-388. No construction or development of any type, including overhead encroachments, shall be allowed within the shore protection area, except as specified in sections 17-389 and 17-392.

(b) *Not to damage, encroach upon shore protection area.* Prior to the beginning of and during the construction phase of property lying contiguous to the Atlantic Ocean, the developer, owner, or contractor is required to construct a fence or barrier no less than three (3) feet high along the shore protection line for the entire width of the property, which clearly identifies the shore protection area. It shall be unlawful to damage or encroach upon this area during the construction of the project.

(Ord. No. 82-0164, § 1505.1, 8-3-82; Ord. No. 88-0252, § 1505.1, 3-1-88)

Sec. 17-391. Prohibited uses.

Notwithstanding any other provisions contained in this article to the contrary, the construction of seawalls, bulkheads, revetments and similar structures which impair or inhibit the development and continuation of the natural dune system are prohibited in the shore protection area.

(Ord. No. 82-0164, § 1505.6, 8-3-82; Ord. No. 88-0252, § 1505.6, 3-1-88)

Sec. 17-392. Nonconforming uses; removal of destroyed or damaged structures.

(a) Any building, structure, or lawful use of land located seaward of the shore protection line established pursuant to section 17-388 which is in existence or is permitted on or before the effective date of this amended article is declared to be nonconforming use. A nonconforming use of a building, structure, or land may be continued as long as such use shall not be extended to occupy a greater area of land or space. Notwithstanding any other provisions contained herein to the contrary, a nonconforming building or structure which is destroyed or which is damaged to the extent of fifty-one (51) percent or more of its actual cash value (replacement cost less observed depreciation) at the time of such damage may not be rebuilt or restored in a manner which continues its nonconformity. In the event that a nonconforming building or structure is destroyed or is damaged to the extent of fifty-one (51) percent or more of its actual cash value at the time of such damage, the owner of such destroyed or damaged nonconforming building or structure shall remove any remaining portions of such building or structure within ninety (90) days of the date of the destruction or damage. Upon the failure of the owner of such building or structure to comply with this requirement, the town council may declare the building or structure a hazard and order removal of same at the owner's expense. Failure of the owner to comply with the requirement stated in this subsection shall constitute a violation of this article.

(b) If a nonconforming building or structure is damaged to the extent of fifty (50) percent or less of its actual cash value at the time of such damage, the owner of such damaged nonconforming building or structure shall determine whether or not to repair and restore the damaged nonconforming building or structure. Provided, however, that no repair or restoration of such a damaged nonconforming building or structure shall extend such nonconforming building or structure to occupy an area of land or space greater than the area of land or space occupied by such nonconforming building or structure prior to such damage. If the owner of such a damaged nonconforming building or structure determines not to repair or restore such building or other structure, such owner shall remove the remaining portions of such building or structure within ninety (90) days of the date of the damage. Upon the failure of such owner to comply with this requirement, the town council may declare the building or structure a hazard and order removal of same at the owner's expense. Failure of the owner to comply with the requirement stated in this subsection shall constitute a violation of this article.
(Ord. No. 82-0164, § 1505.5, 8-3-82; Ord. No. 88-0252, § 1505.5, 3-1-88)

Sec. 17-393. Permit required to destroy, remove, alter sand dunes.

It shall be unlawful for any person, firm, corporation or private authority in any manner to damage, destroy, remove, or redistribute sand and sand dunes lying seaward of the shore protection line, or to alter, interfere with, do or perform any act which tends to lessen the protection afforded by the strand, beach, dunes, or dune line, without first having obtained a permit from the code enforcement official.
(Ord. No. 82-0164, § 1505.2, 8-3-82; Ord. No. 88-0252, § 1505.2, 3-1-88)

Sec. 17-394. Permit required to destroy, remove, alter vegetation.

It shall be unlawful for any person, firm, corporation or private authority in any manner to kill, destroy, remove, or alter the form of any trees, shrubbery, plants, grass, or any other natural form of vegetation growing, living, or situated seaward of the shore protection line, or to interfere with, do, or perform any act which tends to lessen the protection and natural purpose of such vegetation, without first having obtained a permit for such action from the code enforcement official.

(Ord. No. 82-0164, § 1505.3, 8-3-82; Ord. No. 88-0252, § 1505.3, 3-1-88)

Sec. 17-395. Criteria for granting of permits.

No permit shall be issued pursuant to this article without a determination by the code enforcement official, based upon an inspection of the area involved, and a report thereon by the town engineer, that such proposed construction, alteration, or disturbance will not create nor increase a danger or hazard to life or property. No permit shall be granted if the proposed construction, alteration, or disturbance will:

(1) Adversely affect the littoral drift of the shore protection area;

(2) Result in a reduction of sand, sand dune, or vegetation; or

(3) Tend to circumvent the intent of this article.

(Ord. No. 82-0164, § 1505.7, 8-3-82; Ord. No. 88-0252, § 1505.7, 3-1-88)

APPENDIX C

1990 Beachfront Management Act

Beachfront Management Act

July, 1990

(R748, S391)

AN ACT TO AMEND THE CODE OF LAWS OF SOUTH CAROLINA, 1976, BY ADDING SECTIONS 48-39-250 AND 48-39-260 SO AS TO PROVIDE FOR THE FINDINGS AND POLICY RELATING TO THE BEACH/DUNE SYSTEM; TO AMEND SECTION 48-39-130, AS AMENDED, RELATING TO COASTAL COUNCIL PERMITS TO UTILIZE A CRITICAL AREA, SO AS TO REVISE THE PROVISIONS DETAILING WHEN A PERMIT IS NOT NECESSARY; TO AMEND SECTIONS 48-39-270 THROUGH 48-39-360, RELATING TO THE BEACH MANAGEMENT ACT, SO AS TO ADD SECTIONS 48-39-305 AND 48-39-355, REVISE DEFINITIONS, THE PROVISIONS FOR AND THE DETERMINATION OF THE BASELINE AND THE SETBACK LINE, THE DUTIES OF THE COASTAL COUNCIL, THE REQUIREMENTS RELATING TO CONSTRUCTION, RECONSTRUCTION, HABITABLE STRUCTURES, EROSION CONTROL STRUCTURES OR DEVICES, POOLS, AND BUILDING PERMITS, AND THE EXEMPTIONS, PROVIDE FOR A PETITION TO THE CIRCUIT COURT BY LANDOWNERS AND THE COURT'S DETERMINATION, PROVIDE FOR THE PLANTING OF VEGETATION, REVISE THE REQUIREMENTS FOR THE BEACH MANAGEMENT PLAN AND OF A DISCLOSURE STATEMENT IN A CONTRACT OF SALE OR TRANSFER OF REAL PROPERTY, AND PROVIDE FOR THE CIRCUMSTANCES UNDER WHICH A PERMIT IS NOT REQUIRED AND FOR DOCUMENTATION; TO REPEAL SECTIONS 1 AND 2 OF ACT 634 OF 1988 RELATING TO FINDINGS AND POLICY RELATING TO THE BEACH/DUNE SYSTEM; TO PROVIDE FOR THE PLACEMENT OF SAND ON BEACHES; TO AMEND SECTION 48-39-40, RELATING TO THE MEMBERS OF THE COASTAL COUNCIL, SO AS TO PROVIDE FOR THEIR ELECTION INSTEAD OF APPOINTMENT AND DELETE THE PROVISIONS FOR INITIAL APPOINTMENTS; TO PROVIDE FOR THE SERVICE OF THE CURRENT NONLEGISLATIVE MEMBERS OF THE COUNCIL; AND TO PROVIDE FOR APPLICATION OF THE ACT ON LEGAL ACTIONS.

Be it enacted by the General Assembly of the State of South Carolina:

Beach/dune system findings

SECTION 1. The 1976 Code is amended by adding:

"Section 48-39-260. The General Assembly finds that:

(1) The beach/dune system along the coast of South Carolina is extremely important to the people of this State and serves the following functions:

(a) protects life and property by serving as a storm barrier which dissipates wave energy and contributes to shoreline stability in an economical and effective manner;

(b) provides the basis for a tourism industry that generates approximately two-thirds of South Carolina's annual tourism industry revenue which constitutes a significant portion of the state's economy. The tourists who come to the South Carolina coast to enjoy the ocean and dry sand beach contribute significantly to state and local tax revenues;

(c) provides habitat for numerous species of plants and animals, several of which are threatened or endangered. Waters adjacent to the beach/dune system also provide habitat for many other marine species;

(d) provides a natural healthy environment for the citizens of South Carolina to spend leisure time which serves their physical and mental well-being.

(2) Beach/dune system vegetation is unique and extremely important to the vitality and preservation of the system.

(3) Many miles of South Carolina's beaches have been identified as critically eroding.

(4) Chapter 39 of Title 48, Coastal Tidelands and Wetlands, prior to 1988 did not provide adequate jurisdiction to the South Carolina Coastal Council to enable it to effectively protect the integrity of the beach/dune system.

Consequently, without adequate controls, development unwisely has been sited too close to the system. This type of development has jeopardized the stability of the

beach/dune system, accelerated erosion, and endangered adjacent property. It is in both the public and private interests to protect the system from this unwise development.

(5) The use of armoring in the form of hard erosion control devices such as seawalls, bulkheads, and rip-rap to protect erosion-threatened structures adjacent to the beach has not proven effective. These armoring devices have given a false sense of security to beachfront property owners. In reality, these hard structures, in many instances, have increased the vulnerability of beachfront property to damage from wind and waves while contributing to the deterioration and loss of the dry sand beach which is so important to the tourism industry.

(6) Erosion is a natural process which becomes a significant problem for man only when structures are erected in close proximity to the beach/dune system. It is in both the public and private interests to afford the beach/dune system space to accrete and erode in its natural cycle. This space can be provided only by discouraging new construction in close proximity to the beach/dune system and encouraging those who have erected structures too close to the system to retreat from it.

(7) Inlet and harbor management practices, including the construction of jetties which have not been designed to accommodate the longshore transport of sand, may deprive downdrift beach/dune systems of their natural sand supply. Dredging practices which include disposal of beach quality sand at sea also may deprive the beach/dune system of much-needed sand.

(8) It is in the state's best interest to protect and to promote increased public access to South Carolina's beaches for out-of-state tourists and South Carolina residents alike.

(9) Present funding for the protection, management, and enhancement of the beach/dune system is inadequate.

(10) There is no coordinated state policy for post-storm emergency management of the beach/dune system.

(11) A long-range comprehensive beach management plan is needed for the entire coast of South Carolina to protect and manage effectively the beach/dune system, thus preventing unwise development and minimizing man's adverse impact on the system.

Section 48-39-260. In recognition of its stewardship responsibilities, the policy of South Carolina is to:

(1) protect, preserve, restore, and enhance the beach/dune system, the highest and best uses of which are declared to provide:

(a) protection of life and property by acting as a buffer from high tides, storm surge, hurricanes, and normal erosion;

(b) a source for the preservation of dry sand beaches which provide recreation and a major source of state and local business revenue;

(c) an environment which harbors natural beauty and enhances the well-being of the citizens of this State and its visitors;

(d) natural habitat for indigenous flora and fauna including endangered species;

(2) create a comprehensive, long-range beach management plan and require local comprehensive beach management plans for the protection, preservation, restoration, and enhancement of the beach/dune system. These plans must promote wise use of the state's beachfront to include a gradual retreat from the system over a forty-year period;

(3) severely restrict the use of hard erosion control devices to armor the beach/dune system and to encourage the replacement of hard erosion control devices with soft technologies as approved by the South Carolina Coastal Council which will provide for the protection of the shoreline without long-term adverse effects;

(4) encourage the use of erosion-inhibiting techniques which do not adversely impact the long-term well-being of the beach/dune system;

(5) promote carefully planned nourishment as a means of beach preservation and restoration where economically feasible;

(6) preserve existing public access and promote the enhancement of public access to assure full enjoyment of the beach by all our citizens including the handicapped and encourage the purchase of lands adjacent to the Atlantic Ocean to enhance public access;

(7) involve local governments in long-range comprehensive planning and management of the beach/dune system in which they have a vested interest;

(8) establish procedures and guidelines for the emergency management of the beach/dune system following a significant storm event."

Beach/dune system policy

SECTION 2. Section 48-39-130(D)(1) and (6) of the 1976 Code, as last amended by Act 634 of 1988, are further amended to read:

"(1) The accomplishment of emergency orders of an appointed official of a county or municipality or of the State, acting to protect the public health and safety, upon notification to the council. However, with regard to the beach/dune critical area, only the use of sandbags, sandscraping, or renourishment, or a combination of them, in accordance with guidelines provided by the council is allowed pursuant to this item.

(6) Emergency repairs to an existing bank, dike, fishing pier, or structure other than oceanfront erosion control structures or devices which has been erected in accordance with federal and state laws or provided for by general law or acts passed by the General Assembly, if notice is given in writing to the council within seventy-two hours from the onset of the needed repairs."

Coastal Council permits to utilize a critical area

SECTION 3. Sections 48-39-270 through 48-39-360, as added by Act 634 of 1988, are amended to read:

"Section 48-39-270. As used in this chapter:

(1) Erosion control structures or devices include:

(a) seawall: a special type of retaining wall that is designed specifically to withstand normal wave forces;

(b) bulkhead: a retaining wall designed to retain fill material but not to withstand wave forces on an exposed shoreline;

(c) revetment: a sloping structure built along an escarpment or in front of a bulkhead to protect the shoreline or bulkhead from erosion.

(2) Habitable structure means a structure suitable for human habitation including, but not limited to, single or multifamily residences, hotels, condominium buildings, and buildings for commercial purposes. Each building of a condominium regime is considered a separate habitable structure, but if a building is divided into apartments, then the entire building, not the individual apartment, is considered a single habitable structure. Additionally, a habitable structure includes porches, gazebos, and other attached improvements.

(3) Council means the South Carolina Coastal Council.

(4) Beach nourishment means the artificial establishment and periodic renourishment of a beach with sand that is compatible with the existing beach in a way so as to create a dry sand beach at all stages of the tide.

(5) The beach/dune system includes all land from the mean highwater mark of the Atlantic Ocean landward to the setback line described in Section 48-39-280.

(6) A standard erosion zone is a segment of shoreline which is subject to essentially the same set of coastal

processes, has a fairly constant range of profiles and sediment characteristics, and is not influenced directly by tidal inlets or associated inlet shoals.

(7) An inlet erosion zone is a segment of shoreline along or adjacent to tidal inlets which is influenced directly by the inlet and its associated shoals.

(8) Master plan means a document or a map prepared by a developer or a city as a policy guide to decisions about the physical development of the project or community.

(9) Planned development means a development plan which has received local approval for a specified number of dwelling and other units. The siting and size of structures and amenities are specified or restricted within the approval. This term specifically references multifamily or commercial projects not otherwise referenced by the terms, master plan, or planned unit development.

(10) Planned unit development means a residential, commercial, or industrial development, or all three, designed as a unit and approved by local government.

(11) Destroyed beyond repair means that more than sixty-six and two-thirds percent of the replacement value of the habitable structure or pool has been destroyed. If the owner disagrees with the appraisal of the council, he may obtain an appraisal to evaluate the damage to the building or pool. If the appraisals differ, then the two appraisers must select a third appraiser. If the two appraisers are unable to select a third appraiser, the clerk of court of the county where the structure lies must make the selection. Nothing in this section prevents a court of competent jurisdiction from reviewing, de novo, the appraisal upon the petition of the property owner.

(12) Pool is a structure designed and used for swimming and wading.

(13) Active beach is that area seaward of the escarpment or the first line of stable natural vegetation, whichever first occurs, measured from the ocean.

Section 48-39-280. (A) A forty-year policy of retreat from the shoreline is established. The council must implement this policy and must utilize the best available scientific and historical data in the implementation. The council must establish a baseline which parallels the shoreline for each standard erosion zone and each inlet erosion zone.

(1) The baseline for each standard erosion zone is established at the location of the crest of the primary oceanfront sand dune in that zone. In standard erosion zones in which the shoreline has been altered naturally or artificially by the construction of erosion control devices, groins, or other manmade alterations, the baseline must be established by the council using the best scientific and historical data, as where the crest of the primary oceanfront sand dunes for that zone would be located if the shoreline had not been altered.

(2) The baseline for inlet erosion zones that are not stabilized by jetties, terminal groins, or other structures must be determined by the council as the most landward point of erosion at any time during the past forty years, unless the best available scientific and historical data of the inlet and adjacent beaches indicate that the shoreline is unlikely to return to its former position. In collecting and utilizing the best scientific and historical data available for the implementation of the retreat policy, the council, as part of the State Comprehensive Beach Management Plan provided for in this chapter, among other factors, must consider: historical inlet migration, inlet stability, channel and ebb tidal delta changes, the effects of sediment bypassing on shorelines adjacent to the inlets, and the effects of nearby beach restoration projects on inlet sediment budgets.

(3) The baseline within inlet erosion zones that are stabilized by jetties, terminal groins, or other structures must be determined in the same manner as provided for in item (1). However, the actual location of the crest of the primary oceanfront sand dunes of that erosion zone is the baseline of that zone, not the location if the inlet had remained unstabilized.

(4) Notwithstanding any other provision of this section, where a council-approved beach nourishment project has been completed, the local government or the landowners, with notice to the local government, may petition the council to move the baseline as far seaward as the landward edge of the erosion control structure or device or if there is no existing erosion control structure or device, then as far seaward as the post project baseline as determined by the council in accordance with Section 48-39-280(A)(1) by showing that the beach has been stabilized by council-approved beach nourishment.

If the petitioner is asking that the baseline be moved seaward pursuant to this section, he must show an ongoing commitment to renourishment which will stabilize and maintain the dry sand beach at all stages of the tide for the foreseeable future.

If the council grants the petition to move the baseline seaward pursuant to this section, no new construction may occur in the area between the former baseline and the new baseline for three years after the initial beach nourishment project has been completed as determined by the council.

If the beach nourishment fails to stabilize the beach after a reasonable period of time, the council must move the baseline landward to the primary oceanfront sand dune as determined pursuant to items (1), (2), and (3) for that section of the beach.

(B) To implement the retreat policy provided for in subsection (A), a setback line must be established landward of the baseline a distance which is forty times the average

annual erosion rate or not less than twenty feet from the baseline for each erosion zone based upon the best historical and scientific data adopted by the council as a part of the State Comprehensive Beach Management Plan.

(C) The council, before July 3, 1991, must establish a final baseline and setback line for each erosion zone based on the best available scientific and historical data as provided in subsection (B) and with consideration of public input. The baseline and setback line must not be revised before July 1, 1998, nor later than July 1, 2000. After that revision, the baseline and setback line must be revised not less than every eight years, but not more than every ten years after each preceding revision. In the establishment and revision of the baseline and setback line, the council must transmit and otherwise make readily available to the public all information upon which its decisions are based for the establishment of the final baseline and setback line. The council must hold one public hearing before establishing the final baseline and setback lines. Until the council establishes new baselines and setback lines, the existing baselines and setback lines must be used. The council may stagger the revision of the baselines and setback lines of the erosion zones so long as every zone is revised in accordance with the time guidelines established in this section.

(D) In order to locate the baseline and the setback line, the council must establish monumented and controlled survey points in each county fronting the Atlantic Ocean. The council must acquire sufficient surveyed topographic information on which to locate the baseline. Surveyed topographic data typically must be gathered at two thousand foot intervals. However, in areas subject to significant near term development and in areas currently developed, the interval, at the discretion of the council, may be more frequent. The resulting surveys must locate the crest of the primary oceanfront sand dunes to be used

as the baseline for computing the forty-year erosion rate. In cases where no primary oceanfront sand dunes exist, a study conducted by the council is required to determine where the upland location of the crest of the primary oceanfront sand dune would be located if the shoreline had not been altered. The council, by regulation, may exempt specifically described portions of the coastline from the survey requirements of this section when, in its judgment, the portions of coastline are not subject to erosion or are not likely to be developed by virtue of local, state, or federal programs in effect on the coastline which would preclude significant development, or both.

(E) A landowner claiming ownership of property affected who feels that the final or revised setback line, baseline, or erosion rate as adopted is in error, upon submittal of substantiating evidence, must be granted a review of the setback line, baseline, or erosion rate, or a review of all three. The requests must be forwarded to the appropriate committee of the council and handled in accordance with the council's regulations on appeals.

Section 48-39-290. (A) No new construction or reconstruction is allowed seaward of the baseline except as follows:

(1) wooden walkways no larger in width than six feet;

(2) small wooden decks no larger than one hundred forty-four square feet;

(3) fishing piers which are open to the public. Those fishing piers with their associated structures including, but not limited to, baitshops, restrooms, restaurants, and arcades which existed September 21, 1989, may be rebuilt if they are constructed to the same dimensions and utilized for the same purposes and remain open to the public. In addition, those fishing piers with their associated structures which existed on September 21, 1989, that were privately owned, privately maintained, and not open to the public on this date also may

be rebuilt and used for the same purposes if they are constructed to the same dimensions;

(4) golf courses;

(5) normal landscaping;

(6) structures specifically permitted by special permit as provided in subsection (D);

(7) pools may be reconstructed if they are landward of an existing, functional erosion control structure or device.

A permit must be obtained from the council for items (2) through (7).

(B) Construction, reconstruction, or alterations between the baseline and the setback line are governed as follows:

(1) Habitable structures:

(a) New habitable structures: If part of a new habitable structure is constructed seaward of the setback line, the owner must certify in writing to the council that the construction meets the following requirements:

(i) The habitable structure is no larger than five thousand square feet of heated space. The structure must be located as far landward on the property as practicable. A drawing must be submitted to the council showing a footprint of the structure on the property, a cross section of the structure, and the structure's relation to property lines and setback lines which may be in effect. No erosion control structure or device may be incorporated as an integral part of a habitable structure constructed pursuant to this section.

(ii) No part of the building is being constructed on the primary oceanfront sand dune or seaward of the baseline.

(b) Habitable structures which existed on the effective date of Act 634 of 1988 or constructed pursuant to this section:

(i) Normal maintenance and repair of habitable structures is allowed without notice to the council.

(ii) Additions to habitable structures are allowed if the additions together with the existing structure do not exceed five thousand square feet of heated space.

Additions to habitable structures must comply with the conditions of new habitable structures as set forth in subitem (a).

(iii) Repair or renovation of habitable structures damaged, but not destroyed beyond repair, due to natural or manmade causes is allowed.

(iv) Replacement of habitable structures destroyed beyond repair due to natural causes is allowed after notification is provided by the owner to the council that all of the following requirements are met:

a. The total square footage of the replaced structure seaward of the setback line does not exceed the total square footage of the original structure seaward of the setback line. The linear footage of the replaced structure parallel to the coast does not exceed the original linear footage parallel to the coast.

b. The replaced structure is no farther seaward than the original structure.

c. Where possible, the replaced structure is moved landward of the setback line or if not possible, then as far landward as is practicable, considering local zoning and parking regulations.

d. The reconstruction is not seaward of the baseline unless permitted elsewhere in Sections 48-39-250 through 48-39-360.

(v) Replacement of habitable structures destroyed beyond repair due to manmade causes is allowed provided the rebuilt structure is no larger than the original structure it replaces and is constructed as far landward as possible, but the new structure must not be farther seaward than the original structure.

(2) Erosion control devices:

(a) No new erosion control structures or devices are allowed seaward of the setback line except to protect a public highway which existed on the effective date of this act.

(b) Erosion control structures or devices which existed on the effective date of this act must not be repaired or replaced if destroyed:

(i) more than eighty percent above grade through June 30, 1995;

(ii) more than sixty-six and two-thirds percent above grade from July 1, 1995 through June 30, 2005;

(iii) more than fifty percent above grade after June 30, 2005.

(iv) Damage to seawalls and bulkheads must be judged on the percent of the structure remaining intact at the time of damage assessment. The portion of the structure or device above grade parallel to the shoreline must be evaluated. The length of the structure or device parallel to the shoreline still intact must be compared to the length of the structure or device parallel to the shoreline which has been destroyed. The length of the structure or device parallel to the shoreline determined to be destroyed divided by the total length of the original structure or device parallel to the shoreline yields the percent destroyed. Those portions of the structure or device standing, cracked or broken piles, whalers, and panels must be assessed on an individual basis to ascertain if these components are repairable or if replacement is required. Revetments must be judged on the extent of displacement of stone, effort required to return these stones to the prestorm event configuration of the structure or device, and ability of the revetment to retain backfill material at the time of damage assessment. If the property owner disagrees with the assessment of a registered professional engineer acting on behalf of the council, he may obtain an assessment by a registered professional engineer to evaluate, as set forth in this item, the damage to the structure or device. If the two assessments differ, then the two engineers who performed the assessments must select a registered professional engineer to perform the third assessment. If the first two engineers are unable to select an engineer to

perform the third assessment, the clerk of court of the county where the structure or device lies must make the selection of a registered professional engineer. The determination of percentage of damage by the third engineer is conclusive.

(v) The determination of the degree of destruction must be made on a lot by lot basis by reference to county tax maps.

(vi) Erosion control structures or devices must not be enlarged, strengthened, or rebuilt but may be maintained in their present condition if not destroyed more than the percentage allowed in Section 48-39-290(B)(2)(b)(i),(ii), and (iii). Repairs must be made with materials similar to those of the structure or device being repaired.

(c) Erosion control structures or devices determined to be destroyed more than the percentage allowed in Section 48-39-290(B)(2)(b)(i),(ii), and (iii) must be removed at the owner's expense. Nothing in this section requires the removal of an erosion control structure or a device protecting a public highway which existed on the effective date of Act 634 of 1988.

(d) The provisions of this section do not affect or modify the provisions of Section 48-39-120(C).

(3) Pools, as defined in Section 48-39-270(12):

(a) No new pools may be constructed seaward of the setback line unless the pool is built landward of an erosion control structure or device which was in existence or permitted on the effective date of this act and is built as far landward as practical.

(b) Normal maintenance and repair is allowed without notice to the council.

(c) If a pool, existing on July 1, 1988, is destroyed beyond repair, as determined by the council pursuant to Section 48-39-270(11), it may be replaced if the owner certifies in writing to the council that:

(i) It is moved as far landward as practical. This determination of practicality must include the consideration of local zoning requirements.

(ii) It is rebuilt no larger than the destroyed pool.

(iii) It is constructed according to acceptable standards of pool construction and cannot be reinforced in a manner so as to act as an erosion control structure or device.

(d) If a pool is not destroyed beyond repair as determined by the council pursuant to Section 48-39-270(11) but the owner wishes to replace it, the owner may do so if:

(i) The dimensions of the pool are not enlarged.

(ii) The construction conforms to sub-subitem (iii) of subitem (c).

(4) All other construction or alteration between the baseline and the setback line requires a council permit. However, the council, in its discretion, may issue general permits for construction or alterations where issuance of the general permits would advance the implementation and accomplishment of the goals and purposes of Sections 48-39-250 through 48-39-360.

(C) (1) Notwithstanding the provisions relating to new construction, a person, partnership, or corporation owning real property that is affected by the setback line as established in Section 48-39-280 may proceed with construction pursuant to a valid building permit issued as of the effective date of this section. The person, partnership, or corporation may proceed with the construction of buildings and other elements of a master plan, planned development, or planned unit development notwithstanding the setback line established in this chapter if the person, partnership, or corporation legally has begun a use as evidenced by at least one of the following:

(a) All building permits have been applied for or issued by a local government before July 1, 1988.

(b) There is a master plan, planned development, or planned unit development:

(i) that has been approved in writing by a local government before July 1, 1988; or

(ii) where work has begun pursuant to approval as evidenced by the completion of the utility and infrastructure installation designed to service the real property that is subject to the setback line and included in the approved master plan, planned development, or planned unit development.

(2) However, repairs performed on a habitable structure built pursuant to this section are subject to the guidelines for repairs as set forth in this section.

(3) Nothing in this section prohibits the construction of fishing piers or structures which enhance beach access seaward of the baseline, if permitted by the council.

(D) Special permits:

(1) If an applicant requests a permit to build or rebuild a structure other than an erosion control structure or device seaward of the baseline that is not allowed otherwise pursuant to Sections 48-39-250 through 48-39-360, the council may issue a special permit to the applicant authorizing the construction or reconstruction if the structure is not constructed or reconstructed on a primary oceanfront sand dune or on the active beach, and if the beach erodes to the extent the permitted structure becomes situated on the active beach, the permittee agrees to remove the structure from the active beach if the council orders the removal. However, the use of the property authorized under this provision, in the determination of the council, must not be detrimental to the public health, safety, or welfare.

(2) The council's Permitting Committee is the committee to consider applications for special permits.

(3) In granting a special permit, the committee may impose reasonable additional conditions and safeguards as

in its judgment, will fulfill the purposes of Sections 48-39-250 through 48-39-360.

(4) A party aggrieved by the committee's decision to grant or deny a special permit application, may appeal to the full council pursuant to Section 48-39-160(D).

(E) The provisions of this section and Section 48-39-280 do not apply to an area in which the erosion of the beaches located in its jurisdiction is attributed to a federally authorized navigation project as documented by the findings of a Section 111 Study conducted under the authority of the federal Rivers and Harbors Act of 1968, as amended by the federal Water Resources Development Act of 1986, and approved by the United States Army Corps of Engineers. Nothing contained in this subsection makes this area ineligible for beach renourishment funds.

The baseline determined by the local governing body and the council is the line of erosion control devices and structures and the council retains its jurisdiction seaward of the baseline. In addition, upon completion of a council approved beach renourishment project, including the completion of a sand transfer system if necessary for long-term stabilization, an area under a Section 111 Study becomes subject to all the provisions of this chapter.

For the purposes of this section, a beach nourishment project stabilizing the beach exists if a successful restoration project is completed consisting of at least one hundred fifty cubic yards a foot over a length of five and one-half miles, with a project design capable of withstanding a one in ten-year storm, as determined by council, and renourishment is conducted annually at a rate, agreed upon by the council and local governing body, equivalent to that which would occur naturally if the navigation project causing the erosion did not exist. If the two parties cannot agree then the council must obtain the opinion of an independent third party.

Any habitable structure located in an area in which the erosion of the beaches located in its jurisdiction is attributed to a federally authorized navigation project as documented by the findings of a Section 111 Study, which was in existence on September 21, 1989, and was over forty years old on that date and is designated by the local governing body as an historical landmark may be rebuilt seaward of the baseline if it is rebuilt to the exact specifications, dimensions, and exterior appearance of the structure as it existed on that date.

Section 48-39-300. A local governing body, if it notifies the council before July 1, 1990, may exempt from the provisions of Section 48-39-290, relating to reconstruction and removal of erosion control devices, the shorelines fronting the Atlantic Ocean under its jurisdiction where coastal erosion has been shown to be attributed to a federally authorized navigation project as documented by the findings of a Section 111 Study conducted under the authority of the Rivers and Harbors Act of 1968, as amended by the Water Resources Development Act of 1986 and approved by the United States Army Corps of Engineers. Erosion control devices exempt under this section must not be constructed seaward of their existing location, increased in dimension, or rebuilt out of materials different from that of the original structure.

Section 48-39-305. (A) A person having a recorded interest or interest by operation of law in or having registered claim to land seaward of the baseline or setback line which is affected by the prohibition of construction or reconstruction may petition the circuit court to determine whether the petitioner is the owner of the land or has an interest in it. If he is adjudged the owner of the land or to have an interest in it, the court shall determine whether the prohibition so restricts the use of the property as to deprive the owner of the practical uses of

it and is an unreasonable exercise of police power and constitutes a taking without compensation. The burden of proof is on the petitioner as to ownership, and the burden of proof is on the State to prove that the prohibition is not an unreasonable exercise of police power.

(B) The method provided in this section for the determination of the issue of whether the prohibition constitutes a taking without compensation is the exclusive judicial determination of the issue, and it must not be determined in another judicial proceeding. The court shall enter a judgment in accordance with the issues. If the judgment is in favor of the petitioner, the order must require the State either to issue the necessary permits for construction or reconstruction of a structure, order that the prohibition does not apply to the property, or provide reasonable compensation for the loss of the use of the land or the payment of costs and reasonable attorney's fees, or both. Either party may appeal the court's decision.

Section 48-39-310. The destruction of beach or dune vegetation seaward of the setback line is prohibited unless there is no feasible alternative. When there is destruction of vegetation permitted seaward of the setback line, mitigation, in the form of planting of new vegetation where possible, for the destruction is required as part of the permit conditions.

Section 48-39-320. (A) The council's responsibilities include the creation of a long-range and comprehensive beach management plan for the Atlantic Ocean shoreline in South Carolina. The plan must include all of the following:

(1) development of the data base for the state's coastal areas to provide essential information necessary to make informed and scientifically based decisions concerning the maintenance or enhancement of the beach/dune system;

(2) development of guidelines and their coordination with appropriate agencies and local governments for the accomplishment of:

(a) beach/dune restoration and nourishment, including the projected impact on coastal erosion rates, cost/benefit of the project, impact on flora and fauna, and funding alternatives;

(b) development of a beach access program to preserve the existing public access and enhance public access to assure full enjoyment of the beach by all residents of this State;

(c) maintenance of a dry sand and ecologically stable beach;

(d) protection of all sand dunes seaward of the setback line;

(e) protection of endangered species, threatened species, and important habitats such as nesting grounds;

(f) regulation of vehicular traffic upon the beaches and the beach/dune system which includes the prohibition of vehicles upon public beaches for nonessential uses;

(g) development of a mitigation policy for construction allowed seaward of the setback line, which must include public access ways, nourishment, vegetation, and other appropriate means;

(3) formulation of recommendations for funding programs which may achieve the goals set forth in the State Comprehensive Beach Management Plan;

(4) development of a program on public education and awareness of the importance of the beach/dune system, the project to be coordinated with the South Carolina Educational Television Network and Department of Parks, Recreation and Tourism;

(5) assistance to local governments in developing the local comprehensive beach management plans.

(B) The plan provided for in this section is to be used for planning purposes only and must not be used by the council to exercise regulatory authority not otherwise

granted in this chapter, unless the plan is created and adopted pursuant to Chapter 23 of Title 1.

Section 48-39-330. Thirty days after the initial adoption by the council of setback lines, a contract of sale or transfer of real property located in whole or in part seaward of the setback line or the jurisdictional line must contain a disclosure statement that the property is or may be affected by the setback line, baseline, and the seaward corners of all habitable structures referenced to the South Carolina State Plane Coordinate System (N.A.D.-1983) and include the local erosion rate most recently made available by the council for that particular standard zone or inlet zone as applicable. Language reasonably calculated to call attention to the existence of baselines, setback lines, jurisdiction lines, and the seaward corners of all habitable structures and the erosion rate complies with this section.

The provisions of this section are regulatory in nature and do not effect the legality of an instrument violating the provisions.

Section 48-39-340. Funding for local governments to provide for beachfront management must be distributed in a fair and equitable manner. Consideration must be given to the size of the locality, the need for beach management in the area, the cost/benefits of expenditures in that area, and the best interest of the beach/dune system of the State as established by priority by the council.

Section 48-39-350. (A) The local governments must prepare by July 1, 1991, in coordination with the council, a local comprehensive beach management plan which must be submitted for approval to the council. The local comprehensive beach management plan, at a minimum, must contain all of the following:

(1) an inventory of beach profile data and historic erosion rate data provided by the council for each

standard erosion zone and inlet erosion zone under the local jurisdiction;

(2) an inventory of public beach access and attendant parking along with a plan for enhancing public access and parking;

(3) an inventory of all structures located in the area seaward of the setback line;

(4) an inventory of turtle nesting and important habitats of the beach/dune system and a protection and restoration plan if necessary;

(5) a conventional zoning and land use plan consistent with the purposes of this chapter for the area seaward of the setback line;

(6) an analysis of beach erosion control alternatives, including renourishment for the beach under the local government's jurisdiction;

(7) a drainage plan for the area seaward of the setback zone;

(8) a post disaster plan including plans for cleanup, maintaining essential services, protecting public health, emergency building ordinances, and the establishment of priorities, all of which must be consistent with this chapter;

(9) a detailed strategy for achieving the goals of this chapter by the end of the forty-year retreat period. Consideration must be given to relocating buildings, removal of erosion control structures, and relocation of utilities;

(10) a detailed strategy for achieving the goals of preservation of existing public access and the enhancement of public access to assure full enjoyment of the beach by all residents of this State.

The plan must be updated at least every five years in coordination with the council following its approval. The local governments and the council must implement the plan by July 1, 1992.

(B) Notwithstanding the provisions of Section 48-39-340, if a local government fails to act in a timely manner to establish and enforce a local coastal beach management plan, the council must impose and implement the plan or the State Comprehensive Beach Management Plan for the

local government. If a local government fails to establish and enforce a local coastal beach management plan, the government automatically loses its eligibility to receive available state-generated or shared revenues designated for beach/dune system protection, preservation, restoration, or enhancement, except as directly applied by the council in its administrative capacities.

Section 48-39-355. A permit is not required for an activity specifically authorized in this chapter. However, the council may require documentation before the activity begins from a person wishing to undertake an authorized construction or reconstruction activity. The documentation must provide that the construction or reconstruction is in compliance with the terms of the exemptions or exceptions provided in Sections 48-39-280 through 48-39-360.

Section 48-39-360. The provisions of Sections 48-39-250 through 48-39-355 do not apply to an area which is at least one-half mile inland from the mouth of an inlet."

Beach Management Act revised

SECTION 4. Sections 1 and 2 of Act 634 of 1988 are repealed.

Placement of sand on beaches

SECTION 5. The General Assembly hereby recognizes the need for maintaining navigation inlets to promote commercial and recreational uses of our coastal waters and their resources. The General Assembly further recognizes that inlets alter the natural drift of beach-quality sand resources, which often results in these sand resources being deposited around shallow outer-bar areas instead of providing natural nourishment to the downdrift beaches. Therefore, it is the intent of the General Assembly that:

(1) All construction and maintenance dredgings of beach-quality sand be placed on the downdrift beaches; or, if placed elsewhere, an equivalent quality and quantity of sand from an alternate location be placed on the downdrift beaches at no cost to the State and at a location acceptable to the South Carolina Coastal Council.

(2) On an average annual basis, a quantity of sand be placed on the downdrift beaches equal to the natural net annual longshore sediment transport, at no cost to the State. The placement location and quantities based on natural net annual longshore transport be established by the Council, and the sand quality be acceptable to the Council.

(3) The Council may promulgate regulations necessary to implement the provisions of this section."

Election of Coastal Council members

SECTION 6. Section 48-39-40 of the 1976 Code is amended to read:

"Section 48-39-40. (A) There is created the South Carolina Coastal Council which consists of eighteen members as follows: eight members, one from each coastal zone county, to be elected by a majority vote of the members of the House of Representatives and a majority vote of the Senate members representing the county from three nominees submitted by the governing body of each coastal zone county, each House or Senate member to have one vote; six members, one from each of the congressional districts of the State, to be elected by a majority vote of the members of the House of Representatives and the Senate representing the counties in that district, each House or Senate member to have one vote; and the following legislative members who serve ex officio: two state senators, one to be appointed by the President of the Senate and one to be elected by the Senate Fish, Game and Forestry Committee; and two members of the House of Representatives to be appointed

by the Speaker of the House. The council shall elect a chairman, vice-chairman and other officers it considers necessary.

(B) Terms of legislative members are coterminous with their terms as members of the General Assembly. Terms of all nonlegislative members are for four years and until successors are appointed and qualify. Members from congressional districts serve terms of two years only as determined by lot at the first meeting of the council. Vacancies must be filled in the original manner of selection for the remainder of the unexpired term."

Current nonlegislative Coastal Council members

SECTION 7. The current nonlegislative members of the South Carolina Coastal Council representing the eight coastal zone counties serve until their present terms of office expire at which time their successors elected in the manner provided in Section 48-39-40 of the 1976 Code, as amended by this act, take office.

Application on legal actions

SECTION 8. Except as otherwise specifically provided in this act, the provisions of this act shall be applied only prospectively and shall not affect any legal action commenced or any cause of action accruing as a result of an event or events which occurred before the effective date of this act. Any such action must be governed by the provisions of Sections 48-39-10 through 48-39-360, as amended by Act 634 of 1988, and in existence before the effective date of this act.

Time effective

SECTION 9. This act takes effect upon approval by the Governor.

In the Senate House the 19th day of June
In the Year of Our Lord One Thousand Nine Hundred Ninety.

Nick A. Theodore,
President of the Senate

Robert J. Sheheen,
Speaker of the House of Representatives

Approved the 25th day of June, 1990.

Carroll A. Campbell, Jr.,
Governor

Printer's Date -- 07/26/90 -- S.
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APPENDIX D

SCCC Regulations and General Permits

SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-A

WORK: Installation or Repair of Underground and Overhead Water, Sewer, Gas, Electrical, Telephone Lines,and Cable Service Lines.

WHERE: Within the Coastal Council 40-year setback zone and landward of the baseline of the Counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper

DESCRIPTION: The placement, maintenance, repair, and replacement of service lines is allowed under this general permit provided that following conditions are met:

1) All service lines must be located as far landward as possible on the individual lots of record.

2) Lines, junction boxes, poles, and accessory features will be relocated landward as far as possible in the event there is a need for replacement.

3) Dunes altered during construction must be reconfigured and revegetated in accordance with Council's guidelines.

4) All work performed pursuant to this permit must be in compliance with local ordinances governing such work.

5) The permittee must obtain a construction placard from the Council before any work may be performed pursuant to this permit.

6) The Council reserves the right to require an individual permit if, in its descretion, conditions warrant.

SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-B

WORK: Drainage Structures

WHERE: Within the Coastal Council 40-year setback zone and landward of the baseline of the counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper

DESCRIPTION: The placement, maintenance and repair, and replacement of drainage structures which do not go directly to the beach is allowed under this general permit provided the following conditions are met:

1) For new construction, the structures are part of a Coastal Council approved storm water management plan or drainage plan.

2) The replacement of drainage structures does not involve an increase in the size of the existing structures.

3) Any construction involving drainage structures does not disturb the existing dune and its accompanying vegetation system.

4) Provided the drainage structure complies with the local drainage plan for the setback zone.

5) No new drainage structures can be put onto the beach under this permit.

6) All work performed pursuant to this permit must be in compliance with all local ordinances governing such work.

7) The permittee must obtain a construction placard from the Council before any work may be peformed pursuant to this permit.

8) The disturbed areas must be revegetated.

9) The Council reserves the right to require an individual permit if, in its discretion, conditions warrant.

SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-C

WORK: Landscaping
Fill for Landscaping

WHERE: Seaward of the Coastal Council 40 year setback line in the counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper

DESCRIPTION: The installation of landscape and plants, materials and associated amenities and fill for this landscaping is allowed under this general permit provided the following conditions are met:

1) The entire landscaping plan is submitted to and approved by Council. No retaining wall that extends below existing grade will be allowed.

2) No sand from the beach is used as backfill.

3) No native plant material on the frontal dunes is disturbed unless it can be demonstrated the condition of the dune will be improved.

4) Only native salt tolerant species may be planted on dunes and must be approved by Council staff.

5) Adequate measures are taken to contain fill and irrigation run off.

6) No leveling of dunes is allowed.

7) All work performed pursuant to this general permit must be in compliance with all local ordinances governing such work.

8) The permittee must obtain a construction placard from the Council before any work may be performed under this permit.

9) The Council reserves the right to require an individual permit if, in its discretion, condition warrant.

SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-E

WORK: Non-Attached Decks

WHERE: Seaward of the Coastal Council 40-year setback line and the baseline of the Counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper

DESCRIPTION: The placement, maintenance and repair, and replacement of decks is allowed under this permit provided that following conditions are met:

Non-attached decks

a) Provided the structures are constructed of wood.

b) Provided the size of any decks do not exceed 144 square feet.

c) Provided the deck does not extend seaward of the primary dune or on the active beach.

d) Provided there are no more than one of these structures per lot unless a limit of one would cause an unnecessary hardship.

e) Provided that if the beach erodes to the point that the structure is located on the active beach, it will be removed or relocated landward by the owner.

f) All work performed pursuant to this permit must be in compliance with all local ordinances governing such work.

g) The permittee must obtain a construction placard from the Council before any work may be performed pursuant to this permit.

h) The Council reserves the right to require an individual permit if, in its discretion, conditions warrant.

SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-F

WORK: Sand Fences, Minor Beach Renourishment, Dune Revegetation

WHERE: Within the Coastal Council 40-year setback zone of the Counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper.

DESCRIPTION: In an effort to provide beachfront property owners with passive, low-cost stabilization methods, this permit is issued to allow for placement, maintenance and repair, and replacement of sand fencing, dune revegetation, and minor renourishment. These methods should not be viewed as erosion control, but rather as enhancement and stabilization techniques. Since a broad beach and a healthy dune provide the best storm buffer, these methods will aid in the natural beach process.

Sand Fencing

a) The fence material is biodegradable.

b) The fences are installed according to Attachment "A".

c) The fences are installed in a manner so as not to impede turtle nesting. The Coastal Council may at any time have sand fences moved or removed entirely if the fences are found impacting nesting activities or, in the Council's opinion, have the potential to impact turtle nesting activities.

d) Provided the fence is placed above the highest wave up rush.

e) The fencing in no way impedes public access.

f) The fence is installed in a temporary manner.

g) If fence material is damaged, debris must be removed from the beach area by the owner in an expeditious manner.

h) If the fence is judged to be having a detrimental impact by the Council, it must be removed by the owner.

Revegetation

Property owners are encouraged to plant vegetation as a means of stabilizing oceanfront dunes. The roots of plant material tend to bind sand to dunes, while plant foilage serves to trap blowing sand. Suggested plant varieties include, but are not limited to, american beach grass (Ammophila breviligulata), bitter panicum (Panicum anarum), and sea oats (Uniola paniculata).

Vegetation shall be planted in early spring, before May 30 if possible, and should be planted, irrigated and fertilized according to nursery instructions or Coastal Council's "Dunes Restoration" guidelines. Coastal Council staff must inspect the site first and establish a need.

Minor Renourishment

Minor renourishment is allowed in an attempt to build and maintain healthy dunes.

a) Sand must be compatible in size and grain color and from an upland source approved by Council staff.

b) Must be performed between November and March.

c) Council staff must inspect the site and establish that there is a need for the project.

d) Sand which has drifted off the beach and dunes may be returned to the active beach and used to repair gaps in dunes as part of this permit. This may include sand which has accumulated in parking lots, roadways, pool areas and against buildings.

All projects pursuant to this general permit must be in compliance with local ordinances governing such actions.

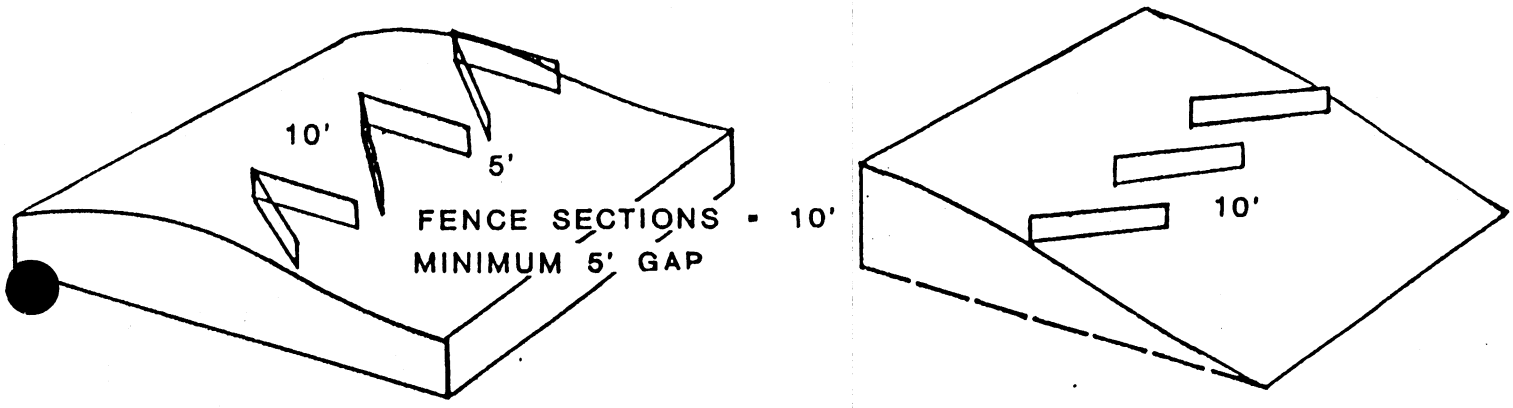
The permittee must obtain a construction placard from the Council before any work can be performed under this permit.

The Council reserves the right to require an individual permit if, in its discretion, conditions warrant.

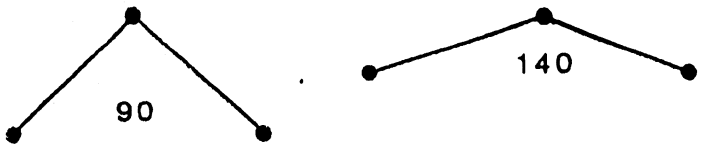
SAND FENCING

PERMITTED CONFIGURATIONS OF FENCE TO TRAP WIND-BLOWN SAND

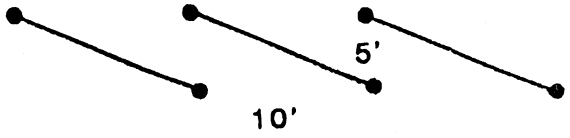
NORMAL DUNE



SECTION ANGLE MAY VARY
90 TO 140 DEGREES



PERMITTED VARIATION



SOUTH CAROLINA COASTAL COUNCIL
GENERAL PERMIT
GP-90-G

WORK: The Construction or Reconstruction of Drives and Parking Lots

WHERE: Within the Coastal Council 40-year setback zone and landward of the baseline of the counties of Horry, Georgetown, Charleston, Colleton, Beaufort, and Jasper

DESCRIPTION: The construction or reconstruction of drives and parking lots within the setback area are allowed under this General Permit provided the following conditions shall be met:

1) On front row lots, new driveways and/or parking lots shall not extend seaward of habitable structures.

2) Reconstruction of existing drives and/or parking lots shall not exceed the footprint of the original drive or parking lot.

3) No sand from the beach may be used as foundation material.

4) No alteration of the dune or dune vegetation is allowed unless no alternative exists.

5) At the Council's discretion, a Stormwater Management Plan may be required before a construction placard is issued pursuant to this general permit.

6) Parking lots of more than ten spaces will require a separate Council permit.

7) Expansion of parking lots is approved by this general permit provided the above criteria are met and the completed lot does not exceed ten spaces.

8) Provided that the work complies with all local zoning and building codes.

9) Provided that the permittee obtains a construction placard from the Council before any work can be performed under this permit.

10) Best Management Practices (BMPs) such as hay bales, silt fences, mulches, or other appropriate means must be used as necessary during the construction phase to prevent erosion to adjacent waters and wetlands. Upon project completion the disturbed areas must be stabilized as soon as possible with grass or other appropriate vegetative cover.

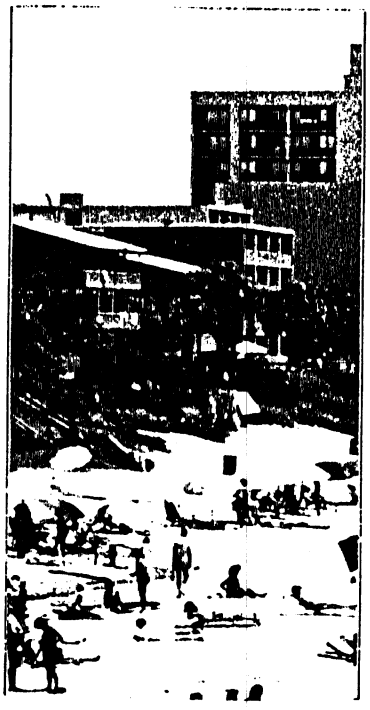
11) The Council reserves the right to require an individual permit if, in its discretion, conditions warrant.

South Carolina Coastal Council

Regulations

for permitting in critical areas
of the state's coastal zone

May 1991



FOR ADDITIONAL INFORMATION:

Should you have questions regarding this document or any other aspect of the South Carolina Coastal Council or South Carolina's Coastal Zone Management Program, please contact the Coastal Council at one of their four offices:

South Carolina Coastal Council
4130 Faber Place, Suite 300
Chalreston, South Carolina 29405
(803)744–5838

South Carolina Coastal Council
1201 Main Street, Suite 1520
Columbia, South Carolina 29201
(803) 737–0880

South Carolina Coastal Council
1601 Oak Street, Suite 203
Myrtle Beach, South Carolina 29577
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May, 1991

Chapter 30, R.30-1 - 30-14, South Carolina Coastal Council. Statutory Authority: Sections 48-39-10 - 48-39-360, Code of Laws of South Carolina, 1976, as amended.

30-1. STATEMENT OF POLICY.

The South Carolina Coastal Management Act was passed by the 1977 General Assembly of South Carolina to provide for the protection and enhancement of the State's coastal resources. This legislation creates the South Carolina Coastal Council which is given the task of promoting the economic and social welfare of the citizens of this State while protecting the sensitive and fragile areas in the coastal counties and promoting sound development of coastal resources.

Through the efforts of an overall coastal zone management program and permitting process, the Coastal Council seeks to guide the wise preservation and utilization of coastal resources. These rules and regulations are intended to:

(1) aid developers and others in taking advantage of state-of-the-art techniques in developing projects compatible with the natural environment;

(2) insure consistent permit evaluations by Council and staff; and

(3) serve as a stimulus for implementation of better and more consistent management efforts for the coastal zone.

These regulations are Coastal Council statements of general public applicability that implement and prescribe policy and practice requirements of the Coastal Council. They are to be read as part of, and to be construed with, the policies set forth in the South Carolina Coastal Management Program.

A. The Value of Tidelands and Coastal Waters.

The tidelands and coastal waters of the South Carolina coast are a very dynamic ecosystem and an extremely valuable natural resource for the people of the State. The tides regularly ebb and flood through the coastal inlets, bays and marshes which constitute a fragile area, vulnerable to the impacts of many of man's activities. Tidelands and coastal waters are identified as "critical areas" over which the Coastal Council has direct permitting authority.

The saline marshes are highly productive components of the marine food web of coastal waters and estuaries. Decaying plant materials, called detritus, serve as the basis of the food web and are the major biological contribution of the saline marshes. Many commercially and recreationally important fish and shellfish species depend on the marshlands and estuaries for all or part of their life cycle. In addition, many birds and other forms of wildlife utilize wetlands as habitat as well as a source of food. Tidelands and coastal waters also have become increasingly important in recent years for the purposes of aquaculture.

Among the more important functions of the salt and brackish marshes is their role in protecting adjacent highlands from erosion and storm damage. Marsh vegetation absorbs and dissipates wave energy and establishes a root system which stabilizes the soils. Its effectiveness as a buffer depends on the surface area available which, combined with the composition of the underlying substrate, allows tidelands to act as "sponges," absorbing and releasing waters during storms or times of heavy riverine discharge.

Marshes also perform a valuable waste treatment function since the dense vegetation acts as a filter, trapping sediments and pollutants which enter as run-off from the upland areas. The trapping of sediments helps maintain water clarity, a factor important to clam, oyster, and phytoplankton productivity. The marshes also assimilate pollutants and recycle nutrients through various biochemical processes.

Coastal waters and the adjacent marshes are also significant as aesthetic, recreational and educational resources. Much of the expenditure for recreation and tourism in the South Carolina coastal zone is for purposes of enjoying outdoor activities and the aesthetic pleasures of undisturbed tideland areas. These natural areas lend themselves to meaningful and important academic pursuits such as bird-watching and wildlife population and nutrient recycling studies.

These same unique natural resource areas face increasing land development pressure and negative impacts from man's activities in and around them. The marshes constitute a fragile ecosystem; consequently, indiscriminate dredging and filling, degradation of water quality or unsound building and development practices can have long-term detrimental effects. All development need not be prohibited; rather, the range of favorable and unfavorable results needs to be realized, and analysis made to determine priorities, evaluate alternatives, anticipate impacts, and suggest the best methods and designs to carry out wise development of these resources.

B. The Value of Beaches and Dunes.

In 1977, the South Carolina General Assembly enacted the Coastal Tidelands and Wetlands Act (Coastal Zone Management Act) to protect, preserve, restore and enhance the coastal resources of South Carolina. The Act created a new state agency, the South Carolina Coastal Council, and charged it with the responsibility of administering and enforcing the statute. This legislation, however, proved ineffective for managing the beach/dune system because regulatory authority over these areas given to the Coastal Council was not sufficient. From the State's beaches, Coastal Council could regulate landward only to the primary oceanfront sand dune or to the highest uprush of the waves where no such dune existed.

Lacking adequate authority, the Coastal Council was unable to prevent structures from being sited unwisely close to the eroding shore, thus making them extremely vulnerable to the effects of storms and high tides. The owners of the structures, in most instances, quickly sought permits from the Coastal Council to construct hard erosion control devices in order to protect their erosion threatened structures. Unfortunately, hard erosion control devices can result in increased erosion, a lowering of the beach profile (thereby reducing the beach/dune system's tourist and recreational value), and a decrease in the ability of the beach/dune system to protect upland property from storms and high tides. Often the result of attempting to protect upland property with hard erosion control structures is that dry sand beaches disappear, thereby placing many millions of tourist dollars in jeopardy and destroying this natural legacy for future generations.

In 1986, the Blue Ribbon Committee on Beachfront Management was formed in response to the growing recognition that existing law was inadequate to protect the fragile beach/dune resource. The Committee determined that the beach/dune system of the State was in a state of crisis. The report concluded that "over fifty-seven miles of our beaches are critically eroding. This erosion is threatening the continued existence of our beach/dune system and thereby threatening life, property, the tourist industry, vital State and local revenue, marine habitat, and a national treasure". The 1988 Beachfront Management Act was enacted by the South Carolina General Assembly in response to the concerns presented in this report.

It has been clearly demonstrated that the erosion problems of this State are caused by a persistent rise in sea level, a lack of comprehensive beach management planning, and poorly planned oceanfront development, including construction of hard erosion control structures, which encroach upon the beach/dune system. Sea level rise in this century is a

scientifically documented fact. Our shoreline is suffering from its effects today. Moreover, a 1983 study conducted by the U. S. Environmental Protection Agency predicts a one foot rise in sea level over the next thirty to forty years and approximately three feet over the next hundred years. It must be accepted that regardless of attempts to forestall the process, the Atlantic Ocean, as a result of sea level rise and periodic storms, is ultimately going to force those who have built too near the beachfront to retreat.

There are three basic approaches to beachfront management:

(1) armor the beach with hard erosion control devices;

(2) nourish the beach with sand;

(3) retreat from the beach.

The 1977 Coastal Zone Management Act, as amended, rejects construction of new erosion control devices and adopts retreat and renourishment as the basic state policy towards preserving and restoring the beaches of our state. The Coastal Council, as steward of the State's coastal resources, has the responsibility under the new statute to implement the forty-year retreat policy by designating a baseline and setback line on all oceanfront properties of the State, developing a long-range comprehensive State plan for management of the beach/dune resource, and supporting the efforts of local governments in developing local long-range beach management plans. In addition, the Coastal Council shall require property owners to move new construction and reconstruction as far landward as possible, to limit the size of structures within the constraints of the Act, and to seek innovative ways to ameliorate the effects of beach erosion.

In the final analysis, the long-range public good is the same as the long-range private good. If the dry sand beaches of this State disappear because of the failure of its people and governmental natural resource managers to protect the beach/dune system, future generations will never have the opportunity to use and enjoy this valuable resource.

C. Definitions:

1. Barrier Islands - There is a listing of all barrier islands in South Carolina on page III-70 of the South Carolina Coastal Management Program.
2. Coastal Waters - the navigable waters of the United States subject to the ebb and flood of the tide and which are saline waters, shoreward to their mean high-water mark.
3. Coastal Zone - all coastal waters and submerged lands seaward to the State's jurisdictional limits and all lands and waters in the counties of the State which contain any one or more of the critical areas. These counties are Beaufort, Berkeley, Charleston, Colleton, Dorchester, Horry, Jasper, and Georgetown.
4. Critical Areas - any of the following: (1) coastal waters, (2) tidelands, (3) beach/dune systems.
5. Erosion Control Structures and Beach Nourishment:

(a) Seawall - a special type of retaining wall that is specifically designed to withstand wave forces.

(b) Bulkhead - a retaining wall designed to retain fill material, but not to withstand wave forces on an exposed shoreline.

(c) Revetment - a sloping structure built along an escarpment or in front of a bulkhead to protect the shoreline or bulkhead from erosion.

(d) Groin - a shore protection structure designed to build a protective beach or to retard erosion of an existing or restored beach by trapping littoral drift. Groins are usually perpendicular to the shore and extend from the shoreline into the water far enough to accomplish their purpose. Groins are narrow and vary in length from less than 100 feet to several

hundred feet.

(e) Jetty - a structure extending into the water to direct and confine river or tidal flow into a channel and to prevent or reduce shoaling of the channel by littoral material. Jetties also stabilize inlet location.

(f) Minor Development Activity - the construction, maintenance, repair or alteration of any private pier or erosion control structure, the construction of which does not involve dredging.

(g) Offshore Breakwater - a structure designed to protect an area from wave action. Breakwaters interfere with natural wave action and wave induced currents; therefore, their construction may cause harmful side effects.

(h) Beach Nourishment - the artificial establishment and periodic renourishment of a beach with sand that is compatible with the beach in such a way as to create a dry sand beach at all stages of the tide.

6. Feasible (feasibility) - As used within these rules and regulations (e.g., "unless no feasible alternative exists"), feasibility is determined by the Coastal Council with respect to individual project proposals. Feasibility in each case is based on the best available information, including, but not limited to, technical input from relevant agencies with expertise in the subject area, and consideration of factors of
environmental, economic, social, legal and technological suitability of the proposed activity and its alternatives. Use of this word includes, but is not limited to, the concept of reasonableness and likelihood of success in achieving the project goal or purpose. "Feasible alternatives" applies both to locations or sites and to methods of design or construction, and includes a "no action" alternative.

7. GAPC (Geographic Areas of Particular Concern) - areas within South Carolina's coastal zone which have been identified in the State's Coastal Management Program as being of such importance as to merit special consideration during Council review of permit applications. GAPC's consist of: (1) areas of unique natural resource value; (2) areas where activities, development, or facilities depend on proximity to coastal waters, in terms of use or access; and (3) areas of special historical, archeological or cultural significance.

8. Joint Public Notice - a permit application public notice issued jointly between the South Carolina Coastal Council and the United States Army Corps of Engineers or the United States Coast Guard and processed independently by the Coastal Council.

9. Nonwater-dependent - a facility which cannot demonstrate that dependence on, use of, or access to coastal waters is vital to the functioning of its primary activity.

10. Previously Undisturbed Wetlands - those wetlands having no visible, physical evidence of previous impoundment; that is, separation from adjacent rivers or estuaries by artificial diking

11. Public Interest - As used within these Rules and Regulations, public interest refers to the beneficial and adverse impacts and effects of a project upon members of the general public, especially residents of South Carolina who are not the owners and/or developers of the project. To the extent that, in the opinion of the Council, the value of such public benefits is greater than the public costs embodied in adverse environmental, economic and fiscal effects, a proposed project may be credited with net public benefits.

12. Tidelands - all areas which are at or below mean high tide and coastal wetlands, mudflats, and similar areas that are contiguous or adjacent to coastal waters and are an integral part of the estuarine systems involved. Coastal wetlands include marshes, mudflats, and shallows and means those areas periodically inundated by saline waters whether or not the

saline waters reach the area naturally or through artificial water courses and those areas that are normally characterized by the prevalence of saline water vegetation capable of growth and reproduction. Provided, however, nothing in this definition shall apply to wetland areas that are not an integral part of an estuarine system. Further, until such time as the exact geographic extent of this definition can be scientifically determined, the Council shall have the authority to designate its approximate geographic extent.

13. Water-dependent - a facility which can demonstrate that dependence on, use of, or access to coastal waters is vital to the functioning of its primary activity.

14. Marinas - facilities that provide boat launchings, storage, moorage, supplies, and/or services. There are three basic types of marinas: (a) the open water type where open pilings and/or appurtenances are used; (b) the inland harbor type where moorings are provided in a lagoon connected to navigable waters; (c) the dry storage type where boats are stored in specially designed warehouses placed entirely on high land.

15. Habitable Structure - a structure suitable for human habitation including, but not limited to, single or multi-family residences, hotels, condominium buildings, and buildings for commercial purposes. Each building of a condominium regime is considered a separate habitable structure, but if a building is divided into apartments, then the entire building, not the individual apartment is considered a single habitable structure. Additionally, a habitable structure includes porches, gazebos, and other attached improvements.

16. Master Plan - a document or a map prepared by a developer or a city as a policy guide to decisions about the physical development of the project or community.

17. Planned Development - a development plan which has received local approval for a specified number of dwelling and other units. The siting and size of structures and amenities are specified or restricted within the approval. This term specifically references multi-family or commercial projects not otherwise referenced by the terms master plan or planned unit development.

18. Planned Unit Development - a residential, commercial, or industrial development, or all three, designed as a unit and approved in writing by local government.

19. Beach/Dune System - all land from the mean high-water mark of the Atlantic Ocean landward to the 40 year setback line described in §48-39-280.

20. Standard Erosion Zone - a segment of shoreline which is subject to essentially the same set of coastal processes, has a fairly constant range of profiles and sediment characteristics, and is not directly influenced by tidal inlets or associated inlet shoals.

21. Inlet Erosion Zone - a segment of shoreline along or adjacent to tidal inlets which is directly influenced by the inlet and its associated shoals.

(a) Unstabilized Inlets - inlets that have not been stabilized by jetties, terminal groins, or other structures.

(b) Stabilized Inlets - inlets that have been stabilized by jetties, terminal groins, or other structures.

22. Baselines:

(a) Within a standard erosion zone the baseline is established at the location of the crest of the primary oceanfront sand dune in that zone. In a standard erosion zone in which the shoreline has been altered naturally or artificially by the construction of erosion control devices, groins, or other man-made alterations, the baselines must be established by the Coastal Council using the best scientific and historical data, as where the crest of the primary ocean

front sand dune for that zone would be located if the shoreline had not been altered.

(b) Within an unstabilized inlet zone the baseline must be determined by the Coastal Council as the most landward point of erosion at anytime during the past forty years, unless the best available scientific and historical data of the inlet and adjacent beaches indicate that the shoreline is unlikely to return to its former position. In collecting and utilizing the best scientific and historical data available for the implementation of the retreat policy, the Coastal Council as part of the State Comprehensive Beach Management Plan provided for in this chapter, among other factors, must consider: historical inlet migration, inlet stability, channel and ebb tidal delta changes, the effects of sediment bypassing on shorelines adjacent to the inlets, and the effects of nearby beach restoration project on inlet sediment budgets.

(c) Within a stabilized inlet zone the baseline location must be determined in the same manner as provided for in a standard erosion zone. However the actual location of the crest of the primary oceanfront sand dune of that erosion zone is the baseline of that zone, not the location if the inlet had remained unstabilized.

23. Setback Line - the line landward of the baseline that is established at a distance which is forty times the average annual erosion rate as determined by historical and other scientific means and adopted by the Coastal Council in the State Comprehensive Beach Management Plan. However, all setback lines shall be established no less than twenty feet landward of the baseline, even in cases where the shoreline has been stable or has experienced net accretion over the past forty years.

24. Garage - a structure built and used for the purpose of parking and protecting vehicles. The structure may be open or enclosed. An open parking area under a habitable structure will not be counted when computing the square footage of a habitable structure.

25. Normal Maintenance and Repair - work performed on any structure within the critical area as part of a routine and ongoing program to maintain the integrity of the structure provided that the structure is still generally intact and functional in its present condition and the work only extends to the original dimensions of the structure. See R.30-5(D).

26. Destroyed Beyond Repair:

(a) Habitable Structures - destroyed beyond repair means more than sixty-six and two-thirds percent of the replacement value of the habitable structure has been destroyed. See R.30-14(D)(3)(a).

(b) Pools - destroyed beyond repair means more than sixty-six and two-thirds percent of the replacement value of the pool has been destroyed. See R.30-14(D)(3)(b).

(c) Seawalls and Bulkheads - damage to seawalls and bulkheads must be judged on the percentage of the structure remaining intact at the time of the damage assessment. Erosion control structures or devices must not be repaired or replaced if destroyed:

(i) more than eighty percent above grade through June 30, 1995;

(ii) more than sixty-six and two-thirds percent above grade from July 1, 1995, through June 30, 2005;

(iii) more than fifty percent above grade after June 30, 2005. See R.30-14(D)(3)(c).

(d) Revetments - must be judged on the extent of displacement of the stone, effort to return this stone to the pre-storm event configuration of the structure or device, and the ability of the revetment to retain backfill material at the time of the damage assessment. See R.30-14(D)(3)(d).

27. Emergency Repairs - repairs due to emergencies as defined in Section 48-39-10(U) to an existing bank, dike, fishing pier, or structure other than ocean front erosion control structures or devices which have been erected in accordance with federal and state laws or provided for

by general law or acts passed by the General Assembly, if notice if given in writing to the Coastal Council within 72 hours of the onset of the needed repair.

28. Emergency Orders - orders issued by an appointed official of a county or municipality or of the state acting to protect the public health and safety, upon written notification to the Coastal Council. However, with regard to the beach/dune critical area, only the use of sand bags, sand scraping, or renourishment, or a combination of them, in accordance with guidelines provided by the Coastal Council is allowed pursuant to emergency orders.

29. Best Management Practices - measures to reduce adverse environmental impacts.

30. Coastal Council - designation for South Carolina Coastal Council.

31. Pool - a structure designed and used for swimming and wading.

32. Active Beach - the area seaward of the escarpment or the first line of stable natural vegetation, whichever first occurs, measured from the ocean landward.

30-2. APPLYING FOR A PERMIT.

A. Preliminary Review: The Council encourages the submission of development plans for preliminary review. If a permit is necessary, the Council will make every effort to assist the applicant in expediting the administrative aspects of filing an application.

B. Permit Application: Except for those exemptions as specified in the 1977 Coastal Zone Management Act, as amended, any person wishing to alter a critical area must receive a permit from the Coastal Council. Section 14(b) of the Act [Section 48-39-140(b)] directs that certain information be included in the permit application submitted to the Council. The following minimum information shall ordinarily be required before a permit application is considered complete:

(1) Name and address of the applicant;

(2) A plan or drawing showing the applicant's proposal and the manner or method by which the proposal shall be accomplished;

(3) A plat or a copy of a plat of the area in which the proposed work will take place;

(4) A certified copy of the deed, lease or other instrument under which the applicant claims title, possession or permission from the owner of the property to carry out the proposal;

(5) A list of all adjoining landowners and their addresses or a sworn affidavit that with due diligence such information is not ascertainable. When considered appropriate by the Council or its staff, additional information may be required concerning affected landowners;

(6) A brief description of the proposed alteration, its purpose and intended use, including a drawing of the type of structure, a description of the method of construction, and identification of materials and equipment to be used;

(7) A copy of the newspaper public notice:

(a) Minor developments (see R.30-2(G)): In the case of applications for minor development permits, the applicant shall publish notice at least once in a newspaper of local circulation in the county of the proposed activity. The newspaper notice should be published within 15 days of the date of Public Notice (see R.30-2(C)). No permit shall be issued by the Council until at least 10 days following the date of newspaper publication. The following form shall be used for newspaper publication:

PUBLIC NOTICE
SOUTH CAROLINA COASTAL COUNCIL

(Name of applicant) will apply (has applied) to the South Carolina Coastal Council for a permit to (description of work) for (public/private) use, at/in (location and name of waterway). Comments will be received by the South Carolina Coastal Council, 4130 Faber Place, Suite 300, Charleston, South Carolina 29405 until (insert date, 10 days after date of this newspaper notice).

(b) Other activities: In the case of applications for other than minor development permits, the applicant shall publish notice at least once in both a newspaper of general statewide circulation (The State, News and Courier, or The Greenville News) and a newspaper of local circulation in the county of the proposed activity. The newspaper notices should be published within 15 days of the date of Public Notice (see R.30-2(C)). No permit shall be issued by the Council until at least 15 days following the date of the last published newspaper publication. The following form shall be used for newspaper publication:

PUBLIC NOTICE
SOUTH CAROLINA COASTAL COUNCIL

(Name of applicant) will apply (has applied) to the South Carolina Coastal Council for a permit to (description of work) for (public/private) use, at/in (location and name of waterway). Comments will be received by the South Carolina Coastal Council, 4130 Faber Place, Suite 300, Charleston, South Carolina 29403 until (insert date, 15 days after date of this newspaper notice).

(8) When considered appropriate by the Council or its staff, additional information may be required. The plat or copy of a plat submitted for those activities subject to the Beach Management Act (Sections 48-39-270 through 350) shall show the location of the baseline, twenty-foot minimum setback line, and forty-year setback line, applicable to the subject property. The lines shall be derived from information available from the Coastal Council. The lines shall be part of the plat and sealed by the engineer and may not be placed on the application by anyone other than a registered engineer or member of the Coastal Council staff.

C. Notification: The Council is directed in Section 14(C) of the Act [Section 48-39-140(C)] and shall within thirty days of receiving either a Joint Public Notice or South Carolina Coastal Council permit application, notify in writing interested agencies, all adjoining landowners, local government units in which the land is located and other interested persons. This notice shall indicate the nature and extent of the applicant's proposal.

D. Permit Processing: Permit processing shall commence immediately upon receipt of either a Joint Public Notice or a South Carolina Coastal Council permit application and shall proceed concurrently but separately from any Federal authorization.

E. Comments on Application: Section 14(C) of the Act [Section 48-39-140(C)] allows all interested federal and state agencies, all adjoining landowners, local government units and other interested persons to have thirty days after the receipt of Public Notice of permit application from the Council to file written comments pertaining to the application. Only those comments received within the thirty day period must be considered in the Council's decision on a permit application. Any persons wishing to receive notice of the initial decision on a permit application shall notify the Council within this comment period. Provided, comments on permit applications for minor development activities, as defined in Section 3(N) of the Act [Section 48-39-10(N)], must be received within fifteen days after

receipt of Public Notice of permit application.

F. Public Information: The complete file on each permit application, including all comments received, will be available for inspection by any member of the general public during regular business hours at the principal Council office.

G. State Comment: Issuance or denial of the permit by the Coastal Council shall be the State comment on the corresponding federal permit application.

H. Water Quality Certificate: If a water quality certificate, is not required by a Federal permitting agency under Section 401 of P.L. 92-500, the Coastal Council may require a statement of water quality certification from the South Carolina Department of Health and Environmental Control.

30-3. PUBLIC HEARINGS

Section 14(C) of the Act [Section 48-39-140(C)] directs the Council to hold public hearings on permit applications if it is deemed necessary. Section 15(B) of the Act [Section 48-39-150(B)] requires the Council to convene a public hearing before acting on an application if twenty or more citizens or residents of the affected county or counties request such a hearing. Each request must be in writing and on a separate sheet of paper and be received within thirty days after publication of a Public Notice of the permit application. In all cases, the public hearing shall be held in the county where the land is located, and if in more than one county, the Council shall determine in which county to hold the hearing or may hold hearings in more than one county. When applicable and practical, joint public hearings will be held with the United States Army Corps of Engineers and/or other agencies.

30-4. DECISIONS ON A PERMIT

A. Permit Approval: The Council is allowed, under Section 15(B) of the Act [Section 48-39-150(B)], to issue a conditional permit approval. Under this provision, the Council may direct the applicant to amend his proposal to take specific measures necessary to protect the public interest. The Council, at its discretion, may seek additional public comment on major modifications to a permit application.

If the Council has approved an application, Section 15(B) of the Act [Section 48-39-150(B)] also allows the Council, at its discretion, to support the applicant in a Federal permitting process for the same activity.

B. Permit Denial: A Permit denial shall cite facts upon which the denial was based and the reasons for denial.

C. Action Upon a Permit: The Council, according to Section 15(c) of the Act, [Section 48-39-150(C)] shall act upon an application for a permit within ninety days. This ninety day period shall begin when the application is complete and filed in approved form. Exceptions of the 90-day deadline are applications for minor developments on which action must be taken in thirty days.

D. Completion of Work: Section 15(F) of the Act [Section 48-39-150(F)] requires a permit holder to complete work within three years from the date of permit issuance. The Council may extend this three-year period upon showing of good cause indicating that due diligence toward completion of the work has been made, evidenced by significant work progress. Work shall be continuous and expeditious whenever possible.

E. Property Rights Not Affected; No State Liability; Other Permit Requirements: No permit shall convey, not be interpreted to convey, a property right in the land or water in which the permitted activity is located. No permit shall be construed as

alienating public property for private use or as alienating private property for public use. In no way shall the State be liable for any damage as a result of the erection of permitted works. A South Carolina Coastal Council permit in no way relieves the holder from responsibility for compliance with other applicable Federal, State, or local permit requirements.

F. Legally Commenced Use: Section 13(C) of the Act [Section 48-39-130(C)] reads as follows, "Ninety days after the effective date of this act no person shall fill, remove, dredge, drain or erect any structure on or in any way alter any critical area without first obtaining a permit from the Council. Provided, however, that a person who has legally commenced a use such as those evidenced by a state permit, as issued by the Budget and Control Board, or a project loan approved by the rural electrification administration or a local building permit or has received a United States Corps of Engineers or Coast Guard permit, where applicable, may continue such use without obtaining a permit. Any person may request the Council to review any project or activity to determine if he is exempt under this section from the provisions of this act. The Council shall make such determinations within forty-five days from the receipt of any such request."

30-5. EXCEPTIONS.

A. List of Exceptions: Section 13(D) of the Act [Section 48-39-130(D)] lists several exceptions which do not require a permit. These are as follows:

(1) The accomplishment of emergency orders of an appointed official of a county or municipality or of the state acting to protect the public health and safety, upon written notification to the Coastal Council. However, with regard to the beach/dune critical area, only the use of sandbags, sand scraping, or renourishment, or a combination of them, in accordance with guidelines provided by the Coastal Council is allowed. See R.30-5(B).

(2) Hunting, erecting duckblinds, fishing, shellfishing and trapping when and where otherwise permitted by law; the conservation, replenishment and research activities of State agencies and educational institutions; or boating or other recreation provided that such activities cause no material harm to the flora, fauna, physical, or aesthetic resources of the area.

(3) The discharge of treated effluent as permitted by law; provided, however, that the Council shall have the authority to review and comment on all proposed permits that would affect critical areas.

(4) Dredge and fill performed by the United States Corps of Engineers for the maintenance of harbor channels and the collection and disposal of the materials so dredged; provided, however, that the Council shall have authority to review and certify all such proposed dredge and fill activities.

(5) Construction of walkways over sand dunes in accordance with Section 12 of the Act [Section 48-39-120]. (See R.30-13(B).).

(6) Emergency repairs to an existing bank, dike, fishing pier, or structure other than oceanfront erosion control structures or devices which have been erected in accordance with federal and state laws or provided for by general law acts passed by the General Assembly, if notice is given in writing to the Coastal Council within 72 hours of the onset of needed repairs.

(7) Maintenance and repair of drainage and sewer facilities constructed in accordance with federal or State laws, and normal maintenance and repair of any utility or railroad.

(8) Normal maintenance or repair to any pier or walkway, provided that such

maintenance or repair shall not involve dredge or fill.

(9) Construction or maintenance of a major utility facility where the utility has obtained a certificate for such facility under "The Utility Facility Siting and Environmental Protection Act" (Sections 58-33-10 through 58-33-430 of the 1976 Code). Provided, however, that the South Carolina Public Service Commission shall make the Council a party to certification proceedings for utility facilities within the coastal zone.

(10) Habitable structures and pools determined to be damaged less than sixty-six and two-thirds percent pursuant to R.30-14(D)(3)(a) and (b) may be repaired after acceptable documentation is provided to Coastal Council.

(11) Erosion control structures or devices determined to be damaged less than eighty percent above grade through June 30, 1995, sixty-six and two-thirds percent above grade from July 1, 1995, through June 30, 2005, or fifty percent above grade after June 30, 2005, pursuant to R.30-14(D)(3)(c) and (d) may be repaired after acceptable documentation is provided to Coastal Council.

B. Notification to Council of Emergency Orders:

(1) As in A(1) above, the Council must be notified of emergency orders that normally would require a Council permit. Notification to the Council must be made in writing prior to commencement of the activity and must state the following:

(a) the nature of the emergency;

(b) the substance of the emergency order;

(c) the time the order will be issued, or if circumstances preclude prior notice, when the order was issued;

(d) the name of the local official executing the order and the authority under which that person is acting;

(e) the location of the activity ordered;

(f) the estimate of when such order shall be withdrawn.

(2) If the Council is not notified within seventy-two hours of the issuance of the emergency action taken, the official issuing such order or ordering such emergency action shall be in violation of the Act and these rules and regulations. Within seventy-two hours after the emergency order, the official ordering the emergency action shall put the above six elements in writing and file them with the Council.

(3) The official issuing the emergency order shall be deemed in violation of the Act if the emergency conditions do not conform with the definition of emergency in Section 3 of the Act [Section 48-39-10].

C. Emergency Repairs to any Existing Bank and Dike or Fishing Pier: As in A(6) above, notice by telephone, telegram or radio of emergency repairs to any existing bank, dike or fishing pier must be given to the Council within seventy-two hours from the onset of needed repairs. Within five days after the commencement of repairs, written notification must be filed with the Council. If such notification is not received, the person(s) performing the work will be in violation of the Act and these rules and regulations.

D. Normal Maintenance and Repair: Normal maintenance and repair applies only to work on a structure which has been previously permitted or is grandfathered or exempted and is still generally intact and functional in its present condition. The work may only extend to the original dimensions of the structure, and any expansion, additions, or major rebuilding will require either a Coastal Council permit or documentation to and written approval from Council.

30-6. COUNCIL APPEALS.

A. Notice of Intention to Appeal: Any person adversely affected by the Council's initial action has the right of direct appeal to the Council. Notice of Intention to Appeal an initial permit application decision must be filed in writing within fifteen days of the date of notification to the applicant and other persons who requested notification of the initial Council action. (See R.30-2(E).)

B. Filing of Appeal: Within fifteen days of filing the Notice of Intention to Appeal, appellant must file in writing an appeal with the grounds for appeal clearly stated. The grounds for appeal must contain a statement showing how the party seeking review is adversely affected by the Council's action. Appellant will be limited to the grounds as stated. The appeal may be filed simultaneously with the Notice of Intention to Appeal (and in the same document) if done so within fifteen days of the date of notification to the applicant and other interested persons of the initial Council decision.

C. Public Notice: The Council, within ten days of receiving the Appeal, shall notify in writing interested agencies, all adjoining landowners, local government units and other interested persons. This notice shall indicate the nature and extent of the Appeal.

D. Intervenors: Affected parties, if they wish to intervene, must give Notice of Intent to Intervene and grounds for intervention within twenty days of the date of the Appeals Public Notice ((C) above). The Notice of Intent to Intervene and accompanying statements must be in writing with grounds clearly stated. The Notice of Intent to Intervene and grounds for intervention must contain a statement indicating that the party seeking to intervene has standing to do so by way of being a person affected by the Council's initial decision. Intervenors will be limited to the grounds as stated. All intervenors shall become parties to the action. Permit applicants will be made a party to all appeals involving their permit applications.

E. Comments: Written comments for Council consideration regarding an Appeal will be accepted for thirty days after the date of the Appeals Public Notice.

F. Notification of Hearing: The Council shall notify parties to the action of the date, time and place of the Appeals hearing. The Appeal shall be heard within 65 days of the date of the Appeals Public Notice but not less than thirty days after the date of Appeals Public Notice. By agreement of all parties to the Appeal, the hearings and/or oral presentations before the Council may be waived.

G. Hearing of Appeal: If a hearing is to be held, the Council may appoint a hearing officer to conduct all or part of the hearing. The hearing officer shall hear all relevant evidence offered from all parties and shall be responsible for compiling the complete record of the Appeal. Written statements for the record shall be welcomed. The transcript of the Appeal shall be distributed to all Council members before the Council meets on the Appeal. After receipt of the transcripts, parties to the Appeal shall be provided an opportunity to present oral arguments to the Council. Each party shall be given an allotted period of time to present oral arguments. Questions from Council members within the allotted time period shall be within a time frame prescribed by the Council. The Council shall notify each party of the hearing schedule at least ten days in advance.

H. Record of Appeal: A Record of Appeal shall be kept and filed in the Council's office. Oral proceedings or any part thereof shall be transcribed upon the request of a party. The Council may, in its discretion, require persons requesting a transcript to pay reasonable printing costs.

I. Decision on Appeal: A decision on the Appeal may be made by the Council immediately after the presentation of oral arguments but, in any case, no later than 35 days after the presentation. Each party shall be notified in writing of the decision.

J. Final Order: The final Council decision shall be in the form of written Findings of Fact and Conclusions of Law. The Findings of Fact and Conclusions of Law must be approved by a vote of the full Council after which they are signed by the Chairman of the Council. The Findings of Fact and Conclusions of Law shall be served on each party to the appeal.

30-7. JUDICIAL APPEAL.

A. Exhaustion of Administrative Remedies: Section 18 of the Act allows judicial review of Council action. Before seeking judicial relief from a Council permit application decision, a person must seek relief through the Council appeal process in 30-6 above.

B. Time Period for Filing: The 20 day time period for filing an appeal in the circuit court will commence to run from date of receipt of the Council's Findings of Fact and Conclusions of Law.

30-8. ENFORCEMENT.

A. Permit Revocation and Modification: One of the needs in administering a permit system to manage coastal resources is the enforcement of the provisions of the system and the identification of unpermitted and unauthorized activities. The Council has initiated a routine aerial surveillance program for the coastal counties which identifies and reports illegal dredging, filling, or other alterations in the critical areas.

As the state agency responsible for managing the critical areas, the Council is adamant in its enforcement of terms of an approved permit. Section 15(E) of the Act [Section 48-39-150(E)] empowers the Council to revoke a permit for noncompliance with or violation of its terms after written notice of intention to do so has been given the holder, and the holder, in return, has been given the opportunity to present an explanation to the Council. Financial hardship on the part of a holder shall not be a defense to the revocation of a permit. The Council may also revoke a permit if it finds that the holder or his agent submitted false information to the Council.

B. Cease and Desist Directive: When any person is found altering a critical area without a permit and such activity is not exempted by Section 13(D) of the Act [Section 48-39-130(D)], has not been authorized by a permit, is in violation of the terms of a Council permit or is violating provisions of the Coastal Management Act [Section 48-39-10 et seq.] in any manner, the Council, or its duly appointed agent, may issue a cease and desist directive. This directive shall inform the person that he is in violation of the Act and that such person should cease unauthorized activity. The Council may then request the person to restore the area to its original condition. If the person responsible for the unauthorized activity refuses to comply with the Council directive, the Council may then file suit in the appropriate circuit court as outlined in Section 16 of the Act [Section 48-39-160].

C. Arrest Warrants: When a person is found altering a critical area without a permit and such activity is not exempted by Section 13(D) of the Act [Section 48-39-130(D)], has not been authorized by a permit, is in violation of the terms of a Council permit or is violating provisions of the Coastal Management Act [Section 48-39-10 et seq.] in any manner, the Council may cause to be issued a warrant for the arrest of the violator.

D. Penalties: As stated in Section 17 of the Act [Section 48-39-170] any person

found guilty of violation of the Act shall be punished by imprisonment of not more than six months or by a fine of not more than five thousand dollars, or both for the first offense; and by imprisonment of not more than one year or by a fine of not more than ten thousand dollars, or both, for each subsequent offense.

E. Judicial Enforcement: Section 16 of the Act [Section 48-39-160] provides the Council, the Attorney General or any person adversely affected with a remedy to restrain violations of the Act.

30-9. OTHER PROVISIONS.

A. Savings Clause: If any provisions of the Act or of these Rules and Regulations are adjudged invalid or unconstitutional, the remainder of the Act and these Rules and Regulations and/or the application of their provisions to other persons or circumstances shall not be affected thereby.

B. Bonding by Council: To insure that the holder complies with all limitations and conditions of the permit, the Council may, at its discretion, require a secured bond before issuance of the permit. The Council may also require the applicant to submit proof of financial responsibility.

C. Transfer of Permits: Permits are issued in the name of the applicant and may not be assigned to another without written permission of the Council.

D. Declaratory Rulings: Interested persons may petition to the Council for declaratory rulings. The Council shall rule on each petition, in writing, within 45 days of receipt.

30-10. CRITICAL AREA BOUNDARIES.

A. Coastal Waters and Tidelands:

(1) The Council has permit authority over the coastal waters and tidelands critical areas defined in Section 3 of the Act [Section 48-39-10] as follows:

"'Coastal waters' means the navigable waters of the United States subject to the ebb and flood of the tide and which are saline waters, shoreward to their mean high-water mark. Provided, however, that the Council may designate boundaries which approximate the mean extent of saline waters until such time as the mean extent of saline waters can be determined scientifically.

'Tidelands' means all areas which are at or below mean high tide and coastal wetlands, mudflats, and similar areas that are contiguous or adjacent to coastal waters and are an integral part of the estuarine systems involved. Coastal wetlands include marshes, mudflats, and shallows and means those areas periodically inundated by saline waters whether or not the saline waters reach the area naturally or through artificial water courses and those areas that are normally characterized by the prevalence of saline water vegetation capable of growth and reproduction. Provided, however, nothing in this definition shall apply to wetland areas that are not an integral part of an estuarine system. Further, until such time as the exact geographic extent of this definition can be scientifically determined, the Council shall have the authority to designate its approximate geographic extent."

Using biological field surveys and aerial photography, the Council has found the point on the upper reaches of the estuarine systems where tideland vegetation changes from predominately brackish to predominately fresh and has established a boundary using the nearest recognizable physical features within this area. This boundary has been posted on an official map in the Coastal Council's principal office of business and is available for public review. An approximate description of this boundary is as follows: On the south at the

intersection of the South Carolina-Georgia border and the old track bed of the Seaboard Coastline (SCL), approximately 1.75 miles above the U. S. Highway 17A bridge across the Savannah River; thence, northeastward along the track bed until its intersection with U. S. Highway 278 near Eutaw Creek; thence, northward along U. S. 278 for approximately one mile until its intersection with S. C. 462; thence, north-northwestward along S. C. 462 until its intersection with U. S. Highway 17 near Coosawhatchie; thence, northeastward along U. S. 17 until its intersection with S-15-26, approximately two miles east of Green Pond; thence, southward along S-15-26 until its intersection with the old SCL track bed near Airy Hall; thence, east-northeastward along the track bed to its intersection with S. C. 174; thence, northward along S. C. 174 for approximately 1.5 miles until its intersection with S. C. 164; thence, east-northeastward approximately three miles along S. C. 164 until its intersection with S. C. 165; thence, northward along S. C. 165 until its intersection with S. C. 642; thence, southeastward along S. C. 642 until its intersection with U. S. Interstate 26; thence, southward along I-26 until its intersection with S. C. 7; thence, northeastward on S. C. 7 until its intersection with the SCL track bed adjacent to Spruill Avenue; thence, northward along this track bed until its intersection with the Charleston County/Berkeley County line, approximately one-fifth mile north of Remount Road; thence, east-northeastward along the county line until its intersection with the Cooper River at Goose Creek; thence, eastward by a straight line across the Cooper River and Yellow House Creek to Yellow House Landing on Yellow House Creek; thence, southward along the only dirt road leading from the landing to S-8-33; thence, northeastward along S-8-33 until its intersection with S-8-100; thence, northeastward along S-8-100 until its intersection with S-10-98; thence, southward along S-10-98 until its intersection with U. S. Highway 17; thence, northeastward along U. S. Highway 17 until its intersection with S-27-30 north of the North Santee River; thence, eastward along S-27-30 for approximately five miles; thence, northward along S-27-30 until its intersection with S-27-18; thence, northwestward along S-27-18 until its intersection with U. S. Highway 17; thence, northeastward along U. S. 17 until its intersection with the South Carolina-North Carolina border. In determining the exact location of this boundary, only those lands seaward of the road beds and track beds described shall be included in the tidelands and coastal waters critical areas.

(2) All coastal waters and tidelands seaward from this boundary to the State jurisdictional limit are included within the critical areas.

B. Beach/Dune System:

The Coastal Council has permitting authority over the beach/dune system. In determining the boundaries of this critical area, the Coastal Council will be guided by Section 48-39-270, Section 48-39-280 and Section 48-39-360.

30-11. GENERAL GUIDELINES FOR ALL CRITICAL AREAS.

A. Preface: The critical areas are of vital importance to the State, and there is strong and growing pressure for the development of these areas. The South Carolina Coastal Council has established these rules and regulations for permit applications in an effort to reduce the irreversible loss of productive tidelands, coastal waters, beaches, and dunes while meeting long-range State development needs.

B. General Considerations: In assessing the potential impacts of projects in critical areas, the Council will be guided by the policy statements in Section 1 and 2 of the Act [Sections 48-39-20, 48-39-30] and the following ten considerations in Section 15 of the Act [Section 48-39-150]:

(1) The extent to which the activity requires a waterfront location or is economically enhanced by its proximity to the water;

(2) The extent to which the activity would harmfully obstruct the natural flow of navigable water. If the proposed project is in one or more of the State's harbors or in a waterway used for commercial navigation and shipping, or in an area set aside for port development in an approved management plan, then a certificate from the South Carolina State Ports Authority declaring that the proposed project or activity would not unreasonably interfere with commercial navigation and shipping must be obtained by the Council prior to issuing a permit;

(3) The extent to which the applicant's completed project would affect the production of fish, shrimp, oysters, crabs, or clams or any marine life or wildlife, or other natural resources in a particular area, including but not limited to water and oxygen supply;

(4) The extent to which the activity could cause erosion, shoaling of channels or creation of stagnant water;

(5) The extent to which the development could affect existing public access to tidal and submerged lands, navigable waters and beaches, or other recreational coastal resources;

(6) The extent to which the development could affect the habitats for rare and endangered species of wildlife or irreplaceable historic and archeological sites of South Carolina's coastal zone;

(7) The extent of the economic benefits as compared with the benefits from preservation of an area in its unaltered state;

(8) The extent of any adverse environmental impact which cannot be avoided by reasonable safeguards;

(9) The extent to which all feasible safeguards are taken to avoid adverse environmental impact resulting from a project;

(10) The extent to which the proposed use could affect the value and enjoyment of adjacent owners."

C. Further Guidelines: In the fulfilling of its responsibility under Section 15(A) of the Act, the Council must in part base its decisions regarding permit applications on the policies specified in Sections 1 and 2 of the Act, and thus, be guided by the following:

(1) The extent to which long-range, cumulative effects of the project may result within the context of other possible development and the general character of the area.

(2) Where applicable, the extent to which the overall plans and designs of a project can be submitted together and evaluated as a whole, rather than submitted piecemeal and in a fragmented fashion which limits comprehensive evaluation.

(3) The extent and significance of negative impacts on Geographic Areas of Particular Concern (GAPC). The determination of negative impacts will be made by the Coastal Council in each case with reference to the priorities of use for the particular GAPC. The priorities of use are found in Chapter IV of the Coastal Management Program.

D. General Guidelines for Beaches and Dunes:

In addition to the provisions of the South Carolina Coastal Management Act of 1977, the policies of the South Carolina Coastal Management Program, and applicable rules and regulations, the Coastal Council shall base its decisions on activities in the beach/dune system on the findings and policies specified in Section 48-39-250 and Section 48-39-260 of the 1977 Coastal Zone Management Act, as amended, and the following:

1. The Coastal Council shall discourage new construction in the beach/dune

system and encourage those who have erected structures within the system to retreat.

2. The Coastal Council shall promote soft-solutions to erosion within the context of a policy of retreat of development from the shore and prevent the strengthening and enlargement of existing erosion control structures.

3. The Coastal Council shall promote public access to the beaches of this state.

4. The Coastal Council shall consider state and local comprehensive plans. No permit shall be issued which is inconsistent with the state plan, and all permits issued shall be consistent with local plans to the maximum extent practicable.

5. The Coastal Council shall be guided by the prohibitions against construction contained in Section 290 and Section 300 of the Act which are based upon the conclusion that ill-planned development, whether habitable structures, recreational amenities, erosion control devices or other manmade structures, will now and in the future adversely impact the fragile beach/dune system. These structures interfere with the natural system and impact the highest and best uses of the system.In order to protect the highest and best uses of the beach/dune system, the Coastal Council, in its management capacity, shall encourage minimal development therein.

6. The destruction of beach or dune vegetation seaward of the setback line is prohibited unless there is no feasible alternative. When there is destruction of vegetation permitted seaward of the setback line, mitigation, in the form of planting new vegetation to rectify the destruction is required as a permit condition. In no event shall any part of a building be constructed on a primary oceanfront sand dune.

30-12. SPECIFIC PROJECT STANDARDS FOR TIDELANDS AND COASTAL WATERS.

A. Docks and Piers:

(1) A dock or pier is a structure built over and/or floating on water and is generally used for the mooring of boats. Docks and piers are the most popular method of gaining access to deep water. Although they are least objectionable from an ecological point of view, docks and piers sometimes pose navigational problems, restrict public use of the water and, under certain circumstances, possess potential for creating environmental problems.

(2) The following standards are applicable for construction of docks and piers:

(a) Docks and piers shall not impede navigation or restrict the reasonable public use of State lands and waters;

(b) Docks and piers shall be constructed in a manner that does not restrict waterflow;

(c) The size and extension of a dock or pier must be limited to that which is reasonable for the intended use;

(d) Docks and piers should use the least environmentally damaging alignment;

(e) All applications for docks and piers should accurately illustrate the alignment of property boundaries with adjacent owners;

(f) To preclude the adverse effects of shading marsh vegetation, walkways which are built over vegetated marsh and lead to the dock or pier shall not exceed four feet in width (unless the applicant can justify a need for a wider structure) and should be

elevated at least three feet above mean high water;

(g) Dry storage in uplands will be encouraged in preference to moorage in crowded areas;

(h) Developers of subdivisions and multiple family dwellings are encouraged to develop joint-use or community docks when their plans are in the development stage. However, community docks may be considered a marina if any services are offered besides moorage for those having a right to use the dock or if the size and location of the community dock creates the potential for significant impact;

(i) Project proposals shall include facilities for the proper handling of litter, waste, refuse and petroleum products, where applicable;

(j) Where docks and piers are to be constructed over tidelands utilized for shellfish culture or other mariculture activity, the Council will consider rights of the lessee and the public prior to approval or denial.

B. Boat ramps:

(1) Boat ramps provide access to the water for those who do not have water access by means of docks, piers, or marinas. However, boat ramp construction may require filling or, in some cases, dredging of wetland areas.

(2) Specific standards which shall apply are as follows:

(a) Filling of vegetated wetlands for boat ramp construction is prohibited unless no feasible alternatives exist in non-vegetated wetland areas. In addition, the area to be filled must be limited to that which is reasonable for the intended use;

(b) Boat ramps must consist of environmentally acceptable materials, demonstrate sound design and construction so that they could reasonably be expected to be safe and effective, and minimize adverse effects.

(c) Justification for boat ramp construction in environmentally sensitive areas shall be considered using the following priorities:

(i) public use - open to all citizens;

(ii) restricted use - open to citizens of a particular area or organization only;

(iii) private use - use for one citizen or family;

(d) In cases where private use is necessary, siting of ramps must, wherever feasible, be located in areas where the least environmental impact will accrue to the area;

(e) Boat ramp location requiring dredging or filling of wetlands to provide deepwater access to the ramp, parking areas for the ramp, or other associated facilities are prohibited unless no feasible alternatives exist and environmental impacts can be minimized;

(f) The siting of "public use" boat ramps is encouraged in easily accessible areas such as bridges and existing, abandoned causeways, provided that these sites comply with other applicable regulations.

C. Bulkheads and Revetments (Rip-rap) (Other than ocean front, as covered under R.30-13(A)):

(1) In an attempt to mitigate certain environmental losses that can be caused by these structures, the following standards are adopted:

(a) Structures must be designed to conform to the existing shoreline (upland boundary), to the maximum extent feasible, and constructed so that reflective wave energy does not destroy stable marine bottoms or constitute a safety hazard;

(b) Where possible, sloping rip-rap structures should be used rather than vertical seawalls;

(c) Where feasible, bulkhead and revetment construction shall avoid sharp angle turns that may collect debris or cause shoaling or flushing problems;

(d) Bulkheads and revetments will be discouraged where marshlands are adequately serving as an erosion buffer, where adjacent property could be detrimentally affected by erosion, sedimentation, or obstruction of view, or where public access is adversely affected;

(e) Bulkheads and revetments will not be approved where public access is adversely affected unless no feasible alternative exists.

D. Cables, Pipelines, and Transmission Lines:

(1) Installation of cables, pipelines, and transmission lines is preferred in non-wetland areas; however, excavating activities in critical areas are sometimes required. Excavation and filling also are sometimes required to construct foundation structures attendant to the installation of overhead transmission line crossings. These installations shall be designed to minimize adverse environmental impacts.

(2) In addition to standards for dredging and filling, the following standards are applicable:

(a) To the maximum extent feasible, alignments must avoid crossing the critical areas;

(b) Creation of permanent open water canals to install pipelines is generally prohibited since such projects usually interfere with drainage patterns and may adversely affect water quality through accelerated bank erosion;

(c) Dimensions of excavated canals for cables and pipelines should be minimal. Silt curtains are recommended for all excavations;

(d) Wherever feasible, all excavations in wetland areas must be backfilled with the excavated material after installation of the appropriate structure, while being careful to maintain the original marsh elevation;

(e) Appropriate erosion control measures shall be employed during the crossing of wetland areas. Where appropriate, revegetation with suitable wetland species will be required;

(f) Alignments of new projects should be designed to utilize existing rights-of-way and topographic features, wherever feasible;

(g) The extension of public services, such as sewer and water facilities, involving the expenditure of public funds or issuance of government revenue bonds to previously undeveloped barrier islands will not be approved unless an overriding public interest can be demonstrated.

E. Marina Location and Design:

(1) Each applicant for a marina in the critical areas of the coastal zone must utilize the "Coastal Marina Permit Application" as published by the South Carolina Coastal Council. Each application must be accompanied by a Coastal Marina Report developed in accordance with the "Guidelines for Preparation of Coastal Marina Report" also published by the South Carolina Coastal Council. In addition, each applicant who is issued a marina permit by the Coastal Council must submit an operation and maintenance plan in accordance with the Coastal Council's "Coastal Marina Operations and Maintenance Manual", and have that plan approved by the Coastal Council before actual construction of the facility may commence.

(2) Commercial docks are also considered a marina type facility. The standards that apply to marinas will also be used as criteria in the evaluation of permit applications for commercial docks.

(3) All marinas affect aquatic habitats to some degree, but adverse effects can be minimized by utilizing proper location and design features. Application for marinas shall include a comprehensive site plan showing location and number of all water-dependent and upland facilities such as parking and storage facilities.

(4) In addition to standards for bulkheads and seawalls, docks and piers, dredging and filling, and navigation channels and access canals, the following standards are applicable:

(a) Marinas should be located in areas that will have minimal adverse impact on wetlands, water quality, wildlife and marine resources, or other critical habitats;

(b) Where marina construction would affect shellfish areas, the Council must consider the rights of the lessee, if applicable, and the public, and any possible detrimental impacts on shellfish resources;

(c) Marinas should be located in areas where maximum physical advantages exist and where the least initial and maintenance dredging will be required;

(d) Marinas must avoid or minimize the disruption of currents. Dead-end or deep canals without adequate circulation or tidal flushing will not be permitted unless it can be demonstrated that water quality will not be adversely affected;

(e) Marina design must minimize the need for the excavation and filling of shoreline areas;

(f) Open dockage extending to deep water is usually preferable to excavation for boat basins, and it must be considered as an alternative to dredging and bulkheading for marinas;

(g) Turning basins and navigation channels shall be designed to prevent long-term degradation of water quality. In areas where there is poor water circulation, the depth of boat basins and access canals should not exceed that of the receiving body of water to protect water quality;

(h) Project proposals shall include facilities for the proper handling of petroleum products, sewage, litter, waste, and other refuse with regard to the South Carolina Department of Health and Environmental Control (DHEC) specifications.

Adequate restroom facilities shall be required in order to discourage any overboard discharge of sewage from boats and, thus, to protect water quality. The number of toilets required for any given marina shall be determined by the nature and size of the marina and by its specific site location. However, regardless of size, two toilets and one lavatory for women and one toilet, one urinal, and one lavatory for men shall be required for all marinas, and unless there are mitigating circumstances, the Council shall require one toilet and one lavatory for women and one toilet, one urinal, and one lavatory for men for every additional 100 boat slips or fraction thereof over the original 100 boat slips. Toilet facilities should be constructed in a location that would encourage their use by the users of the marina.

If there are more than 100 slips, there shall be provided one additional toilet, lavatory and shower for each sex for each additional 40 slips or fraction thereof and one additional men's urinal for each 100 additional slips or fraction thereof.

Additional facilities are required by DHEC where restaurants, motels, laundries, and other nonwater-dependent structures are provided.

All pump-out and sewage facilities must be included in the public notice and certified

by DHEC before permit approval. Also, DHEC can provide advice regarding the necessity of having hose connections from boats to shore-based sewage facilities where these boats are used as residences.

Trash receptacles or similar facilities should be plentiful and convenient for the proper disposal of trash, waste and noxious materials such as paints, rags and oil cans required for normal boat maintenance and repair.

Where feasible, boat maintenance areas must be designed so that all bottom scraping and painting be accomplished over dry land allowing for proper control and deposition of residues, spills and storm water runoff;

(i) Dry storage type marinas are preferred, wherever feasible;

(j) Applications for construction of marina and commercial dock facilities will be considered by the Council only after adequate demonstration by the applicant of demand for the facilities;

(k) Applications for marinas must include maintenance dredging schedules and dredged material disposal sites when applicable.

F. Transportation:

(1) There is often a strong public need for transportation projects. Unfortunately, such projects can pose a significant risk of environmental degradation. However, careful consideration of environmental factors can guide development toward more favorable results. To the maximum extent possible, environmental considerations shall be harmonious with public safety considerations.

(2) The specific standards are as follows:

(a) In the planning of major transportation routes and airports, these projects should be sited for location inland from the critical areas;

(b) The location and design of public and private transportation projects must avoid the critical areas to the maximum extent feasible. Where coastal waters and tidelands cannot be avoided, bridging rather than filling of these areas will be required to the maximum extent feasible;

(c) Where wetlands will be destroyed, their value as wetlands will be assessed by the Council and weighed against public need for their destruction;

(d) To the maximum extent feasible, transportation structures must be designed so as not to alter the natural waterflow and circulation regimes or create excessive shoaling or erosion. Where applicable, adequate clearance for commercial and pleasure craft must be provided;

(e) Where feasible, maximum care shall be taken to prevent the direct drainage of runoff water from transportation routes and associated facilities from entering adjacent water bodies;

(f) Where appropriate, bridges and approaches should be designed to provide for the enhancement of public access by the utilization of fishermen, catwalks, boat launching ramps, and other structural features;

(g) During the planning of a multi-lane widening or improvement project, it is preferable to follow the existing alignment in wetland areas. Existing causeway and fill areas must be utilized wherever possible. The degree to which any existing causeway through wetlands can be widened must be reasonably proportionate to the expected traffic load of the causeway in the near future and the size and use of the area being provided access. The width of medians of divided highways must be reduced as much as possible wherever they cross wetland areas;

(h) Roadway embankments and fill areas shall be stabilized by utilizing appropriate erosion devices and/or techniques in order to minimize erosion and water quality degradation problems. Culverts shall be required, where appropriate, in order to maintain normal tidal influence and minimize disruption of drainage patterns;

(i) The Council will require applicants for transportation project permits to consider the accommodation of other public utilities in facility design, thus avoiding unnecessary future alteration such as that caused by the laying of cables or transmission lines in wetlands adjacent to an existing roadway;

(j) New road or bridge projects involving the expenditure of public funds to provide access to previously undeveloped barrier islands will not be approved unless an overriding public interest can be demonstrated.

G. Dredging and Filling:

(1) Development of wetland areas often has been considered synonymous with dredging and filling activities. Dredging and filling in wetlands can always be expected to have adverse environmental consequences; therefore, the Council discourages dredging and filling. There are cases, however, where such unavoidable environmental effects are justified if legitimate public needs are to be met.

(2) The specific standards are as follows:

(a) The creation of commercial and residential lots strictly for private gain is not a legitimate justification for the filling of wetlands. Permit applications for the filling of wetlands and submerged lands for these purposes shall be denied, except for erosion control, see R.30-12(C), or boat ramps, see R.30-12(B). All other dredge and fill activities not in the public interest will be discouraged;

(b) Dredging and filling in wetland areas should be undertaken only if that activity is water-dependent and there are no feasible alternatives;

(c) To the maximum extent feasible, dredging and filling activities should be restricted in nursery areas and shellfish grounds and during periods of migration, spawning, and early development of important sport and commercial species;

(d) Dredging and excavation shall not create stagnant water conditions, lethal fish entrapments, or deposit sumps or otherwise contribute to water quality degradation;

(e) Designs for dredging and excavation projects shall, where feasible, include protective measures such as silt curtains, diapers, and weirs to protect water quality in adjacent areas during construction by preventing the dispersal of silt materials;

(f) Dredged materials shall be deposited and contained in such a manner so as to prevent dispersal into adjacent wetland areas;

(g) Applications for dredging in submerged and wetland areas for purposes other than access, navigation, mining, or drainage shall be denied, unless an overriding public interest can be demonstrated. Dredging permits for mining will be issued only as specified in (2)(h) below. Drainage permits must be consistent with the provisions in R.30-12(L);

(h) Applications for dredging for mining activities within the critical areas will be denied unless a significant portion of the resource is located in the critical area, extraction of the resource is clearly necessary, and benefits derived from extraction would outweigh resultant detrimental impacts on coastal ecosystems. For any permit issued to allow dredging for mining operations in the critical areas, a complete site reclamation plan shall be required;

(i) Wetlands shall not be utilized as depositories for waste materials except as discussed in R.30-12(I);

(j) In all cases, dredging activities shall not be approved until satisfactory disposal sites have been acquired.

H. Navigation Channels and Access Canals:

(1) Certain dredging activities involve the creation and maintenance of navigation channels and access canals. These activities have a potential for severe environmental impacts and should meet a demonstrated public need.

(2) Where the Council determines that such activities are justified, the following standards will be applied:

(a) Dredging for establishment of new canals which involves permanent alteration of wetland habitats will be prohibited unless no feasible alternative exists. Establishment of canals for purposes of creating waterfront lots from inland property will be prohibited unless it can be demonstrated that there will be no significant environmental impacts on critical areas;

(b) To the extent feasible, project plans must utilize piers or catwalks, rather than channels or canals, to reach deeper water areas;

(c) Access canals shall be designed to insure adequate flushing and shall not create dead-end or stagnant water pockets. Open-ended, U-shaped, or semicircular canals are generally preferred over dead-end canals, since they usually provide better water circulation;

(d) Highland waterway construction that is slated to be tied into wetland areas shall be constructed in the dry, if feasible, so that sloping and stabilization of the banks can be completed before the plug is removed for the connection to open waters. Where dry construction is not possible, temporary plugs or silt curtains at the end of canals connected to waterways should be maintained until all sediment settles out;

(e) The sides of navigation channels and access canals should be gently sloping rather than vertical to facilitate biological as well as physical stabilization of the canal banks;

(f) When several landowners are to be served by a project, dredging for navigation channels and access canals should be well planned to prevent unnecessary excavation. Tributary canals in the highlands leading to a central navigation channel should be utilized rather than separate channels for each waterfront landowner;

(g) The berm of access canals should be raised so that there is a gradual slope away from the canal edge. This will help prevent introduction of contaminants into adjacent wetland areas;

(h) Alignment of channels and canals should make maximum use of natural or existing channels. Alignment of channels and canals should avoid shellfish beds, nursery areas, and spawning areas in wetlands.

I. Deposition of Dredged Material:

(1) The deposition of dredged materials resulting from numerous dredging activities along the coast has serious environmental effects separate from the original dredging activity. Thousands of acres of productive wetland habitat have been destroyed by such deposition. Recognizing that additional disposal sites will be required, it is important that site acquisition proposals include plans for mitigating any adverse impacts upon the environment.

(2) The following standards are to be utilized:

(a) Upland disposal of dredged material shall always be sought in preference to disposal in wetlands. Vegetated wetlands and mudflats shall not be utilized for disposal of dredged materials unless there are no feasible alternatives. Any other wetlands should not be utilized for disposal of dredged materials when other alternatives exist;

(b) Open water and deep water disposal should be considered as an alternative if highland alternatives are not feasible. However, open and deep water disposal sites should be seriously considered only after careful consultation with the Council and other relevant State and Federal agencies;

(c) Dredged materials containing hazardous levels of toxic material must be disposed of with extraordinary caution. These materials shall never be disposed of in wetland areas and only in highland areas which are lined and diked with impervious materials. These materials will only be disposed in open water ocean dumping sites when maximum safety has been demonstrated after thorough review by the Coastal Council and other appropriate state and federal agencies;

(d) Dikes surrounding disposal areas should be shaped and vegetated immediately to minimize erosion, with outfalls positioned to empty into non-wetland areas;

(e) Future disposal sites shall be reviewed on a case-by-case basis;

(f) Wherever feasible, existing disposal areas shall be utilized to the fullest extent possible; this would include raising the height of the embankments to increase the holding capacity of the disposal area;

(g) Consideration must be given to the temporal aspects of spoil deposition - for example, impacts on spawning, fish migrations, shellfish harvesting, waterfowl nesting and wintering areas, and mosquito control. Attention must be given to possible adverse impacts of various alternative sites on the public health and welfare as well as on critical fish and wildlife areas;

(h) In all cases, dredging activities shall not be approved until satisfactory disposal sites have been acquired.

J. Waste Treatment Systems:

(1) Several agencies regulate the installation and operation of waste water treatment facilities, septic tanks, and landfills. Council permits will be coordinated with these relevant agencies. Normal maintenance and repair of sewer facilities are exempted from Council permit requirements by Section 13(D) of the Act [Section 48-39-130(D)]. The discharge of treated effluent is also exempted; provided, however, that the Council shall review and comment on these discharges. The Council is concerned primarily with wetland degradation problems which could involve commercially important shellfish, recreational fisheries, and critical wildlife habitats.

(2) Standards applicable to these installations are as follows:

(a) Applications for the construction of lagoons or impoundments for waste treatment facilities, solid waste disposal sites and similar activities in the critical areas shall be denied unless there are no feasible alternatives and it can be demonstrated that there will be no significant environmental impacts;

(b) Wherever feasible, construction and design of waste treatment facilities shall be accomplished in such a manner that no effluent will be discharged into areas where shellfish and other marine resources would be adversely affected. Where waste treatment facilities would affect open, productive shellfish harvesting areas, the Council must consider the rights of the lessee, if applicable, or the public in the case of public oyster grounds, as well as impacts on shellfish resources;

(c) The siting of sewage treatment systems should avoid the critical areas. The location of structures other than actual pipelines, such as pump or lift stations, in critical areas will be prohibited unless no feasible alternatives exist;

(d) The construction of sewage treatment facilities and associated discharge pipes should be located and designed so as not to have adverse impacts upon areas of significant public use.

K. Marsh Impoundments for Recreational and Commercial Activities:

(1) Marsh impoundments totalling nearly 69,000 acres comprise a significant portion (approximately 16 percent) of our coastal wetlands. An additional acreage, perhaps equaling this figure, has been impounded in the past but consists today of tidally influenced areas where embankments are no longer maintained. Once important rice growing areas, the majority of these impoundments are managed primarily for recreational waterfowl hunting, wildlife sanctuaries, and other commercial, agricultural, and preservation uses.

(2) Proposals will be reviewed on a case-by-case basis according to the following standards:

(a) Permit applications to impound previously unimpounded wetlands or areas inundated by SAA waters shall be denied unless an overriding public interest is clearly demonstrated.

(b) The following factors will be considered in the review of permit applications for the impoundment of wetlands:

(i) Condition of existing dikes. Projects should require a minimum of new bank construction in wetlands.

(ii) Amount of wetlands proposed to be impounded.

(iii) The extent to which the project would block waters presently used for recreation or navigation by the public.

(iv) Degree of salinity of waters impacted by the proposed project.

(v) Quality of waters affected by the proposed project.

(vi) Primary purpose of the impoundment.

(c) All applications for the impoundment of wetlands must be accompanied by a detailed management plan setting forth the intent and method of managing the impounded areas. This plan must contain, but not necessarily be limited to, the following information:

(i) Applicant's objective(s) for the impoundment.

(ii) Schedule of water level manipulations.

(iii) Methods of pest and predator control (i.e., use of pesticides, prescribed burning, etc.).

(iv) Water quality management plan.

The management plan must be approved by the Council prior to permit issuance and shall become a condition of the permit.

L. Drainage Canals or Ditches:

(1) Drainage canals or ditches should follow the least damaging alignment and should meet one or more of the following needs:

(a) insect or vector control as a public health necessity;

(b) other public health purposes;

(c) the control of runoff as part of a comprehensive flood plain management plan.

(2) In addition to the application standards for dredging and filling and navigation channels and access canals, the following standards shall apply:

(a) Drainage canals and ditches shall not create dead water or stagnant pockets;

(b) To the extent feasible, the alignment of drainage canals should avoid the more productive wetlands;

(c) To the extent feasible, alignments of canals shall make maximum use of existing deep water channels to avoid unnecessary excavation;

(d) To the extent feasible, the quantity and quality of any discharged waters shall not result in extensive alteration of wetlands or the quality of coastal waters;

(e) All dredged material must be disposed of in accordance with the regulations under R.30-12(I).

M. Nonwater-dependent Structures: Nonwater-dependent structures, as defined in Section R.30-1(C), have been built in the past on pilings over coastal waters and tidelands critical areas. Nonwater-dependent structures shall be prohibited from being constructed over or in tidelands and coastal waters critical areas unless there is no significant environmental impact, an overriding public need can be demonstrated and no feasible alternatives exist.

30-13. SPECIFIC PROJECT STANDARDS FOR BEACHES AND DUNES.

A. Normal Maintenance and Repair of Habitable Structures: Normal maintenance and repair of habitable structures is allowed without notice to Coastal Council. See R.30-14(D)(3)(a) and R.30-1(C)(28).

B. Construction of New Habitable Structures: If any part of a new habitable structure is constructed seaward of the setback line, the owner shall certify to the Coastal Council that construction meets the following requirements:

(1) The habitable structure is no larger than five thousand square feet of heated space.

(2) The structure is located as far landward on the property as practicable.

(3) A drawing has been submitted to the Coastal Council showing a footprint of the structure on the property, a cross section of the structure, and the structure's relation to property lines and setback lines which affect the property.

(4) No erosion control structure or device is incorporated as an integral part of the habitable structure pursuant to Section 48-39-290.

(5) No part of the building is being constructed on the primary oceanfront sand dune or seaward of the baseline.

C. Additions to Habitable Structures: Additions to habitable structures between the baseline and setback line are allowed provided the following requirements are met:

(1) The additions together with the existing structure do not exceed five thousand square feet of heated space.

(2) Additions to habitable structures comply with the conditions of new habitable structures as set forth in R.30-13(B).

D. Repair and Renovation of Habitable Structures: Repair and renovation of a habitable structure between the baseline and setback line damaged but not destroyed beyond repair, due to natural or man-made causes is allowed after notice and written documentation to Coastal Council.

E. Replacement or Rebuilding of Habitable Structures:

(1) A habitable structure in excess of five thousand square feet of heated space between the baseline and setback line which has been destroyed beyond repair due to natural causes may be replaced or rebuilt provided all of the following requirements are met:

(a) The total square footage of the replaced structure seaward of the setback line does not exceed the total square footage of the original structure seaward of the setback line.

(b) The linear footage of the replaced structure parallel to the coast does not exceed the original linear footage parallel to the coast.

(c) The replaced structure is no farther seaward than the original structure.

(d) Where possible, the replaced structure is moved landward of the setback line or if not possible, then as far landward as practicable, considering local zoning and parking regulations.

(e) The reconstruction is not seaward of the baseline unless permitted elsewhere in Section 48-39-250 through 48-39-360.

(f) Replacement of a habitable structure destroyed beyond repair due to man-made causes is allowed provided the rebuilt structure is no larger than the original structure it replaces and is constructed as far landward as possible, but the new structure must not be farther seaward than the original structure.

(2) A habitable structure up to five thousand square feet of heated space between the baseline and setback line which has been destroyed beyond repair by natural or man-made causes may be replaced or rebuilt provided the requirements of new habitable structures are met pursuant to R.30-13(B).

F. Landscaping, Earthmoving and Fill for Landscaping.

Within the beach/dune system, the installation of materials and associated amenities, moving of earth and placing of fill to accomplish these installations are allowed provided all of the following requirements are met:

(1) A comprehensive landscaping plan is submitted to and approved in writing by Coastal Council.

(2) The construction of a retaining wall which extends below existing grade will not be allowed;

(3) No sand from the beach shall be used as backfill;

(4) No native plant material growing on the frontal dunes may be disturbed unless it can be demonstrated that the condition of the dune will be improved;

(5) Only native salt tolerant plant species may be planted on dunes and shall be approved by Coastal Council staff;

(6) Adequate measures shall be taken to contain fill and irrigation runoff;

(7) No leveling of dunes is allowed;

(8) All work shall be in compliance with applicable local ordinances.

G. Fences, Lighting, Trash Receptacles, Sidewalks, and Signs.

Seaward of the setback line the placement, maintenance and repair, and replacement of fences, lighting, trash receptacles, sidewalks, and signs are allowed provided all of the following requirements are met:

(1) Construction shall not alter or impact existing sand dunes, dune vegetation, or the beach;

(2) Existing concrete sidewalks attendant to public streets may be replaced

within their original footprint;

(3) Trash receptacles (not dumpsters) may be attached to access ways or placed on the beach when the local government determines there is a need for such receptacles;

(4) Signs are limited to only those attached to attendant structures or mail receptacles or informational signs deemed necessary by federal, state, or local government for public health and safety. Advertisements are not allowed except on the walls or roofs of commercial structures;

(5) No fence may be used as a retaining wall;

(6) Any additional lighting seaward of the setback line shall be designed to shield the beach from illumination.

H. Emergency Vehicle Access Ways, Non-attached Decks, Gazebos and Other Structures Which Enhance Beach Access.

Seaward of the setback line the placement, maintenance and repair, and replacement of emergency vehicle access ways, decks, gazebos, and other structures which enhance beach access are allowed provided all of the following requirements are met:

(1) Emergency vehicle access ways shall:

(a) Be constructed at sites which preclude alteration of existing sand dunes and dune vegetation to the maximum extent practicable;

(b) Be constructed above the existing grade except for points of entry and exit;

(c) Be constructed of wood.

(d) Be located at least one-half mile from any other vehicle access to the beach unless, after review by Coastal Council, this provision is determined to be unreasonable due to site specific circumstances concerning health and safety needs;

(e) Be approved by the local government with jurisdiction;

(f) Provide for pedestrian access use.

(2) Non-attached decks, gazebos and other structures (other than walkways) which enhance beach access shall:

(a) Be constructed of wood.

(b) Not be constructed seaward of the no-construction zone;

(c) Not exceed one hundred forty-four square feet (this square footage is not included in the five thousand square-foot limitation on habitable structures);

(d) Be limited to no more than one of these structures per lot unless a limit of one would cause an unnecessary hardship as determined by the South Carolina Coastal Council;

(e) Not be put to a commercial use;

(f) Be in compliance with applicable local ordinances.

I. The Construction and/or Repair of Drives and Parking Lots.

Within the setback area, the construction and/or repair of drives and parking lots within the setback area is allowed provided all of the following requirements are met:

(1) On front row lots, new driveways and/or parking lots shall not extend seaward of habitable structures;

(2) Existing drives and/or parking lots shall not be expanded beyond their original size;

(3) No sand from the beach may be used during construction and/or repair;

(4) No alteration of the primary oceanfront sand dune or its dune vegetation is

allowed;

(5) At the Coastal Council's discretion, a Stormwater Management Plan may be required;

(6) The work shall comply with applicable local ordinances;

(7) Best Management Practices (BMP's) such as hay bales, silt fences, mulches, or other appropriate measures shall be used as necessary during the construction phase to prevent sedimentation reaching adjacent waters and wetlands. Upon project completion the disturbed areas shall be stabilized as soon as possible with grass or other appropriate vegetative cover;

(8) No new driveway or parking lot may be constructed seaward of the baseline unless a special permit as provided in Section 48-39-290(D) is obtained.

J. Installation or Repair of Underground and Overhead Water, Sewer, Gas, Electrical, Telephone Lines and Cable Service Lines.

Within the setback area the placement, maintenance, repair, and replacement of service lines are allowed provided the following requirements are met:

(1) All service lines shall be located as far landward as possible on each individual lot;

(2) Lines, junction boxes, poles, and accessory features will be relocated landward as far as possible in the event there is a need for replacement;

(3) Dunes allowed to be altered during construction shall be reconfigured and revegetated in accordance with Coastal Council guidelines;

(4) All work shall be in compliance with applicable local ordinances;

(5) A comprehensive plan for new or replacement utilities shall be approved in writing by the Council.

K. Drainage Structures.

Seaward of the setback line the placement, maintenance and repair, and replacement of drainage structures are allowed provided the following requirements are met:

(1) For new construction, the structures shall be part of a Coastal Council approved storm water management plan or drainage plan which must be submitted either prior to or at the time the permit application is submitted.

(2) The replacement of drainage structures shall not involve an increase in the size of the existing structures, unless this change is approved by the Coastal Council as a part of the Stormwater Management Plan or drainage plan.

(3) Any disturbance to the dunes and dune vegetation shall be restored to pre-project conditions as soon as possible, and the restoration shall be approved by the Coastal Council staff.

(4) The drainage structure shall comply with the local drainage plan for the area seaward of the setback line.

(5) New drainage structures may be placed on the beach only if:

(a) Existing structures are eliminated;

(b) No feasible alternative exists.

(6) All work shall be in compliance with applicable local ordinances.

(7) Areas disturbed during construction shall be revegetated to the Coastal Council's satisfaction.

L. Sand Fences, Minor Beach Renourishment, Dune Revegetation.

In an effort to provide beachfront property owners with passive, low-cost dune stabilization methods, the placement, maintenance and repair, and replacement of sand fencing,

dune revegetation, and minor renourishment may be allowed seaward of the setback line under the following conditions (Note: These steps may not be viewed as being undertaken for erosion control but rather as dune enhancement and stabilization measures. Since a broad beach and a healthy dune provide a storm buffer, these methods should aid the natural processes affecting the beach/dune system.):

(1) Sand fencing requirements:

(a) The fence material shall be degradable.

(b) The fences shall be installed according to guidelines established by Coastal Council staff.

(c) The fences shall be installed in a manner so as not to impede turtle nesting. The Coastal Council may require sand fences be moved or removed entirely if the fences are found to impact turtle nesting activities or, in the Coastal Council's opinion, have the potential to impact turtle nesting activitie

(d) The fence shall be placed above the highest up rush of the waves as determined by Coastal Council staff.

(e) The fencing shall not impede public access.

(f) The fence shall be installed with the understanding that this is a temporary measure.

(g) If fence material is damaged, debris shall be removed expeditiously from the beach area by the owner.

(h) If the Coastal Council determines that the fence has a detrimental impact to the beach/dune system, it shall be removed by the owner as directed by the Coastal Council.

(2) Revegetation requirements:

Property owners are encouraged to plant vegetation as a means of stabilizing oceanfront dunes. The roots of plant material tend to bind sand to dunes, while plant foliage serves to trap wind blown sand. Suggested plant varieties include, but are not limited to, American beach grass (Ammophila breviligulata), bitter panicum (Panicum amarum), and sea oats (Uniola paniculata).

(a) Vegetation shall be planted in early spring, before May 30 if possible, and shall be planted, irrigated and fertilized according to nursery instructions or Coastal Council's "How to Build a Dune" guidelines.

(b) Coastal Council staff shall inspect the site first and determine that there is a need for vegetative stabilization.

(3) Minor renourishment is allowed in an attempt to build and maintain healthy dunes. Minor renourishment requirements are:

(a) Sand shall be compatible in size and grain color, shall be from an upland source, and its use approved in writing by Coastal Council staff.

(b) Minor renourishment shall be performed between November 1 and March 1.

(c) Coastal Council staff shall inspect the site and establish that there is a need for the project.

(d) All projects shall be in compliance with applicable local ordinances.

M. Returning Sand to the Beach/Dune System.

Seaward of the setback line sand that has drifted out of this critical area may be returned to it if the following requirement is met:

(1) A description of the proposed work shall be submitted to and approved in writing by the Coastal Council prior to any initiation of work.

N. Erosion Control.

(1) Groins and Jetties:

Groins and jetties interfere with the natural transport of sediment and this is not always beneficial. Therefore, applications for these structures shall be carefully reviewed to determine their overall effect. The following standards shall apply:

(a) Groins shall be constructed so that they can be altered or removed if they cause undesirable effects;

(b) Where feasible, jetties shall be designed to provide public recreational fishing opportunities;

(c) Construction activities shall be scheduled so as not to interfere with nesting and brood-rearing activities of sea birds, sea turtles, or other wildlife species.

(2) Offshore Breakwaters:

Permits for offshore breakwaters may be issued only after careful review and in each case with the provision for removal of the structure to mitigate harmful effects which might be manifested after construction.

(3) Protection of Beaches and Artificial Beach Nourishment:

The following requirements apply to the Coastal Council's consideration of projects for the nourishment of beaches:

(a) Careful study shall be given to the type (grain size and quality) of material most suitable for nourishment of a particular beach area;

(b) Borrow areas and sand for artificial nourishment shall be carefully selected to minimize adverse effects. Where possible, artificial beach nourishment shall be performed in concert with inlet stabilization or navigation projects;

(c) Dredging in the borrow areas shall not be in conflict with spawning seasons or migratory movements of significant estuarine or marine species. Nourishment of beach areas shall be scheduled so as not to interfere with nesting and brood-rearing activities of sea birds, sea turtles, or other wildlife species;

(d) All policies concerning dredging and filling cited at R.30-12G shall be applied to beach nourishment proposals;

(e) Nourishment projects shall have a minimum projected life of ten years.

(4) Erosion Control Structures or Devices

(a) No new erosion control structures or devices are allowed seaward of the setback line except to protect a public highway which existed on June 25, 1990.

(b) No erosion control structures or devices may be incorporated as an integral part of a habitable structure.

(c) Erosion control structures or devices must not be enlarged, strengthened, or rebuilt but may be maintained in their present condition if not destroyed more than the percentage allowed in Section 48-39-290(B)(2)(b)(i), (ii) and (iii). Repairs must be made with materials similar to those of the structure or device being repaired.

(d) Erosion control structures or devices determined to be destroyed more than the percentage allowed in Section 48-39-290(B)(2)(b)(i), (ii) and (iii) must be removed at the owner's expense. Nothing in this section requires the removal of an erosion control structure or device which existed on July 1, 1988, that protected a public highway.

(e) Erosion control structures or devices which existed on June 25,1995;

1990, must not be repaired or replaced if destroyed:

(i) more than eighty percent above grade through June 30,

(ii) more than sixty-six and two-thirds percent above grade from July 1, 1995, through June 30, 2005.

(iii) more than fifty percent above grade after June 3, 2005. [See R.30-14(D)(3)(c) and (d) for damage assessment.]

O. Sand Dune Management.

(1) Walkways over dunes, as provided in §48-39-130(D), shall meet the following requirements:

(a) Be constructed of wood;

(b) Have a maximum width of six feet;

(c) Conform with the contour of the dunes;

(d) Displace no sand in a critical area;

(e) Be constructed with as little environmental damage as possible;

(f) Not be located within fifty feet of another walkway on the same parcel of property;

(g) Be limited to no more than one of these structures per lot unless a limit of one would cause an unnecessary hardship as determined by the Coastal Council.

(2) Projects to protect, restore, or build dunes shall conform to the following standards:

(a) Except for walkways over sand dunes, as provided in §48-39-130(D), no alteration of a sand dune in the beach/dune system shall be permitted unless it can be demonstrated that there shall be no permanent deleterious effects.

(b) The use of natural beach vegetation to trap wind blown sand is encouraged. Where pedestrian traffic has destroyed natural vegetation, the use of temporary sand fencing or its equivalent may be permitted.

(c) The construction of a dune by using beach sand and mechanical equipment shall be permitted only for restoration after unusual damage, such as that caused by a hurricane.

(d) Artificial dunes shall not be constructed seaward of the normal spring high-tide line.

(e) Any artificially constructed dunes shall be aligned to the greatest extent possible with existing dune ridges and shall be of the same general configuration as adjacent dunes.

P. Nonwater-dependent Structures.

Nonwater-dependent structures, including but not limited to residences, restaurants, motel/hotel facilities, other commercial activities, and parking facilities, have been constructed in the past within the beach/dune system. The siting of new nonwater-dependent structures seaward of the baseline is prohibited unless a special permit is obtained pursuant to Section 48-39-290(D) and R.30-15(F) herein.

Q. Golf Courses.

(1) Golf Courses are allowed seaward of the baseline because they can adjust to a changing shoreline more readily than other types of land uses. Sandscraping or sandbagging is not allowed as protection for golf courses.

(2) Specific standards which shall apply are as follows:

(a) Leveling or damaging of dunes or dune fields is prohibited.

(b) Golf courses should be located as far landward as practicable to

minimize encroachment into the setback area.

(c) Any lighting seaward of the setback line must be low intensity and adequately shielded to prevent impact on sea turtle nesting.

(d) Measures must be taken to protect the integrity of the primary oceanfront sand dune from foot traffic. These measures may include:

(i) courses designed in a manner that will minimize adverse effects on the sand dunes;

(ii) physical barriers such as sand fencing placed at the landward trough of the dune;

(iii) certain types of vegetation that would discourage pedestrian traffic, or;

(iv) any other measures Coastal Council may deem necessary.

R. New Fishing Piers:

(1) New fishing piers are allowed seaward of the baseline in order to provide public access to our coastal resources.

(2) Specific standards which shall apply are as follows:

(a) They must be dedicated to public use. A reasonable fee may be charged to the public but the general public may not be excluded from use.

(b) No restaurant, arcade or other nonwater-dependent structure shall be placed on the pier seaward of the baseline.

(c) The height of the pier stringers and spacing of the piles must be able to accommodate vehicular traffic associated with emergency operations and renourishment projects.

R. 30-14 ADMINISTRATIVE PROCEDURES.

A. Procedures for Local Beach Management Plan Approval and Amendments [§48-39-350(A)].

(1) South Carolina local governments with jurisdiction fronting the Atlantic Ocean shall submit to Coastal Council by no later than July 1, 1990, a local beach management plan after the local government has afforded the opportunity for adequate public review.

(2) Upon receipt of the local plan, the Coastal Council shall:

(a) Afford the public a thirty day comment period;

(b) Afford the opportunity for a public hearing on the local beachfront management plan;

(c) After considering all comments, approve, modify or remand the local beachfront management plan.

(3) The Coastal Council shall issue a public notice of the approval of any local beach management plan or amendment thereto. The implementation date of the local beach management plan or amendment thereto will be specified in such public notice.

B. Procedures for State Implementation of Local Responsibilities [§48-39-350(B)].

(1) If a local government fails to develop and implement a local beach management plan as required by §48-39-350, the Coastal Council shall implement the local government's responsibilities by:

(a) Issuing public notice that the Coastal Council has found that the local government has failed to develop and implement a local beach management plan as

required;

(b) Carrying out the tasks enumerated in §48-39-350(A)(1-10);

(c) Providing a thirty day public comment period for public review of Coastal Council's proposed local beach management plan;

(d) Affording the opportunity for a public hearing;

(e) After reviewing all public comments, modify and/or adopt and implement the local plan.

(2) The Coastal Council may delegate responsibility for the implementation of the Coastal Council sponsored and approved local beach management plan to the local government, but the Coastal Council shall have the right to assume responsibility for administering and enforcing the plan if the local government fails to do so.

C. Procedures for State/Local Coordination During and in Response to Emergency Situations (Sections 48-39-320 & 350).

The issuance of a Coastal Council emergency order automatically supersedes any local emergency order for the same emergency situation.

D. Procedures for Determining Destroyed Beyond Repair (Section 48-39-290(B)].

(1) The Coastal Council shall be required to make a determination as to whether or not a habitable structure is destroyed beyond repair under Section 48-39-290 in any of the following cases:

(a) Upon the written request of an owner of the habitable structure or local government official;

(b) Upon its own election;

(c) As part of a damage assessment effort conducted solely by the Coastal Council or in cooperation with a local government in response to an emergency situation.

(2) The Coastal Council shall provide a copy of its determination of whether a habitable structure is destroyed beyond repair to the property owner and the local government with jurisdiction over such habitable structure.

(3) The Coastal Council shall employ the following procedures in determining whether a structure is destroyed beyond repair:

(a) Habitable Structure:

(i) Following a natural disaster, Coastal Council shall coordinate a post-storm damage appraisal with the affected unit of local governments. The Coastal Council will develop guidelines pursuant to Section 48-39-270(11) for performing damage appraisals. The Coastal Council staff shall make the initial damage appraisal. When appropriate, the Coastal Council may use the property owner's insurance adjustor's figures to determine the damage.

(ii) If an owner disagrees with the appraisal of the Coastal Council, he may obtain a second appraisal to evaluate the damage to the building. An owner who disagrees with the appraisal of the Coastal Council must notify the Coastal Council in writing, within 90 days of receipt of the Coastal Council's determination that he intends to obtain an appraisal. If the two appraisals differ, then the two appraisers must select a third appraiser. If the two appraisers are unable to select a third appraiser, the Clerk of Court of the county in which the structure lies must make the selection. All third appraisers must be registered, professional engineers, registered architects or licensed adjustors. All third appraisers must not have been involved in either the insurance adjustment of the property or the first or second appraisal and the cost of the third appraisal will be divided equally between the

Coastal Council and the property owner. In no event may the property owner begin rebuilding or repairing (other than emergency repairs) a structure until the appraisal process described herein has been completed. Nothing in this section prevents a court of competent jurisdiction from reviewing, de novo, the appraisal upon the petition of the property owner.

(b) Pools:

(i) Following a natural disaster, Coastal Council shall coordinate a post-storm damage assessment with the affected unit of local government. The Council will develop guidelines pursuant to Section 48-39-270(11) for performing damage appraisals. The Coastal Council shall make the initial assessment.

(ii) If an owner disagrees with the appraisal of the Coastal Council, he may obtain an appraisal to evaluate the damage to the pool. An owner who disagrees with the appraisal of the Coastal Council must notify the Coastal Council in writing, within 90 days of receipt of the Coastal Council's determination, that the owner intends to obtain an appraisal. If the two appraisals differ, then the two appraisers must select a third appraiser. If the two appraisers are unable to select a third appraiser, the Clerk of Court of the county where the pool lies must make the selection. All third appraisers must be registered, professional engineers and the cost of the third appraisal will be equally divided between the Coastal Council and the property owner. In no event may the property owner begin rebuilding or repairing a pool (other than emergency repairs) until the appraisal process described herein has been completed. Nothing in this section prevents a court of competent jurisdiction from reviewing, de novo, the appraisal upon the petition of the property owner.

(c) Seawalls and Bulkheads: In determining whether a seawall or bulkhead as defined in Section 48-39-270(1)(a) and (b) is destroyed more than eighty percent above grade through June 30, 1995, more than sixty-six and two thirds percent above grade from July 1, 1995, through June 30, 2005, and more than fifty percent above grade after June 30, 2005, the damage assessment shall be accomplished as follows:

Damage to seawalls and bulkheads will be judged on the percent of the structure remaining intact at the time of damage assessment. The portion of the structure or device above grade parallel to the shoreline must be evaluated. The length of the structure or device parallel to the shoreline still intact must be compared to the length of the structure or device parallel to the shoreline which has been destroyed. The length of the structure or device parallel to the shoreline determined to be destroyed divided by the total length of the original structure or device parallel to the shoreline yields the percent destroyed. Those portions of the structure or device standing, cracked or broken piles, whalers, and panels must be assessed on an individual basis to ascertain if these components are repairable or if replacement is required.

If the property owner disagrees with the assessment of a registered professional engineer acting on behalf of the Coastal Council, he may obtain an assessment by a registered professional engineer to evaluate, in the same manner set forth herein, the damage to the structure or device. An owner who disagrees with the assessment of the Coastal Council must notify the Coastal Council in writing, within 90 days of receipt of the Coastal Council's determination, that he intends to obtain an independent assessment. If the two assessments differ, then the two engineers who performed the assessment must select a registered professional engineer to perform the third assessment. If the first two engineers are unable to select an engineer to perform the third assessment, the Clerk of Court of the county where the structure or device lies must make the selection of a registered professional engineer. The cost of the third engineer will be equally divided between the Coastal Council

and the property owner. The determination of the percentage of damage by the third engineer is conclusive. In no event may the property owner begin rebuilding or repairing a seawall or bulkhead until the appraisal process described herein has been completed. The determination of the degree of destruction must be made on a lot by lot basis by reference to county tax maps.

(d) Revetments: Revetments must be judged on the extent of displacement of the stone, the effort to return these stones to the pre-storm event configuration of the structure or device, and the ability of the revetment to retain backfill material at the time of the damage assessment. If the property owner disagrees with the assessment of a registered professional engineer acting on behalf of the Coastal Council, he may obtain an assessment by a different registered professional engineer to evaluate, as set forth in this item, the damage to the structure or device. An owner who disagrees with the appraisal of the Coastal Council must notify the Coastal Council in writing, within 90 days of receipt of the Coastal Council's determination, that the owner intends to obtain an appraisal. If the two assessments differ, then the two engineers who performed the assessment must select a registered professional engineer to perform the third assessment. If the first two engineers are unable to select an engineer to perform the third assessment, the Clerk of Court of the county where the structure or device lies must make the selection of a registered professional engineer. The cost of the third engineer will be equally divided between the Coastal Council and the property owner. The determination of the percentage of damage by the third engineer is conclusive. In no event may the property owner begin rebuilding or repairing a structure until the appraisal process described herein has been completed. The determination of the degree of destruction must be made on a lot by lot basis by reference to county tax maps.

E. Procedures for Adopting Baselines and Erosion Rates (Section 48-39-280).

(1) Following the establishment of the interim baselines, erosion rates, and setback lines pursuant to Section 48-39-280(C) and any amendments or revisions thereto, the Coastal Council will adopt final baselines, erosion rates, and setback lines as part of the state comprehensive beach management plan pursuant to Section 48-39-280. The following procedure will be used for the establishment of final baselines, erosion rates, and setback lines:

(a) The proposed baseline, erosion rate, and setback line for a region, island or part thereof, or other geographic area of South Carolina's ocean shoreline shall be made available to the public for inspection at each of the Coastal Council's offices;

(b) The Coastal Council shall afford the public a thirty-day comment period;

(c) The Coastal Council shall afford the opportunity for a public hearing.

(2) The Coastal Council shall, following the consideration of all public comments, adopt in final form the baselines, erosion rates, and setback lines and shall include such information in the state plan.

F. Procedures for Appealing Baselines and Erosion Rates [Section 48-39-280(E)].

(1) Any coastal riparian landowner adversely affected who feels that the setback line, baseline or erosion rate as adopted by the Coastal Council is in error, upon submittal of substantiating evidence, shall be granted a review of the setback line, baseline, erosion rate, or a review of all three. The Permitting Committee of the Coastal Council shall hear all such requests for review.

(2) The landowner may appeal the decision of the Permitting Committee according to the general provisions of R.30-6. However, no intervenors are allowed to join

the appeal and no public notice is required for appeals under this section.

G. Procedure for Movement of Baseline After Renourishment.

(1) Coastal Council must receive a petition from the local government; or the landowners with notice to the local government, before the baseline can be moved pursuant to Section 48-39-280(A)(4). The petition cannot be submitted until the permitted beach nourishment project, which must have a minimum five-year design life, has been completed. The local government must certify to the Coastal Council that the proposal to move the baseline is consistent with the objectives and policies of its local comprehensive beachfront management plan.

(2) Petitioner must demonstrate an ongoing commitment to fund a future renourishment project with the same or greater design life than the original project using an acceptable funding option.

(3) The Petitioner must prove that it possesses or has obtained all necessary legal authority to perform the nourishment project in the future, excluding environmental regulatory permits.

(4) Petitioner must submit survey data in the following format to demonstrate the beach has been stabilized by the nourishment project:

(a) A minimum of three sets of survey data from the stations (monuments) designated in the project permit must
be submitted. This will include all stations within the construction limits (maximum allowable profile spacing is 1,000 feet) and stations within 2,000 feet of each end of the project. These surveys will be taken at three month intervals, beginning at the time of project construction completion.

(b) Semi-annual surveys of the project beach during years two and three after project construction must be performed and submitted to Council to document beach stability.

(5) Coastal Council will evaluate the survey data to determine beach stability. Stability is defined in (10) below. If the beach has not stabilized in the first six months following construction, additional subsequent surveys will be evaluated to determine stability.

(6) The project must be constructed according to the permit design at an elevation which will maintain a dry sand beach. The maintenance of the dry sand beach will be evaluated in the same manner as stability, using the survey data.

(7) The Petitioner must show an ongoing financial commitment to renourishment which will stabilize and maintain the dry sand beach at all stages of the tide for the foreseeable future. The Council defines foreseeable future as at least ten years from the date the original project achieved stability.

(8) The Coastal Council will move the baseline when all of the above criteria have been met. The new baseline will be located on the landward edge of the existing erosion control device or at a position determined by Coastal Council using the method described in Section 48-39-280(A)(1).

(9) No new construction may occur in the area between the former baseline and the new baseline for three years after the initial beach nourishment project has been completed. The project is "completed" when it has stabilized in the manner described in (10) below. Reconstruction of habitable structures and pools is not considered new construction for purposes of this section. Additions are considered new construction.

(10) The following definition will be used by Coastal Council to define

"stability": A renourished beach is stabilized when field observations and quarterly surveys of the project beach, conducted for a minimum of six months following construction completion, demonstrate only normal long-term erosion patterns and losses are affecting the nourished beach. Council may consider any or all of the following in determining stability: profile characteristics and changes (volumetric and contour changes) and sediment analyses.

R.30-15. ACTIVITIES ALLOWED SEAWARD OF BASELINE.

A. Wooden Walkways:

Wooden walkways no larger in width than six feet are the only structures allowed seaward of the baseline that do not require a Coastal Council permit.

B. Small Wooden Decks:

Wooden decks seaward of the baseline require a Coastal Council permit. These decks should be no larger than one hundred and forty-four square feet.

C. Fishing Piers:

(1) New fishing piers require a Coastal Council permit and must be open to the public. See R.30-13(R).

(2) Those fishing piers with their associated structures including, but not limited to, bait shops, restrooms, restaurants, and arcades which existed September 21, 1989, may be rebuilt if they are constructed to the same dimensions and utilized for the same purposes and remain open to the public. In addition, those fishing piers with their associated structures which existed on September 21, 1989, that were privately owned, privately maintained, and not open to the public on this date may be rebuilt and used for the same purposes if they are constructed to the same dimensions. A Coastal Council permit is required.

D. Golf Courses:

Golf Courses require a Coastal Council permit pursuant to the criteria set forth in R.30-13(Q).

E. Normal Landscaping:

Normal landscaping requires a Coastal Council permit pursuant to the criteria set forth in R.30-13(F).

F. Special Permits:

The Coastal Council's Permitting Committee is the committee to consider applications for special permits.

Special permits are to be issued only in situations where without such a permit, the property owner would have no reasonable use of his property, or when an overriding public benefit can be demonstrated.

When issuing special permits, the Permitting Committee shall consider the legislative findings and policies as set forth in Sections 48-39-30, 48-39-250 and 48-39-260. Specifically, the following criteria shall serve as guidelines when issuing special permits:

(1) The property suffers a singular disadvantage through the operation of this Act, which disadvantage does not apply to neighboring properties, and because of this disadvantage, the property owner is unable to make any reasonable use of the affected property.

(2) A structure cannot be constructed or reconstructed on a primary oceanfront dune or on the active beach, and in the event that the beach erodes so that in the future the permitted habitable structure is located on the active beach, the property owner agrees to remove the structure at his own expense.

(3) The decision to grant a special permit shall not be based purely on economic considerations.

(4) There shall be no adverse impact on the stated policies of the Beachfront Management Act, including the policies protecting the sand dunes and preservation of the dry sand beach.

(5) The granting of a special permit shall not create a situation contrary to the public health, safety or welfare.

(6) In determining whether or not a permit is contrary to the public health, safety or welfare, the Permitting Committee shall consider a) the erosion rate at the site, b) how soon the structure will be located on the active beach, c) whether or not the proposed structure meets American National Standards Institute building standards, and/or d) the potential cumulative effect that similar structures will have upon the beach/dune system.

(7) Necessary components of habitable structures, such as sewer lines, septic tanks and utilities, do not require separate special permits. However, decking, patios, driveways, etc., are not considered as necessary components of habitable structures and therefore these items must be shown on the permit application.

G. Pools:

Pools may be reconstructed if they are landward of an existing functional erosion control structure or device provided a Coastal Council permit is obtained.

R.30-16. DOCUMENTATION REQUIREMENTS BEFORE COMMENCING ACTIVITIES BETWEEN SETBACK LINE AND BASELINE.

A. Notification Procedure:

(1) Activities requiring written notification to and written response from Coastal Council:

(a) Construction of new habitable structures at least partially seaward of the forty year setback line.

(b) Additions to habitable structures.

(c) Replacement of habitable structures.

(d) Construction of new pools between the baseline and the setback line and landward of an erosion control device which existed June 25, 1990.

(e) Replacement of pools.

(2) Information required:

(a) New habitable structures and additions to habitable structures:

(i) heated square footage of the proposed habitable structure or proposed addition.

(ii) plat showing footprint and cross section showing foundation of new structure as located on lot. Also, all property lines, setback lines and any parking requirements which may be in effect must be shown. The structure or addition must be located as far landward on the property as practicable as determined by Coastal Council.

(iii) for additions, the plat must clearly differentiate between the original structure and proposed additions.

(b) Replacement structures:

(i) heated square footage of original and proposed replacement structure.

(ii) linear footage along the coast of proposed replacement and original structure.

(iii) plat showing footprint and cross section showing foundation of proposed replacement structure.

(c) Replacement of destroyed pools will require a plat showing footprint and cross section of the original and replacement pool.

R.30-17. APPLICATION PROCEDURES FOR GENERAL PERMITS PURSUANT TO SECTION 48-39-290(B)(4).

A. General Guidelines:

Applicants for general permits shall be required to submit the following information:

(1) Completed Coastal Council application form.

(2) Proof that the adjacent property owners and the local governmental body having jurisdiction over the site have been notified of the proposed activity by certified mail through the use of the following notification:

(Applicant) has applied to the South Carolina Coastal Council for a General Permit to (description of activity) at (address or legal description of property) in (city and county). Comments on this application should be mailed to South Carolina Coastal Council at the following address: 4130 Faber Place, Suite 300, Charleston, South Carolina 29405, by (insert date, fifteen days after date of certified mailing).

The applicant must furnish the certified mail stubs to the South Carolina Coastal Council at the time of mailing. The General Permit cannot be issued until the fifteen day comment period has expired.

(3) Proof of publication that the above public notice was placed in a newspaper published in the county where the proposed activity is taking place must be forwarded to the Coastal Council office processing the application. General Permits cannot be issued until the fifteen day comment period as advertized in the newspaper has expired.

(4) A brief description of the proposed work, its purpose and intended use. A drawing or plat may be required as well as a description of the method of construction, and identification of materials and equipment to be used.

Information on activities eligible for General Permits may be obtained from Coastal Council.

R.30-20 BEACH RESTORATION FUND.

A. Funding for Projects: Beach restoration projects will follow a cyclical pattern that is conditioned by the availability of funds. The Council will make an initial announcement when applications are to be submitted. The announcement will specify the time of submission and the format to be used. There will be at least a 90 day period for receiving applications. Projects that are not funded during the initial cycle will be eligible for consideration at the next cycle which will start when additional funds become available. Communities will be given the opportunity to update their applications for subsequent cycles to show any changed conditions.

B. Application Process: Applications for beach nourishment must be submitted to the Coastal Council. The applications will be reviewed by the staff for completeness and eligibility requirements. The applications will then be considered by the Administration and Finance Committee of the Coastal Council, where input from the applicant and the public will be solicited and considered. In evaluating the project applications the Council will be guided by the legislated criteria and guidelines, and, the following consideration:

(1) Environmental impact of the project.

(2) Public recreational benefit.

(3) Expected useful life of project.
(4) Protection benefit of project.
(5) Extent of support for project.

C. Ranking of Projects: The Committee will rank the projects in priority sequence and will make a recommendation to the Council. Council approval of the Committee recommendation will establish project priorities and subsequent commitment of funds as funds become available.

D. Necessary Permit Application Information: Any eligible local government desiring to submit an application for Beach Restoration Funds should submit a completed permit application to the South Carolina Coastal Council. The following information should be submitted on or attached to the permit application form.

(1) The name, address, and telephone number of the local government making the application and the name and telephone number of the designated liaison agent.

(2) The name, address, and telephone number of the project consulting engineer or other agent.

(3) A resolution adopted by the applicant's governing body approving the submittal of an application for beach restoration funds, and committing to the local funding requirements necessary to complete the project.

(4) The Chief Executive Officer of the governing body should sign the application.

(5) A narrative description of the project to include:
(a) Project limits.
(b) Quantity of fill.
(c) Borrow sites.
(d) Expected design life of project.
(e) Project construction duration and time of year.
(f) Estimated first cost and annual maintenance costs.
(g) A statement as to the source and availability of all local, state, and federal funds for the project.
(h) Benefits to be realized by the project.
(i) Environmental impacts.
(j) Public access to renourished area.

(6) Map or maps showing:
(a) Project site plan and borrow area locations.
(b) Upland ownership of property, indicating federal, state, local, or private ownership.
(c) Public access points.
(d) Public parking areas.
(e) Private parking areas.
(f) Baseline and setback line(s).

(7) Any engineering studies that have been completed concerning the project, and plans for post-project monitoring.

(8) Approved beach restoration plan for the community which includes an analysis of beach erosion control alternatives.

E. Minimum Regulatory Requirements: All applications will be evaluated to determine if the project meets the minimum regulatory requirements and then ranked on a relative basis according to the five considerations listed in 20.F. The minimum regulatory re-

quirements are:

(1) Prior to July 1, 1991:

(a) A state-approved shorefront management plan or a state-approved local nourishment plan, and

(b) A state and locally approved beach access plan with an implementation schedule. The plan must include an inventory of current access and parking, an analysis of current and future demand, and a strategy for enhancing public access and parking, and

(c) A complete application.

(2) After July 1, 1991:

(a) A state approved beach management plan developed in accordance with Section 48-39-350 of the South Carolina Coastal Zone Management Act, as amended, and

(b) A complete application.

F. Project Evaluation Considerations: If the project meets the minimum regulation requirements, the project is then evaluated and ranked using the following considerations:

(1) Environmental impact of project.
(2) Public recreational benefit.
(3) Expected useful life of project.
(4) Protection benefit of project.
(5) Extent of support for project.

G. Administration of the Project: The execution and administration of the project will be coordinated by the Coastal Council according to regulations of the State Budget and Control Board regarding procurement of architectural/engineering services and for construction of permanent improvements projects.

APPENDIX E

SCCC Guidelines for Sand Scraping and Sand Bagging

SOUTH CAROLINA COASTAL COUNCIL

Guidelines for Emergency Sand Scraping

Scraping of beach sand shall be discouraged. This practice has been shown to be of little practical value and in many cases produces an overall adverse effect on the beach system. However, in view of no feasible alternative, a public official may issue an emergency order and allow sand scraping for a building which is in imminent danger as a result of storm related erosion. Sand scraping must be minimized to only that necessary to prevent further damage to buildings from storm related erosion. The Coastal Council reserves the right to evaluate the need for the declared emergency and the appropriateness of scraping sand.

1. Emergency sand scraping may only be ordered and performed seaward of existing buildings. It may not be allowed in front of erosion control devices.

2. Sand may be scraped only from the intertidal beach and only between extended property lines of the affected property.

3. The depth of scraping may not exceed one foot.

4. Sand may be placed against an erosional escarpment or to replace an eroded dune. This dune shall not exceed 6 feet above grade or 20 feet in width. Sand may be used to shore up a habitable structure in imminent danger of collapse. (see number 5).

5. No sand may be placed behind an erosion control device.

6. The sand scraping may be performed one time only under one emergency order.

7. The applicant shall provide before and after photographs to assist in the determination of an emergency and compliance with these guidelines. Photos shall be site specific, labeled, and dated.

8. A copy of these guidelines signed by the property owner or his agent shall be forwarded to the nearest Coastal Council office when the order is issued.

9. A copy of these signed guidelines shall be in the possession of anyone performing beach scraping.

10. All work performed pursuant to this emergency order must be in compliance with all local ordinances governing such work.

SOUTH CAROLINA COASTAL COUNCIL

Guidelines for Emergency Use of Sandbags

Sandbags may be used to construct temporary protection for coastal structures, in emergency situations. A public official may declare an emergency if he determines that a structure is in imminent danger as a result of extreme erosion or damage to an erosion control structure. The Coastal Council reserves the right to evaluate the need for the declared emergency and the appropriate use of sand bags.

1. The bags should be commercially manufactured for the purpose of holding sand or made of burlap.

2. The bags shall be of a maximum size of 5 gallons. (0.66 Cu. ft.)

3. The bags shall be filled and installed by hand.

4. The bags may be placed no farther seaward than is necessary to protect a habitable structure or to allow repair to an erosion control structure. In no case may sandbags protect a dune or be used to retard normal shoreline movement.

5. The bags shall be stacked at an angle not steeper than 45 degrees and may not exceed 10 feet from the base of the structure.

6. Only clean sand may be placed in these bags.

7. Beach sand may be used to fill these bags but must be returned to the beach when the bags are removed.

8. The bags must be removed within 3 months of installation unless they are completely buried by a dune.

9. The property owner is responsible for day-to-day maintenance of the sandbags to insure that they remain in place and in good repair.

10. The property owner is responsible for complete removal of the bags if they remain uncovered or become uncovered at some future time, and restoration of the area to a natural or pre-emergency condition as determined by the Coastal Council.

APPENDIX F

Planting Guidelines for Dune Vegetation

Uniola paniculata L. - Sea-Oats

PLANT CHARACTERISTICS

Ecological Function/User Applications - sand stabilization; food source and cover for birds and small mammals; aesthetics.

Natural Geographic Distribution/Cold Hardiness - coastal dunes; Virginia to Florida and Gulf states.

Optimum Soil Type - well-drained, sandy or calcareous soils.

Resistance to Erosion - good, once established; withstands wind erosion well, but waves wash away soil and plants.

Potential Growth Rate - highly dependant on environmental conditions and maintenance; plants can grow laterally up to four feet per year after establishment; dense cover possible in three growing seasons; flowers in second or third year.

PLANT AVAILABILITY

Nursery Sources - liners, two- and four-inch pots, one- and three-gallon pots.

Natural Sources - generally not available in large quantities. Available as seeds or transplants on private property behind the 40-year setback line.

PLANTING GUIDELINES

Elevation - above limit of wave uprush.

Ground Slope - up to 30^0 (1 to 2).

Depth - top of root-ball four inches below sand surface (many planting failures have been attributed to not planting deeply enough).

Planting Window - Nursery stock: April through October; Field stock: November through March.

Density - one- and two-inch pots one and one-half feet O.C., increased spacing to three feet O.C. for large plants (three-gallon).

MAINTENANCE GUIDELINES

Watering - when planted, and weekly for first few months depending on rainfall.

Fertilization - one teaspoon per plant of a balanced, time-released fertilizer (14-4-14) incorporated when planted.

Weeding - remove and control exotics.

Pruning - after establishment may respond to careful clipping by producing more tillers; this activity may be prohibited - check with local/state authorities.

Source: Applied Technology and Management, Inc., 1991

Panicum amarum - Bitter Panicum; Beach Panicgrass

PLANT CHARACTERISTICS

Ecological Function/User Applications - sand trapping and stabilization; food source and cover for birds and small mammals.

Natural Geographic Distribution/Cold Hardiness - coastal dunes; Connecticut to Florida and Gulf states.

Optimum Soil Type - well-drained, sandy soils.

Resistance to Erosion - good, once established; withstands wind erosion well, but waves wash away soil and plants.

Potential Growth Rate - rapid (dense coverage in two to three growing seasons).

PLANT AVAILABILITY

Nursery Sources - liners, two- and four-inch pots; advance notice of plant quantities and/or a growing contract may be necessary for large quantities.

Natural Sources - cuttings or seeds from private property behind the 40-year setback line or from out-of-state sources.

PLANTING GUIDELINES

Elevation - above limit of wave uprush and highest spring tides.

Ground Slope - up to 30^0 (1 to 2).

Depth - top of root-ball four inches below sand surface.

Planting Window - Nursery stock: April through October; Field stock: November through March.

Density - small plants one and one-half feet O.C., large plants three feet O.C.

MAINTENANCE GUIDELINES

Watering - when planted, and during the first month unless heavy rainfall occurs.

Fertilization - incorporate one teaspoon per plant of a balanced, time-released fertilizer (14-4-14) when planted.

Weeding - remove and control exotics.

Pruning - lateral spread improved by clipping. This activity may be prohibited - check with local/state authorities.

Source: Applied Technology and Management, Inc., 1991

APPENDIX G

Draft SCCC Beach/Dune Restoration Project Evaluation Guidelines

DRAFT WORKSHEET

BEACH RESTORATION EVALUATION SYSTEM

The purpose of this system is to provide the Coastal Council with an objective method of comparing and ranking beach restoration projects.

Project ranking criteria are:

		Points Available
(1)	Public Recreation Benefit of Project	25
(2)	Expected Useful Life of Project	25
(3)	Environmental Impact of Project	20
(4)	Protection Benefit of Project	15
(5)	Extent of Support for Project	15
	TOTAL POINTS	100

PUBLIC RECREATION BENEFIT

A total of 25 points are available for this criterion.

Factors

1. Surplus Parking Capacity. This factor is determined by the ratio of available parking to the increased beach capacity as a result of the nourishment project. A ratio of 1.0 or greater would indicate that there is sufficient parking for the project. A point score will be assigned by multiplying this ratio times 5. A maximum of five points is available for this factor.

2. Private Beach Use Parking Spaces. This factor is determined by the number of privately owned spaces that are available for beach use such as hotel-motel parking spaces. The score will be determined by the average number of spaces per mile within the project area. This number will be multiplied by a factor of 0.005 to determine the score. A maximum of five points is available for this factor.

3. Public Beach Use Parking Spaces. This factor is determined in the same way, however the multiplying factor will be 0.01. A maximum of 5 points is available for this factor.

4. Length of Publicly Owned Property. This factor is determined by the percentage of publicly owned beach frontage within the project area. A score will be assigned by multiplying the percentage of publicly owned property by 0.1. A maximum of five points is available for this factor.

5. Demand/Supply Ratio for Beach. This factor will be determined by comparing the projected resident and tourist demand for beach activities with the existing supply. The method for determining a number will have to be worked out and approved. A maximum of five points is available for this factor.

MAXIMUM TOTAL POINTS 25

EXPECTED USEFUL LIFE OF PROJECT

Factor. The expected useful life of the project will be based on the best available engineering report and will be determined by the ratio of the project volume divided by the annual volume loss.

Project Volume (Yds^3) divided by Annual Loss (Yds^3 per year) = _____ years.

A score will be assigned by multiplying the ratio by a factor of 0.625.

A maximum score of twenty five points is available. This would be attained if the project life was forty years.

ENVIRONMENTAL IMPACT OF PROJECT

Factors

1)	Local critical habitat protection program (Y/N)	7/0
2)	Beach nourishment plan is sensitive to areas of critical habitat (Y/N)	5/0
3)	Will mining of sand sources disturb vegetated wetlands or critical habitat? (Y/N)	5/0
4)	Active beach litter control program (Y/N)	3/0
	MAXIMUM TOTAL POINTS	20

PROTECTION BENEFIT OF PROJECT

Factors

Considering Dollar Value of Property Protected

1) Property value within project ($_____) Millions

(assessed value of property in 40 year setback zone)

2) Length of project (_____ miles)

3) Setback distance (average) (_____ feet)

(average setback from vegetation line or seawall to main portion of structure)

$$\frac{\text{Average Value/Mile}}{\text{Average Setback Distance}} \times \_\_\_\_ = \_\_\_\_\_ \text{ Points (Maximum of 7.5)}$$

Considering Number of Habitable Structures Protected

1) Number of structures within project (_____)

(habitable structures affected by 40 year setback zone)

2) Length of project (_____ miles)

3) Setback distance (average) (_____ feet)

$$\frac{\text{Number of Average Structures/Mile}}{\text{Average Setback Distance}} \times \_\_\_\_ = \_\_\_\_\_ \text{ Points (Maximum of 7.5)}$$

A MAXIMUM SCORE OF 15 POINTS IS AVAILABLE

EXTENT OF SUPPORT FOR PROJECT

Factors. Specific steps and commitments made by federal, state, and local governments to facilitate the project.

Factors (yes or no)

1) Special local funding established (4) ____

2) Intergovernmental cooperation (joint local sponsorship) (4) ____

3) Prospects of Federal Support (3) ____

   Preliminary studies (1)

   Authorized project (2)

   Funds available (3)

4) Engineering studies (Local) (2) ____

   Study funded (1)

   Study completed (2)

5) Public beach management (2) ____

   Public restrooms (1)

   Lifeguard/Beach patrol (1)

____

TOTAL POINTS ____

A MAXIMUM OF 15 POINTS IS AVAILABLE

APPENDIX H

Town of Surfside Beach
Flood Damage Prevention Regulations

Chapter 14

FLOOD DAMAGE PREVENTION*

ARTICLE I. IN GENERAL

Secs. 14-1—14-15. Reserved.

ARTICLE II. FLOODPLAIN MANAGEMENT†

Sec. 14-16. Intent.

The intent of this article is to provide for adequate, minimum standards and procedures for the construction of new residential and nonresidential structures, including prefabricated and manufactured homes, and for such structures that are substantially improved, so that such structures can be eligible for insurance under the Federal Flood Insurance Program and so that the construction of such structures will be in conformity with recognized construction techniques designed to offer flood protection.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-17. Definitions.

The following definitions shall apply in the interpretation, enforcement and intent of this article. When not inconsistent with the context, words used in the present tense include the future, words in the plural number include the singular, and words in the singular number include the plural. The word "shall" is always mandatory and not merely directory.

Building permit means the permit as required by Chapter 17, Zoning.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials.

*Cross references—Planning and zoning commission, § 2-76 et seq.; buildings and building regulations, Ch. 13; subdivisions, Ch. 15; zoning, Ch. 17.

†Editor's note—Former Art. II of Ch. 14 pertained to similar subject matter, consisted of §§ 14-16—14-27, and derived from an ordinance adopted Feb. 5, 1980, §§ 1702—1714, as amended by Ord. No. 88-0252, §§ 1701—1716, adopted Mar. 1, 1988; these former provisions were repealed by Ord. No. 88-0260, adopted June 21, 1988, which ordinances further enacted new §§ 14-16—14-30 to read as herein set out.

Flood or *flooding* means a general and temporary condition of partial or complete inundation of normally dry land area from abnormally high tidal water or rising coastal waters resulting from severe storms, hurricanes, or tidal waves.

Flood insurance zones. The incorporated area of the town is divided into zones, each having a specific flood potential or hazard. Each zone is assigned one of the following flood insurance zone designations:

(1) *Zone VE:* Coastal high hazard areas inundated by the 100-year flood, that have additional hazards due to velocity (wave action), base flood elevations shown, and zones subdivided according to flood hazard factors.

(2) *Zone AE:* Special flood hazard areas inundated by the 100-year flood, with base flood elevations determined and zone designations assigned.

(3) *Zone X:* Aras of the 500-year flood; areas of the 100-year flood with average depths of less the one (1) foot.

Flood map or *flood insurance rate map* means the map and any revision thereto of various areas of the town, which was prepared by the Federal Emergency Management Agency. The map depicts the base flood elevation for each special flood hazard zone designation and an explanation of each zone designation.

Level of 100-year flood means the highest level of flooding that, on the average, is likely to occur once every one hundred (100) years (or has a one (1) percent chance of occurring each year).

Lowest floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood-resistant enclosure, usable solely for parking of vehicles, building access or storage, in an area other than a basement area, is not considered a building's lowest floor, provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of this article.

Manufactured home (mobile home) means a structure transportable in one (1) or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for one hundred eighty (180) consecutive days or longer and intended to be improved properly [property].

New construction means buildings for which the start of construction commenced on or after the effective date of this article.

Start of construction includes substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within one hundred eighty (180) days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slab or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation; such as

clearing and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure.

Substantial improvement means any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the actual cash value of the structure, either before the improvement is started, or, if the structure has been damaged and is being restored, before the damage occurred. Substantial improvement is commenced when the first alteration of any structural part of the building is begun.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-18. Adoption of flood hazard boundary maps.

The flood hazard boundary map and any revision thereto, including the zone designations on said map and all explanatory material noted thereon, are hereby incorporated by reference into this article. These maps shall be kept in custody of that individual to whom the mayor and town council have delegated the administrative responsibility for the approval and issuance of building permits. These maps shall be used to determine those areas that contain flood hazards and those areas that require construction of buildings to meet certain minimum elevations.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-19. Residential construction.

Within those areas of the municipality designated as areas of special flood hazards on the flood map (VE and AE areas), all new construction or substantial improvements of existing residential structures, including prefabricated and manufactured homes, shall have the lowest floor of such structure, including basements, elevated to or above the applicable level of the 100-year flood.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-20. Nonresidential construction.

Within those areas of the municipality designated as special flood hazard areas by the flood map (AE areas), all new construction of nonresidential structures shall have the lowest floor, including basement, elevated on or above the applicable level of the 100-year flood, or, together with attendant utility and sanitary facilities, such nonresidential structures shall be flood-proofed up to the applicable level of the 100-year flood. Flood-proofing in lieu of elevation will be accomplished in strict conformance with the provisions outlined in the Federal Emergency Management Agency's Publication Number 102, entitled *Flood-proofing, Non-Residential Structures*, and dated May, 1986. When flood-proofing is utilized for a particular structure, a registered professional engineer or architect shall certify that the standards of the above-named publication have been satisfied. These regulations are available for review within the office of the building inspector.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-21. Manufactured homes.

Within those areas of the town designated as special flood hazard areas by the flood map (AE areas), new placement of manufactured homes, and manufactured home parks or subdivisions, will be placed such that:

(1) Stands or lots are elevated on compact fill or on pilings so that the lowest floor of the manufactured homes will be at or above the 100-year flood level, and be securely anchored to an adequately anchored foundation system; and

(2) Adequate surface drainage and access for a hauler are provided; and

(3) In the instance of elevation on pilings, lots are large enough to permit steps, foundations are placed in stable soil no more than ten (10) feet apart, and reinforcements are provided for pilings more than six (6) feet above the ground level.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-22. Marinas, boat docks, etc.

Construction of the following nonresidential structures is not subject to the prohibitions of section 14-20, even so located within flood danger areas and below flood levels; marinas, boat docks, launching ramps, marine terminals and bulk-heads, exclusive of any buildings connected with any of the previously mentioned.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-23. Nonconforming land uses.

Nonconforming land uses will be in accordance with Chapter 17, Article V. Within those areas designated as coastal high hazard areas by the flood map (VE areas), all nonconforming uses on land below the 100-year flood level shall not be expanded.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-24. Development of coastal high hazard areas.

Within those areas designated as coastal high hazard areas by the flood map (VE areas), no land below the level of the 100-year flood shall be developed unless the new construction or substantial improvement shall:

(1) Be located landward of the reach of the mean high tide; and

(2) Be elevated and secured to adequately anchored pilings and columns so that the lowest portion of the structural members of the lowest floor (excluding pilings and columns) is elevated to or above the applicable 100-year flood level; and it shall be certified by a registered professional engineer or architect that the structure is secured or adequately anchored to pilings or columns in order to resist flotation, collapse and lateral movement due to the effects of wind and water loads.

(3) Have no basement and have the space below the lowest floor free of obstructions or constructed with nonsupporting breakaway walls, open wood lattice work, or insect

screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purpose of this section, a breakaway wall shall have a design-safe loading resistance of not less than ten (10) and no more than twenty (20) pounds per square foot. Such enclosed space may be used solely for parking of vehicles, building access or storage.

(4) Prohibit the placement of manufactured homes.

(5) Not use fill as structural support. Non-compacted fill may be used around the perimeter of a building for landscaping/aesthetic purposes, provided the fill will wash out from storm surge prior to generating excessive loading forces, ramping effects or wave deflection, and proper documentation is submitted.

(6) There shall be no alteration of sand dunes or dune vegetation which would increase potential flood damage.

(Ord. No. 88-0260, 6-21-88)

Cross reference—Beaches, § 12-61 et seq.

Sec. 14-25. Review of building permits, development applications.

Within those areas of the town designated as special flood hazard areas by the flood map (VE and AE areas), all building permits or development applications for new construction or substantial improvement of residential and nonresidential structures, including prefabricated and manufactured homes, shall be reviewed to assure that the proposed construction shall:

(1) Be protected against flood damage; and

(2) Be designed or modified and anchored to prevent flotation, collapse or lateral movement of the structures; and

(3) Use construction materials and utility equipment that are resistant to flood damage; and

(4) Use construction methods and practices that will minimize flood damage; and

(5) Have electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding; and

(6) Have new and replacement water supply systems designed to minimize or eliminate infiltration of floodwaters into the system; and

(7) Have new and replacement sanitary sewerage systems designed to minimize or eliminate infiltration of floodwaters into the system and discharges from the system into floodwaters; and

(8) Have on-site waste disposal systems located and constructed to avoid impairment to them or contamination from them during flooding; and

(9) Have any alteration, repair, reconstruction or improvements to a structure which is in compliance with the provisions of this article meet the requirements of new construction as contained in this article; and

(10) Be in compliance with other federal and state requirements; copies of any required federal and state permits shall be maintained on file with the building permit.

The building official shall obtain, review and reasonably utilize any base flood elevations and floodway data available from a federal, state, or other source as criteria for requiring that new construction, substantial improvement or other development complies with this article.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-26. First floor elevation.

Within those areas designated as special flood hazard areas by the flood map (VE and AE areas), all building permit applications for the construction or substantial improvement of residential and nonresidential structures, including prefabricated and manufactured homes, shall have indicated thereon the first floor elevations from mean sea level. Such elevations shall be shown also on the building permit and they must be approved as meeting the requirements of this article by the zoning official. Upon placement of the lowest floor (in AE areas), or placement of the horizontal structural members of the lowest floor (VE areas), a certificate of the elevation of the lowest floor or the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level, shall be submitted to the building official.
(Ord. No. 88-0260, 6-21-88)

Sec. 14-27. Elevated buildings.

New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevations shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls, as follows:

(1) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:

a. Provide a minimum of two (2) openings having a total net area of not less than one (1) square inch for every square foot of enclosed area subject to flooding;
b. The bottom of such openings shall be no higher than one (1) foot above grade; and
c. Openings may be equipped with screens, louvers, valves or other coverings or devices provided they permit the automatic flow of floodwaters in both directions;

(2) Electrical, plumbing, and other utility connections are prohibited below the base flood elevations;

(3) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connec-

tion with the premises (standard exterior door) or entry to the living area (stairway or elevator); and

(4) The interior portion of such enclosed area shall not be permitted [partitioned] or finished into separate rooms.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-28. Administration; enforcement; appeal.

Procedures for the administration, enforcement and appeal of the provisions of this article will be in accordance with Chapter 17, Article II.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-29. Conflicting laws.

The provisions and requirements of this article shall take precedence over any conflicting laws, ordinances, regulations or codes or parts thereof as they apply within the corporate limits of the town.

(Ord. No. 88-0260, 6-21-88)

Sec. 14-30. Severability.

In the event any section, subsection, sentence, clause or phrase contained in this article shall be declared or adjudicated to be invalid or unconstitutional by a court of competent jurisdiction, all the remaining provisions of this article shall be and remain in full force and effect.

(Ord. No. 88-0260, 6-21-88)

Secs. 14-31—14-45. Reserved.

ARTICLE III. STORMWATER MANAGEMENT*

DIVISION 1. GENERALLY

Sec. 14-46. Short title.

This article shall be known and cited as "The Stormwater Management Ordinance" of the town.

(Ord. No. 85-0222, § 1, 10-1-85)

Sec. 14-47. Findings of fact.

The town finds that inadequately or improperly designed, constructed or maintained drainage facilities and the development of land without due consideration of potential problems associated with stormwater runoff may have significant adverse impact upon the quality

*Cross references—Required drainage improvements in subdivisions, § 15-112(5); wastewater system, § 16-16 et seq.

of the waters of the community and that in the absence of adequately and properly designed, constructed, and maintained facilities, the following situations have occurred and may occur again which have potential adverse impact on the public's health, safety and welfare:

(1) Unregulated land use changes may result in increased rates and volumes of stormwater runoff, contributing to local and area flooding, which is potentially harmful to human health, welfare, and safety, and creates a risk of harm to property, and unreasonable interference with the enjoyment of life or property.

(2) Development requiring the alteration of natural topography or removal of vegetation may increase the rate and volume of stormwater runoff, thereby increasing soil erosion and sedimentation and degrading water quality.

(3) The siltation of a drainage facility resulting from increased erosion may significantly decrease the drainage facility's capacity to transport stormwater, thereby increasing the potential for more frequent and aggravated flooding.

(4) The piecemeal strategies practiced in the absence of stormwater management techniques most often result in increased off-site flooding, erosion, and property damage.

(5) Uncontrolled surface water runoff carries pollutants, including nutrients, heavy metals, debris, oils and greases, into receiving bodies thereby degrading their water quality.

(6) Increased rates and volumes of stormwater discharged onto the beach may further increase beach erosion, reducing the aesthetic value of the beach and increasing the potential for property damage to oceanfront structures.

(Ord. No. 85-0222, § 2, 10-1-85)

Sec. 14-48. Jurisdiction.

This article shall apply to the development or redevelopment of any land in the incorporated areas of the town and any land development outside the corporate limits for which a request for annexation has been submitted.

(Ord. No. 85-0222, § 3, 10-1-85)

Cross references—Subdivisions, Ch. 15; zoning, Ch. 17.

Sec. 14-49. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Adverse impact shall mean any modifications, alterations, or effects on a feature or characteristic of community water or wetlands, including their quality, quantity, hydrodynamics, surface area, living resources, aesthetics or usefulness for human or natural uses which are or may potentially be harmful or injurious to human health, welfare, safety or property, or biological productivity, diversity, or stability or which unreasonably interfere

with the enjoyment of life or property, including outdoor recreation. The term includes secondary and cumulative as well as direct impact.

Applicant shall mean the owner or his authorized representative of a lot or tract of land that is the site of development or proposed development activity within the scope of this article.

Clearing shall mean the removal of trees and brush from the land, but shall not include the ordinary mowing of grass or gardening.

Culvert shall mean an enclosed symmetrical channel of comparatively short length installed to convey water from one side of an embankment to the other.

Detention shall mean the collection and storage of stormwater runoff in a surface or subsurface facility for subsequent controlled discharge to a watercourse or waterbody.

Detention/retention basin shall mean a sotrmwater management facility for impoundment of runoff in surface storage systems, *i.e.*, regulated systems including excavated depressions, lakes and ponds.

Developer shall mean any person who engages in development either as the owner or as the agent of an owner of property.

Development or *development activity* shall mean:

(1) The construction, installation, alteration, demolition, or removal of a structure, impervious surface, or drainage facility;

(2) Clearing, scraping, grubbing, or otherwise removing or killing the vegetation of a site; or

(3) Adding, removing, exposing, excavating, leveling, grading, digging, burrowing, dumping, piling, dredging or otherwise significantly disturbing the soil, mud, sand or rock of a site, but shall not include ordinary gardening.

Ditch shall mean a drainage channel in earth created by natural or artificial means to convey surface and subsurface water, flowing continuously or intermittently.

Drainage facility shall mean any component of the drainage system.

Drainage system shall mean the surface and/or subsurface system which collects and conveys stormwater and surface water, and includes all watercourses, water bodies, and wetlands.

Elevation shall mean height in feet above a given known datum, such as mean sea level.

Erosion shall mean the wearing or washing away of soil by the action of water or wind.

Flood shall mean a temporary rise in the level of any water body, watercourse or wetland which results in the inundation of areas not ordinarily covered by water.

Grading shall mean any displacement of soil by stripping, excavating, stockpiling, or any combination thereof, but does not include ordinary gardening.

Impervious surface shall mean a surface which has been compacted or covered with a layer of material so that it is highly resistant to infiltration by water. This term includes, but is not limited to, most conventionally surfaced streets, roofs, sidewalks, driveways, and parking lots.

Outlet facility shall mean a stormwater management facility designed to regulate the elevation, rate, and volume of stormwater discharge from detention/retention facilities.

Owner shall mean the person in whom the fee ownership, dominion, or title of real property is vested. This term may also include a tenant, if such tenant is chargeable under his lease for the maintenance of the real property, and any agent of the owner or tenant including a developer.

Person shall mean any and all persons, whether natural or artificial, and including any individual, firm, corporation, government agency, business trust, estate, trust, partnership, association, two (2) or more persons having a joint or common interest, or any other legal entity.

Postdevelopment conditions shall mean those conditions which are expected to exist or do exist after alteration of the natural topography, vegetation, and rate, volume or direction of stormwater runoff, resulting from development activity.

Predevelopment conditions shall mean those conditions, in terms of the existing topography, vegetation and rate, volume or direction of stormwater runoff, which exist at the time the applicant submits an application form for a stormwater management plan permit or a stormwater management plan permit waiver.

Primary drainage system shall mean a system that includes major drainage facilities and appurtenances for conveying stormwater and surface water from watershed areas which equal or exceed forty (40) acres in upstream tributary area.

Project shall mean improvements and structures proposed by the applicant to be constructed on a defined site as part of a common plan of development.

Rate shall mean a volume of water passing a point per unit of time, generally expressed in cubic feet per second (cfs).

Receiving bodies of water shall mean any water bodies, watercourses, or wetlands into which surface waters flow either naturally or in manmade ditches or in a closed conduit system.

Receiving water stage shall mean the elevation at which stormwater is discharged from a receiving water body, either through regulated facilities or nonregulated facilities.

Retention shall mean the collection and storage of stormwater runoff without subsequent discharge to surface waters.

Return period shall mean the average length of time between rainfall events having the same amount of precipitation and length of time over which the precipitation occurs.

Runoff shall mean that part of rainfall that is not absorbed into the site, but, as surface water, flows from or over the site.

Secondary drainage system shall mean a system that includes minor storm sewer systems, ditches, swales, and appurtenant structures and systems for conveying stormwater and surface water from watershed areas which are less than forty (40) acres in upstream tributary area.

Sediment shall mean fine, particulate material, whether mineral or organic, that is in suspension and is being transported or has been transported from its site of origin by water or air.

Sedimentation facility shall mean any structure or area which is designed to retain suspended sediments from collected stormwater runoff, to include sediment basins.

Site shall mean any tract, lot or parcel of land or combination of tracts, lots or parcels of land which are in common ownership, or are contiguous and in diverse ownership where development is to be performed as part of a unit, subdivision, or project.

Storm sewer shall mean an artificial drainage facility or system designed to collect and transport stormwater runoff from storms of frequent occurrence, such as 2-, 5-, or 10-year events.

Stormwater management facility shall mean a drainage facility which is designed, constructed and maintained to mitigate the detrimental effects of stormwater runoff generated by development activity by encouraging infiltration and percolation, attenuating peak discharge rates and volumes, reducing and controlling erosion and sediment transport, or otherwise approximating the predevelopment hydrologic conditions of a site.

Stormwater management plan shall mean drawings, maps, calculations, and legal documents prepared in accordance with the provisions of this article with the purpose of mitigating detrimental effects of stormwater runoff generated by development activities.

Tail water shall mean the depth of ponding of water at the outlet of a culvert as measured from the culvert invert to the water surface in the outlet channel.

Vegetation shall mean all plant growth, including, but not limited to trees, shrubs, vines, ferns, mosses and grasses.

Volume of rainfall shall mean the amount of precipitation occurring over the duration of a storm event, generally expressed in inches.

Volume of runoff shall mean the quantity of stormwater runoff generated upstream of a particular point or stored in a stormwater management facility, generally expressed in cubic feet (cf) or acre-feet (acre-ft.).

Water body shall mean any natural or artificial pond, lake, reservoir or other area which ordinarily or intermittently contains water and which has a discernible shoreline.

Watercourse shall mean any natural or artificial stream, river, creek, channel, ditch, canal, conduit, culvert, drain, waterway, street, roadway, swale or wash in which water flows in a definite direction, either continuously or intermittently and which has a definite channel, bed, or banks.

Watershed shall mean a drainage area or drainage basin contributing to the flow of stormwater into a receiving watercourse or water body.

Wetlands shall mean those areas where:

(1) The soil is ordinarily saturated with water; or

(2) The dominant plant community is one (1) or more of those species designated by the soil conservation service as identifying wetlands or the transitional zone of wetlands.

(Ord. No. 85-0222, § 4, 10-1-85)

Cross reference—Definitions and rules of construction generally, § 1-2.

Sec. 14-50. Applicability.

A stormwater management plan prepared in accordance with this article must be approved by the building department for each of the following:

(1) All development activity, with the exception of development on a site which does not exceed 0.35 acres and which does not exceed the forty (40) percent cumulative impervious coverage;

(2) Commencing development for multifamily, institutional, commercial, industrial or other land development projects;

(3) Construction of a new street or roadway; provided, however, that a stormwater management plan shall not be required for the paving or resurfacing of any street or roadway existing on October 1, 1985;

(4) Altering, rerouting, deepening, widening, obstructing, or changing the characteristics of an existing drainage system or taking action such as filling or grading that would create adverse impact on the drainage system; or

(5) Commencing any other development activity which may have adverse impact on any wetland, watercourse, or water body.

(Ord. No. 85-0222, § 5(A), 10-1-85)

Cross references—Subdivisions, Ch. 15; zoning, Ch. 17.

Sec. 14-51. Exemptions.

For the purpose of sections 14-50 through 14-53, the following activities are exempt from the requirements of this article:

(1) Bona fide agricultural pursuits including gardening except where an artificial drainage system will be used to increase the flow of surface water from the owner's land;

(2) Maintenance work performed on existing stormwater detention/retention structures and drainage channels for the purpose of public health and welfare, provided such work does not alter the function, capacity, or integrity of such structures or channels.

(Ord. No. 85-0222, § 5(B), 10-1-85)

Sec. 14-52. Waiver.

(a) A waiver of the stormwater management plan requirement may be requested by submitting a stormwater management plan permit application form, referred to throughout this article as application form, to the building department. The application form shall be accompanied by the following information, prepared by a professional engineer registered in the state:

(1) A sketch of the proposed project at a scale of one (1) inch equals one hundred (100) feet, or greater;

(2) The characteristics and limitations of the soil at the proposed site, specifically with respect to percolation, infiltration, and water table depth;

(3) The existing topography of the proposed site and the extent of proposed topographical changes after development;

(4) The existing vegetation of the proposed site and the extent of proposed vegetational changes after development;

(5) The continuity of phased projects. Projects to be developed in phases will require the submission of a comprehensive plan for the project's total boundary.

(b) The building department may grant a waiver if the applicant demonstrates to the satisfaction of the building department that the development is not likely to increase the rate or volume of surface water runoff or have an adverse impact on a wetland, watercourse, and/or water body.
(Ord. No. 85-0222, § 5(C), 10-1-85)

Sec. 14-53. Appeals.

Determinations made by the building department regarding the enforcement or provisions of this article may be appealed, in writing, to the building board of appeals in accordance with the ordinances of the town.
(Ord. No. 85-0222, § 5(D), 10-1-85)

Sec. 14-54. Preapplication conference.

(a) *Purpose.* The purpose of the preapplication conference is to discuss acceptable sources of information concerning stormwater management, applicable requirements and information known about the subject property in order to identify issues that should be addressed by the applicant. Preapplication conferences are encouraged, but are not required.

(b) *Required information.* If a preapplication conference is requested by the applicant, the application form shall be submitted to the building department and shall be accompanied by the following information:

(1) A location map of the property with appropriate lot and block number;

(2) A statement and sketch of the property at a reasonable scale expressing the intent and scope of the proposed project and the anticipated extent of disturbance to the natural and existing drainage system on and around the site.

(c) *Review process.* The application form, request for preapplication conference, and the required information shall be reviewed by the building department within ten (10) working days after submission of the completed application form for utilization at the preapplication conference. The conference will be held between the applicant or his designated representative and a designated representative of the building department.

(d) *Fees.* No fee shall be charged for the preapplication review and conference.
(Ord. No. 85-0222, § 6(A), 10-1-85)

Sec. 14-55. Stormwater management plan permit application.

(a) *Purpose.* The purpose of the stormwater management plan review process is to provide an organized framework for evaluating and acting upon proposals for development as they relate to stormwater management issues.

(b) *Required information.* The applicant shall furnish the building department with five (5) copies of the application form together with all plans and data required by the *Manual of Design Requirements for Stormwater Management Plans,* which plans and data shall bear the seal of a professional engineer registered in the state.

(c) *Review process.*

(1) The building department will ascertain whether the application form is complete and contains the information required by the provisions of the *Manual of Design Requirements for Stormwater Management Plans* within ten (10) working days of submission. If the building department determines that the application form and supporting plans and data are complete, the building department shall notify the applicant, in writing, that the application form is complete.

(2) If the building department determines that the application form is not complete, the building department shall notify the applicant, in writing, that the application form is not complete and specify the deficiencies of the application form. No further action shall be taken by the town with respect to the application form. If the applicant fails to submit the information necessary to complete the application form together with supporting plans and data within thirty (30) calendar days after the building department has notified the applicant, in writing, that the application form together with supporting plans and data is not complete, the application form shall be determined abandoned by the applicant. If the application form is determined to be abandoned by the applicant, the applicant must resubmit on a new application form all information together with supporting plans and data along with a new application fee to the building department in order to have the project reviewed.

(3) Within twenty (20) calendar days after the building department has notified the applicant that the application form is complete, the building department shall approve the application form or shall reject the application form and recommend that specified conditions conforming to the requirements of this article be met as a condition precedent to approval of the application form, and shall notify the applicant accordingly in writing.

(4) The stormwater management plan application form, together with all plans and data required by the *Manual of Design Requirements for Stormwater Management Plans* will be reviewed by the building department which may include the building official, director of public works, town engineer, town attorney and such other expertise as may be retained by the town.

(5) If a decision on the application form is not rendered by the building department within twenty (20) calendar days after written notification to the applicant that the

application form is complete, the application form will be deemed approved without conditions. If the applicant feels aggrieved as a result of denial of the application form, he may appeal the decision of the building department to the building board of appeals consistent with the requirements of section 14-53.

(d) *Review criteria.* The building department, in approving or rejecting an application form, shall consider the requirements of this article including the following criteria with respect to each application form:

(1) The characteristics and limitations of the soil at the proposed site, specifically with respect to percolation, infiltration, and water table depth;

(2) The existing topography of the proposed site and the extent of proposed topographical changes after development;

(3) The existing vegetation of the proposed site and the extent of proposed vegetational changes after development;

(4) The plans and specifications of structures or devices to be employed for detention, retention, erosion control, and flow attenuation;

(5) The effect the proposed water detention or retention facilities will have upon mosquito breeding habitats;

(6) The continuity of projects to be developed in phases will require the submission of a comprehensive drainage plan for the project's total boundary.

(e) *Fees.*

(1) A fee shall be collected at the time the application form is submitted by the applicant to the building department and will reflect the cost of the administration and management of the review process.

(2) When work for which an approved application is required by this article is commenced prior to obtaining approval, the building department shall establish a fee equivalent to twice the amount of the application form fee to reflect the additional administrative, inspection, and enforcement efforts required to deal with the violation. The payment of such fee shall not relieve any persons from fully complying with the requirements of this article in the execution of the work nor from any applicable penalties prescribed in this article.

(Ord. No. 85-0222, § 6(B), 10-1-85)

Sec. 14-56. Design requirements and contents of stormwater management plans.

(a) *Responsibility of applicant.* It is the responsibility of an applicant to include sufficient information for review by the building official in the application form to enable evaluation of the project. Application shall be made on the standard forms approved by the building department.

(b) *Required information from the applicant.* The information supplied by the applicant shall be in conformance with the provisions of the *Manual of Design Requirements for*

Stormwater Management Plans available from the building department. The manual outlines the following requirements:

(1) Required information from applicant;

(2) Plan contents;

(3) Hydraulic design considerations;

(4) Computational methodologies;

(5) System design requirements;

(6) Soil erosion and sediment control plan.

(Ord. No. 85-0222, § 7, 10-1-85)

Sec. 14-57. Performance objectives for stormwater management plans.

(a) *Purpose.* The purpose of this section is to establish engineering objectives for the design, construction, and maintenance activities of stormwater management plans. It is the intent of this article that the performance objectives be satisfied by all stormwater management plans.

(b) *Performance objectives.* Stormwater management plans will be approved, consistent with procedures in this article, when the applicant has demonstrated that the proposed development activity has been designed to be constructed and maintained to meet each of the following performance objectives:

(1) To encourage the maximum use of on-site storage facilities to reduce runoff rates and volumes, and minimize erosion and sedimentation;

(2) To design, construct, and maintain stormwater management facilities in a manner which regulates and controls postdevelopment runoff to levels equivalent to or less than predevelopment conditions;

(3) To design, construct, and maintain stormwater management facilities in such a manner that erosion or sedimentation does not exceed natural or predevelopment conditions;

(4) To ensure that no adverse impact on the existing system results from improper location, design and construction of stormwater management facilities;

(5) To design, construct and maintain stormwater management facilities to minimize stagnant water conditions.

(Ord. No. 85-0222, § 8, 10-1-85)

Sec. 14-58. Maintenance responsibilities for stormwater management facilities.

(a) *Granting of easement.* The stormwater management facility required by this article shall be constructed by and maintained by the owner. The owner shall be required to grant an

easement to the town which will permit the building department officials or other town employees or agents:

(1) Adequate ingress and egress to inspect the premises; and

(2) If necessary, to take corrective maintenance action should the owner fail to properly maintain the system.

(b) *Documentation of maintenance responsibility.* The owner shall be required to provide documentation to the town attorney which clearly shows the continuity of maintenance responsibility for the stormwater management facility. If the project involves sale of units or parcels to third parties, the owner must provide legal documents to ensure that successors are legally bound to continue proper maintenance of the system. The documentation requirements will vary as to the type of project, whether townhouse, a subdivision, or a condominium project. The town attorney will review and approve all permit applications regarding maintenance responsibility.

(c) *Failure to maintain.* Should the owner fail to properly maintain the system to be maintained by him, the building department shall give written notice to the owner of record as appears on the latest property tax rolls, by certified, return receipted mail, of the nature of the violation and shall order the corrective action necessary. Should the owner fail, within thirty (30) calendar days from the date of the written notice, to take corrective action to the satisfaction of the building department or shall fail to appeal the notice and order within thirty (30) calendar days of the date of the written notice, the town may enter upon the lands, take such corrective action as the building department may deem necessary, and place a lien on the property of the owner for the costs thereof.

(d) *Town maintenance.* Certain off-site systems as may be identified by the building department which are to provide general public benefits may be accepted by the town for maintenance. All areas and/or structures to be maintained by the town must be dedicated to the town by plat or separate instrument and accepted by resolution of the town council.
(Ord. No. 85-0222, § 9, 10-1-85)

Sec. 14-59. Compliance with plan; amendments to plan.

(a) The applicant shall be required to adhere strictly to the stormwater management plan submitted by the applicant and approved by the building department. Any changes or amendments to the plan must be approved by the building department in accordance with the procedures set forth in this article for obtaining stormwater management plan approval. Enforcement officials shall, and are granted by this section, inspection rights and right of entry privileges in order to ensure compliance with the requirements of this article.

(b) After completion of the project and prior to issuance of a certificate of occupancy, the building department shall require from the applicant that the professional engineer in charge certify compliance with terms of the approved stormwater management plan and permit.
(Ord. No. 85-0222, § 10, 10-1-85)

Sec. 14-60. Enforcement.

If the building department determines that the project is not being carried out in accordance with the approved plan, or that any project subject to this article is being carried out without approval, the building department is authorized to take the following actions:

(1) *Written notice.* Issue written notice to the owner by certified, receipted delivery mail specifying the nature and location of the alleged noncompliance, with a description of the remedial actions necessary to bring the project into compliance within a reasonable specified time.

(2) *Stop-work order.* Issue a stop-work order by certified, receipted delivery mail or receipted hand delivery directing the applicant or owner to cease and desist all or any portion of the work which violates the provisions of this article, if the remedial work identified in the written notice is not complete within the specified time.

(3) *Revocation of approval.* Should the applicant or owner fail to bring the project into compliance with the written notice and stop-work order he shall then be subject to immediate revocation of the stormwater management plan permit and all building permits issued by the building department with respect to the project and to the penalties described in this article. Notice of such revocation shall be made by certified, receipted delivery. In the event of such revocation, no stormwater management plan permit fees or building permit fees shall be refunded.

(4) *Appeal.* Any notice, order, or revocation shall become final unless the person named therein requests a hearing before the building board of appeals pursuant to section 14-53. Such request shall be made in writing no later than ten (10) calendar days after the date such notice, order, or revocation is served.

(Ord. No. 85-0222, § 11, 10-1-85)

Sec. 14-61. Penalties for violation.

Any person who violates or causes to be violated any provision of this article or permits any such violation or fails to comply with any of the requirements in this article shall be guilty of a misdemeanor. Each day upon which such violation occurs shall constitute a separate offense. In addition to any other remedies, whether civil or criminal, the violation of this article may be restrained by injunction, including mandatory injunction, and otherwise abated in any manner provided by law.

(Ord. No. 85-0222, § 12, 10-1-85)

Sec. 14-62. Emergencies.

(a) This article shall not be construed to prevent the doing of any act necessary to prevent material harm to or destruction of real or personal property as a result of a present emergency, including but not limited to fire, infestation by pests, or hazards resulting from violent storms or hurricanes, or when the property is in imminent peril and the necessity of obtaining a permit is impractical and would cause undue hardship in the protection of the property.

(b) A report of any such emergency action shall be made to the building department by the owner or person in control of the property upon which emergency action was taken as soon as practical, but not more than ten (10) calendar days following such action. Further, the property on which the emergency action is taken shall be brought back to acceptable standards as determined by the building department within thirty (30) calendar days after initiation of such action.
(Ord. No. 85-0222, § 13, 10-1-85)

Sec. 14-63. Fee schedule.

The following is the schedule of fees applicable to development within the jurisdiction of and pursuant to this article:

(1) *Base fee, all development.*

Site size	*Fee*
1.0 acre or less	$250.00
1.01 to 5.00 acres	250.00 plus $40.00/acre
5.01 or more acres	410.00 plus $20.00/acre

The base fee of $250.00, plus an acreage fee, includes an initial plan review by the building department staff, public works, town engineer, and the town attorney. The initial review includes reviewing the plans, conducting a committee meeting to assimilate comments from the reviewers, forwarding comments to the developer and a second plan review to ensure comments are incorporated in the plans. It will also entail the preapplication conference conducted by the building department if requested by the applicant.

(2) *Excess review fee.*

Third review	100.00
Fourth review	150.00
Fifth review	200.00
Sixth or more (per review)	250.00

Reviews above the number indicated in the base fee initial plan review process (in excess of two (2) by any member of the review team or the committee as a whole) will result in an excess review fee being assessed to the applicant in accordance with the schedule above. Such fee shall be collected prior to initiation of the review, and the timetable indicated for review by the building department shall not commence until the appropriate fee is paid.

(3) *Waiver review.* A fee of twenty-five dollars ($25.00) shall be charged for an initial waiver review. Each additional waiver review, either submission or resubmission for a proposed project will entail a fee of twenty-five dollars ($25.00). If an applicant does

not qualify for a waiver, the fee will be applied to the stormwater management application fee.
(Ord. No. 85-0222, 10-1-85)

Secs. 14-64—14-75. Reserved.

DIVISION 2. DESIGN REQUIREMENTS FOR PLANS

Sec. 14-76. Responsibility of applicant.

It is the responsibility of an applicant to include sufficient information in the stormwater management plan to enable evaluation of the potential and predicted impact of the proposed activity on all affected lands and waters, and the effectiveness and acceptability of the measures proposed by the applicant of preventing or reducing adverse impact.
(Ord. No. 85-0222, § I(A), 10-1-85)

Sec. 14-77. Required information from applicant.

The following information is required from the applicant:

(1) *Stormwater management plan application form.*

a. The name, address and telephone number of the applicant, and the owner if different from the applicant;
b. Name, address and phone number of the professional engineer;
c. The legal description of the property or plat with location map.

(2) *Predevelopment site information.*

a. Location sketch showing the parcel, major adjacent roads, water bodies and existing drainage patterns through and around the site at a scale of one (1) inch equals one hundred (100) feet or greater;
b. Topographic map of the site at a scale of at least one (1) inch equals one hundred (100) feet or greater with one-foot contour intervals and spot elevations, as needed, tied into an approved U.S.G.S. datum;
c. Identification of SCS soils characteristics of the site indicating seasonal water table elevations and general soils suitability;
d. Percolation tests and soil borings, if percolation or subsurface systems are proposed, representative of design conditions;
e. Location of 100-year floodplain with known floodways identified on a map at a scale of one (1) inch equals one hundred (100) feet or greater using flood insurance data published by the Federal Emergency Management Agency or its successors. This information may be recorded upon the topographic map of the site required pursuant to subsection (2)b.

(3) *Stormwater management plan.*

Provide a separate map (twenty-four (24) inches by thirty-six (36) inches) on a scale of one (1) inch equals one hundred (100) feet or greater for subsections a and b below, showing the following:

a. 1. Identify and describe all water bodies and watercourses adjacent to the site with details of size, capacity, side slopes and depths;
   2. Location and details of all water control structures with control elevations of the control structures and any seasonal water level regulation schedules;
   3. Make provisions for the unimpeded conveyance of stormwater from off-site areas which drain onto or through the site;
   4. Paving, grading and drainage plans along with locations of roads and buildings and their proposed elevations;
   5. Right-of-way and easement locations for the drainage system including all areas to be dedicated for stormwater management purposes;
   6. Location and size of internal stormwater management facilities.

b. Soil erosion and sediment control plan identifying all structures, and strategies proposed to control erosion and contain sediment.

(4) *Calculations.*

a. Average slope and hydraulic length for both the present condition and for the future developed condition;
b. The predevelopment conditions of the site;
c. The amount of pervious and impervious surface for both the predevelopment conditions of the site and the postdevelopment conditions of the site;
d. Calculations of the peak rate of discharge for the required design storm, and retention volume for the first one (1) inch of runoff, all in accordance with the methods outlined in section 14-81;
e. Runoff routing calculations for detention basins showing discharges, elevations, and volumes retained and/or detained during applicable storm events and for storm events of more frequent return period to ensure the effectiveness of the system in controlling lesser events;
f. For surface storage facilities, stage-storage computations and stage-discharge computations for the major discharge structure, based on the appropriate hydraulics;
g. Depth to water table from SCS soil survey unless long term observations by a professional soils engineer are available for the site;
h. Calculations supporting the design of any subsurface percolation system proposed.

(5) *Legal and institutional information including:*

a. Every stormwater management plan shall identify the person or entity responsible for construction, operation and maintenance of the stormwater management facility from the date of commencement of the project through the later of the date of completion of the project or the date of acceptance of responsibility for

maintenance of the project's stormwater management facility by another person or legal entity.

b. If the project involves the subdivision of a site, the developer must submit a proposed declaration of restrictions for the site which shall contain affirmative perpetual convenant running with the land imposing upon each of the owners of the site, and their respective successors and assigns, the obligation to appropriately maintain the stormwater management facility. The declaration of restrictions may provide for the establishment of an owner's association and delegate to the owners' association the responsibility for appropriate maintenance of the stormwater management facility located upon the site; provided, however, that the establishment of an owners' association and the delegation to the owners' association of the responsibility for appropriate maintenance of the stormwater management facility shall not relieve the owners of the site from their obligation to appropriately maintain the stormwater management facility if the owners' association fails to adequately maintain the stormwater management facility. The declaration of restrictions shall be reviewed by the town attorney to ensure compliance with the letter and the intent of this article. No stormwater management plan shall be approved unless and until the town attorney has notified the applicant and the town building department, in writing, that the proposed declaration of restrictions complies with the letter and intent of this article. Any amendments to the proposed declarations of restrictions shall also be submitted to the town attorney for review to ensure compliance of the declaration of restrictions with the letter and intent of this article. Upon recording the declaration of restrictions and any amendments thereto in the office of the clerk of the court for the county, the developer shall deliver to the town building department a certified copy of the declaration of restrictions and any amendments thereto attested as true and correct by the clerk of the court for the county, which certified copies shall be maintained by the town building department as part of its permanent records pertaining to the project.

c. If the proposed project involves the establishment of a horizontal property regime, sometimes termed "condominium," upon a site pursuant to the horizontal property act, Code of Laws of South Carolina, 1976, as amended, the developer must submit for review by the town attorney, a proposed master deed for the horizontal property regime as well as a proposed declaration and petition for incorporation and proposed bylaws for an owners' association to be formed for the purpose of administering the horizontal property regime. The master deed shall contain affirmative covenants which shall clearly set forth the obligation and the responsibility incident to ownership of each unit in the horizontal property regime and its appurtenant interest in the common elements of the horizontal property regime to appropriately maintain the stormwater management facility. The master deed shall clearly indicate that the obligation and responsibility to appropriately maintain the stormwater management facility is a covenant running with the land which is binding upon all unit owners and their respective successors and assigns. The master deed shall delegate to the owners' association

the responsibility for appropriate maintenance of the stormwater management facility located upon the site; provided, however, that the delegation to the owners' association of the responsibility for appropriate maintenance of the stormwater management facility shall not relieve the unit owners of their obligation to appropriately maintain the stormwater management facility if the owners' association fails to adequately maintain the stormwater management facility. The master deed declaration and petition for incorporation and bylaws of the owners' association shall be reviewed by the town attorney to ensure compliance with the letter and the intent of this article and no stormwater management plan shall be approved unless and until the town attorney has notified the applicant and the town building department, in writing, that the proposed master deed, charter for incorporation and bylaws of the owners' association complies with the letter and intent of this article. Any amendments to the proposed master deed, charter for incorporation and bylaws of the owners' association shall also be submitted to the town attorney for review to ensure compliance of the master deed, charter for incorporation and bylaws of the owners' association with the letter and intent of this article. Upon recording the master deed, charter for incorporation and bylaws of the owners' association and any amendments thereto in the office of the clerk of the court for the county, the developer shall deliver to the town building department a certified copy of the master deed, charter of incorporation and bylaws of the owners' association and any amendments thereto, attested as true and correct by the clerk of the court for the county, which certified copies shall be maintained by the town building department as part of its permanent records pertaining to the project.

(Ord. No. 85-0222, § I(B), 10-1-85)

Sec. 14-78. Performance objectives.

The purpose of this section is to establish engineering objectives for the design, construction, and maintenance activities of stormwater management plans. It is the intent of this article that the performance objectives by satisfied by all stormwater management plans. Stormwater management plans will be approved, consistent with procedures in this article when the applicant has demonstrated that the proposed development activity has been designed to be constructed and maintained to meet each of the following performance objectives:

(1) To encourage the maximum use of on-site storage facilities to reduce runoff rates and volumes, and minimize erosion and sedimentation;

(2) To design, construct, and maintain stormwater management facilities in a manner which regulates and controls postdevelopment runoff to levels equivalent to or less than predevelopment conditions;

(3) To design, construct, and maintain stormwater management facilities in such a manner that erosion or sedimentation does not exceed natural or predevelopment conditions;

(4) To ensure that no adverse impact on the existing system results from improper location, design and construction of stormwater management facilities;

(5) To design, construct and maintain stormwater management facilities to minimize stagnant water conditions.

(Ord. No. 85-0222, § II, 10-1-85)

Sec. 14-79. General requirements.

(a) Plans, calculations, and supporting documentation as required by this article for the design, construction, and maintenance of stormwater management facilities shall be prepared and sealed by a professional engineer currently registered in the state.

(b) Innovative approaches to stormwater management shall be encouraged and the concurrent control of flooding, erosion, sedimentation and water pollution shall be mandatory.

(c) The developer of a project that is to be developed in phases shall submit a master plan of the developer's contiguous landholdings.

(d) Development should maximize the amount of on-site rainfall infiltration and minimize direct overland runoff onto adjoining property, public drainage facilities, adjoining streets, water bodies, watercourses, and wetlands. Channeling runoff directly into watercourses shall be prohibited; instead, runoff shall be routed to decrease velocity, increase infiltration, allow suspended solids to settle, and remove pollutants.

(e) A drainage facility for discharging runoff in excess of that retained shall be provided to a watercourse.

(f) The soil types of a site and the contiguous watershed area shall be of prime consideration in the design and maintenance of all stormwater management facilities.

(g) A soil erosion and sediment control plan shall be prepared and submitted as part of the stormwater management plan.

(Ord. No. 85-0222, § III(A), 10-1-85)

Sec. 14-80. Hydraulic design.

(a) *Design storms.* Stormwater systems will be designed with sufficient hydraulic capacity for the following frequencies and durations:

Facility	*Frequency (in years)*	*Duration (in hours)*
Retention and detention basins	25	24
Primary drainage systems	25	24
Secondary drainage systems, *i.e.*, crossdrains and ditches for internal subdivision drainage	10	24

(b) *Sources of information.* All rainfall data is to be obtained using sources generally accepted as good engineering practice. Reference sources include:

(1) U.S. Weather Bureau Technical Paper No. 49, "Two-to-Ten-Day Precipitation for Return Periods of 2 to 100 Years in the Contiguous United States," latest revision;

(2) U.S. Weather Bureau Technical Paper No. 40, "Rainfall Frequency Atlas of the United States for Duration from 30 Minutes to 24 Hours and Return Periods from 1 to 100 years," latest revision;

(3) U.S. Department of Agriculture, Soil Conservation Service, "Rainfall Frequency Atlas of Alabama, Florida, Georgia, and South Carolina for Duration from 30 Minutes to 24 Hours and Return Periods from 1 to 100 years," latest revision.

(Ord. No. 85-0222, § III(B), 10-1-85)

Sec. 14-81. System design requirements.

(a) *Methods of runoff computations.* Accepted methods of computation are as follows:

(1) Rational method hydrograph procedure, limited in use to developments with watershed areas of ten (10) acres or less;

(2) Soil Conservation Service Method (see U.S. Department of Agriculture, Soil Conservation Service, *National Engineering Handbook,* Section 4, "Hydrology") using antecedent moisture condition II;

(3) Illinois Urban Area Drainage Simulator;

(4) Unit hydrograph method;

(5) Other methods will be accepted only with prior approval by the building department.

(b) *Receiving water stage.*

(1) Regulated systems. Existing design and maintained stage elevations will be available from the building department.

(2) Nonregulated systems. The applicant should compute receiving water stages for such systems from the best available data and submit the results to the building department for review and concurrence before utilizing such results in further computations.

(3) Any system. Tail water stages should be considered if they have a significant influence on the design.

(c) *Detention/rentention.*

(1) As a minimum, adequate storage volume shall be provided to retain on-site the first inch of runoff generated by any storm event over the developed or redeveloped portion of the site. For soil conditions or groundwater table conditions which do not permit the percolation of this volume within the five (5) days following a storm event, the building department may approve detention with filtration systems in lieu of retention.

(2) Outlet facilities shall be designed in accordance with accepted engineering principles, with particular attention given to appropriate hydraulics, including orifice, weir, and culvert hydraulics.

(3) Outlet facilities shall be so designed to attenuate the postdevelopment peak discharge rates of one-year, twenty-four-hour storms to twenty-five-year, twenty-four-hour storms, to be less than or equal to the peak rates of the predeveloped state of the site.

(4) Where the detention/retention basin discharges into a stream, ditch, swale, or water body, an energy dissipator may be required by the building department to reduce discharge velocities in order to minimize soil erosion and sediment transport.

(5) For detention and retention basins, an emergency spillway may be required by the building department to discharge flows in excess of the twenty-five-year, twenty-four-hour storm event. The spillway shall be designed to accommodate the peak discharge rate occurring from a fifty-year, twelve-hour storm event. The spillway shall be so located that the discharge does not erode the basin or receiving channel.

(6) The design of retention/detention areas shall incorporate considerations for regular maintenance and vegetation management procedures.

(d) *Subsurface percolation systems.*

(1) Subsurface percolation shall be designed on the basis of representative or actual test data. Tests shall be consistent as to soils, elevations, locations, and water table depths with the system design to which the test data will be applied.

(2) Subsurface percolation systems shall be designed for prevention of clogging by fine material and for ease of cleaning with conventional sewer cleaning equipment. This may include but not necessarily be limited to wrapping of the perforated pipe and the seepage trench with an appropriate fabric and providing sufficient cleanouts to the system.

(3) Systems shall have an overflow with a control device to a watercourse between the subsurface percolation system and the discharge pipe. The overflow or control device shall be sized for the allowable discharge.

(e) *Impervious areas.* Runoff shall be discharged from impervious surfaces through retention areas, detention devices, filtering and cleansing devices prior to discharge from the project site.

(f) *Stagnant water conditions.* Configurations which create stagnant water conditions, such as hyraulically dead-end canals, are to be avoided, regardless of the type of development.

(g) *Stormwater management areas.* Areas to be utilized for the conveyance or storage of stormwater shall be legally reserved for that purpose by plat, easement, etc., so that subsequent owners or others may not remove such areas from their intended use.

(h) *Runoff from adjacent lands.* Runoff from adjacent or upstream lands shall be considered and provision for unimpeded conveyance of such runoff shall be included in drainage plans.

(Ord. No. 85-0222, § III(C), 10-1-85)

Sec. 14-82. Soil erosion and sediment control plan.

(a) *Purpose.* The purpose of the soil erosion and sediment control plan is to provide effective measures to control erosion and sedimentation generated by removal of ground surface cover.

(b) *General principles.*

(1) Erosion and sedimentation control requires consideration of stormwater control and soil to be encountered in order to be effective.

(2) Proper design shall include measures for erosion control and provide for the early establishment of vegetation that will help to avoid erosion problems during and after development activities.

(3) Alignment, grades, area of disturbed soil and bank slopes shall be based on soil erodibility, climatic exposure, geology, proposed vegetative restoration and expected maintenance.

(c) *Guidelines for design.*

(1) Slopes should be protected from erosion by quick establishment of vegetative cover, benches or terraces, slope protection structures, mulches, or a combination of these practices as required. It is hereby recommended that Pensacola Bahia be utilized as vegetative cover as provided for in this article.

(2) Drainage channels should be designed to avoid erosion problems. Wide channels with flat side slopes lined with grass or other vegetation shall be utilized where feasible. Where channel gradients are steep, concrete linings or grade control structures, such as stone check dams, may be required. Every effort should be made to preserve natural channels.

(3) Sediment basins shall be constructed to discharge stormwater runoff while trapping sediment loads. Sediment basins may either be temporary or permanent, as required by the building department.

(4) Detention basins may also be used to trap sediment during and after development. Where used for this purpose, the basin shall continue to detain stormwater in accordance with the hydraulic design criteria, but allow for the settlement and containment of sediment in the basin. Sediment shall be removed periodically to ensure the intended performance of the detention basin.

(5) Existing vegetation, adequate to control erosion, shall be preserved. Regeneration of wood plants shall be encouraged.

(6) Hay bales or silt fences may be placed around storm sewer inlets and at the boundaries of disturbed areas to trap sediment on site.

(d) *Contents.* Each soil erosion and sediment control plan shall contain the following:

(1) Location, scope, and manner of performing erosion control measures;

(2) Proposed construction sequence and time schedule for all earth disturbing activities and installation of provisions for erosion and sediment control and stormwater management; and

(3) Design computations and applicable assumptions for all structural measures for erosion and sediment control. Volume and velocity must be given for all surface water conveyance measures and pipe discharges.

(Ord. No. 85-0222, § III(D), 10-1-85)

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APPENDIX I

Town Beach Regulations

Sec. 12-43. Same—Unlawful removal.

It shall be unlawful for any person to remove any barricade or remove or extinguish any light which may be placed as a signal at night to warn persons of danger from ditches, trenches, building materials, scaffolds, excavations, impediments or obstacles of any description whatever within the corporate limits of the town.
(Code 1969, § 18-8)

Secs. 12-44—12-60. Reserved.

ARTICLE IV. BEACHES*

DIVISION 1. GENERALLY

Sec. 12-61. Authority of lifeguards, deputies, constables, police officers.

(a) Those persons who shall be duly appointed as lifeguards, deputies or constables or who are police officers shall have the power and authority to supervise and regulate surf fishing, physical activities and swimming on the beaches, strand and the Atlantic Ocean within the jurisdiction of the town, and in such areas shall have the responsibility to maintain peace and order. Such lifeguards, deputies, constables, or police officers shall have the power and authority to recall from the ocean waters and the surf adjoining the waters any person who shall be in the ocean waters a distance of more than fifty (50) yards from the point where the ocean waters adjoin the strand, or who shall be more than shoulder deep at any time, or when such person shall be in danger of drowning or becoming imperiled or may imperil the safety of others, all of which shall be determined in the discretion of such deputies, constables, police officers or lifeguards authorized by them.

(b) Such personnel shall have authority to recall from the ocean waters any person who shall be in the ocean waters at any distance at any time when the condition of the wind, water, weather or any hazard, including the physical or mental condition of the person in the ocean waters, shall be such, in the discretion of such personnel as described in this section, as to constitute a danger to the health, life, or safety of such person or other persons within such ocean waters.

(c) It shall be unlawful for any person to disobey the instructions of any lifeguard authorized by the town with regard to activities on the beach and in the ocean.
(Code 1969, § 18-33)

Cross reference—Police department generally, § 11-41 et seq.

***Cross references**—Sleeping in automobiles on beaches, § 8-2; development of coastal high hazard areas, § 14-24; shore protection, § 17-386 et seq.

State law references—Jurisdiction of municipalities bordering on the Atlantic Ocean, S.C. Code 1976, § 5-7-140; coastal municipalities jurisdiction over piers, waters, etc., of ocean, S.C. Code 1976, § 5-7-150.

Sec. 12-62. Shark fishing.

It shall be unlawful for any person to engage in the practice of shark fishing from the beaches adjacent to the Atlantic Ocean within the town limits.
(Code 1969, § 18-30)

Sec. 12-63. Commercial fishing.

It shall be unlawful for any person to engage in commercial fishing on the public beach within the town limits.
(Code 1969, § 18-31)

Sec. 12-64. Surfing.

(a) It shall be unlawful for any person to ride a surfboard or any other similar device of a hard or solid nature between the hours of 9:00 a.m. and 5:00 p.m. in any location other than the area starting at the swash two hundred seventy (270) feet south of 12th Avenue North and extending northward to 14th Avenue North.

(b) Surfing will be allowed along the beach before the hours of 9:00 a.m. and after 5:00 p.m. except within three hundred (300) feet of the fishing pier.

(c) During the off-season (September 15 to May 15), surfing will be allowed anywhere along the beach from sunup to sundown. Exception: surfing is not allowed within three hundred (300) feet of the fishing pier.

(d) Telephone poles [shall] be placed at the dunes' base to mark the designated summer season surfing area. The poles should be marked in such a manner that surfers will be able to view the poles in the ocean.

(e) All surfers shall be required to wear a surfing leash at all times, having a stretch factor no less than six (6) feet.

(f) Surfers must navigate the surfboard in such a way that it does not become a hazard to others in the ocean or on the beach. The individual will be responsible for his or her actions while navigating the surfboard.
(Code 1969, § 18-31; Ord. No. 87-0241, 7-21-87; Ord. No. 88-0257, 5-3-88)

Sec. 12-65. Dangerous operation of boats, skis, surfboards.

(a) No person shall operate any motorboat or vessel or manipulate any skis, surfboard or similar device in a reckless or negligent manner so as to endanger the life, limb or property of any person.

(b) No person shall operate any motorboat, boat or vessel or manipulate any water skis, surfboard or similar device when under the influence of alcohol, any narcotic drug, barbituate, marijuana or hallucinogen.

(c) Any person convicted of a violation of this section may be prohibited by the court having jurisdiction from operating any vessel on any waters of the state for a period of not more than two (2) years in addition to any other penalties.
(Code 1969, §§ 18-36, 18-37)

State law reference—Similar provisions, S.C. Code 1976, § 50-21-110.

Sec. 12-66. Solicitation.

The solicitation of patrons or customers for commercial purposes including but not limited to solicitation incident to the sale of real or personal property and products and services on the beach and public access areas adjoining the beach by any person, firm, company, corporation or party and their agents, clerks or employees is hereby prohibited within the jurisdiction of the town, except as otherwise provided by a franchise agreement, as conferred by the town council in compliance with S.C. Code 1976, § 5-7-30. Any person convicted of violating this provision shall be punished as provided in section 1-16.
(Code 1969, § 18-44)

Sec. 12-67. Obstructions.

Beach umbrellas and other beach paraphernalia will be at a distance of at least ten (10) feet to the rear (inland side) of the lifeguard stands and in a line generally parallel with the ocean strand. It shall be unlawful to place any obstruction on the beach in such position that it will interfere with the ground level vision of a lifeguard looking toward the water and the lifeguard stands on either side of him.
(Code 1969, § 18-34)

Sec. 12-68. Dangerous objects.

It shall be unlawful to place, throw, or deposit upon the beach any glass bottle, glass, nails, wire, tacks, cans or other substances likely to injure any person.
(Code 1969, § 18-38)

Sec. 12-69. Dogs and other domestic pets.

It shall be unlawful to allow any dog or domestic pet on the public beach within the town limits during the calendar period from May 15 through September 15.
(Code 1969, § 18-39)

Cross reference—Animals generally, Ch. 3.

Sec. 12-70. Horses.

It shall be unlawful for any person to ride a horse or any other animal on the public beach within the town limits during the calendar period from April 1 through November 1.
(Code 1969, § 5-47)

Cross reference—Animals generally, Ch. 3.

Sec. 12-71. Vehicles.

The operation of motor vehicles on the beaches of the town is prohibited, but this prohibition shall not apply to emergency or law enforcement vehicles being used as such.
(Code 1969, § 12-26)

Cross reference—Motor vehicles generally, Ch. 9.

Sec. 12-72. Parking in public access area overnight.

It shall be unlawful to leave a vehicle, boat, trailer, motorbike or camper in any public parking access area overnight. Anyone violating the provisions of this section may have his vehicle, boat, trailer, motorbike or camper towed and impounded and, upon conviction for violation of this provision, shall be punished as provided in section 1-16.
(Code 1969, § 18-45)

Cross references—Motor vehicles generally, Ch. 9; parking-storage of boats, § 12-90.

Secs. 12-73—12-85. Reserved.