

RESOLUTION NO. 99- 52

A RESOLUTION OF THE BOARD OF COUNTY COMMISSIONERS OF NASSAU COUNTY, FLORIDA, REQUESTING THAT THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION, BUREAU OF BEACHES AND COASTAL SYSTEMS, PROVIDE COST SHARING TO THE SAISS-MSBU/NASSAU COUNTY LONG RANGE BEACH EROSION CONTROL PROGRAM

WHEREAS, the Board of County Commissioners of Nassau County, Florida, sits as the South Amelia Island Shore Stabilization Municipal Services Benefit Unit (SAISS-MSBU) Board of Governors; and

WHEREAS, the SAISS-MSBU has constructed a successful Beach Restoration Project (COE-199301096 IP-ME, DEP-DBS9A0328/45237969) over a large segment of south Amelia Island; and

WHEREAS, the SAISS-MSBU desires to investigate the feasibility of a terminal structure to help reduce the end losses to the SAISS-MSBU Beach Restoration Project and to design, permit and construct said project if feasible; and

WHEREAS, the SAISS-MSBU desires to receive state cost sharing to help pay for the terminal structure; and

WHEREAS, the SAISS-MSBU desires to receive state cost sharing to help pay for the on-going monitoring efforts; and


WHEREAS, the Board of County Commissioners of Nassau County, Florida, desires to expand its role in monitoring beach conditions along the entire Atlantic coast beaches of Nassau County including the City of Fernandina Beach, Florida.

NOW, THEREFORE, BE IT RESOLVED this 22nd day of March, 1999, by the Board of County Commissioners of Nassau County, Florida as follows:


1. The State of Florida Department of Environmental Protection, Bureau of Beaches and Coastal Systems provide cost share from the State Beach Erosion Control Program for the projects listed on

the attached SAISS-MSBU/Nassau County Long Range Beach Erosion  
Control program.


BOARD OF COUNTY COMMISSIONERS  
NASSAU COUNTY, FLORIDA

  
\_\_\_\_\_  
J.H. COOPER  
Its: Chairman

ATTEST:

  
\_\_\_\_\_  
J. M. "CHIP" OXLEY, JR.  
Its: Ex-Officio Clerk

Approved as to form by the  
Nassau County Attorney:

  
\_\_\_\_\_  
MICHAEL S. MULLIN

# AMELIA ISLAND COMPREHENSIVE BEACH MONITORING PROGRAM NASSAU COUNTY, FLORIDA

## Background

In accordance with the recommendations of the Florida D.E.P., Nassau County proposes to initiate a comprehensive, island-wide beach monitoring program. The purpose of the effort is to develop and maintain a data base sufficient to rationally address matters related to beach erosion and beach management issues along the entirety of the Nassau County oceanfront shoreline.

Historically, chronic beach erosion problems have existed along the northern and southern extremities of Amelia Island. At present, the City of Fernandina Beach comprises the limits of a proposed federal shore protection project at the north end. Portions of the City's shoreline are likewise benefitted by episodic beach disposal of sand dredged from the adjacent federal navigation project located at St. Marys Entrance. Recent State/Federal policies require beach monitoring be provided by local sponsors for both beach disposal and shore protection projects.

At the south end of the island, local interests formed the South Amelia Island Shore Stabilization Association for the purpose of construction of a 3.2 mile beach restoration project in 1994. Subsequently, an experimental groin field was constructed in 1995 for purposes of enhancing beach fill performance. The Nassau County Board of County Commissioners sits as the head of a Municipal Service Benefit Unit established to fund the initial construction of the 1994 beach restoration project. Continued annual monitoring is required by State Permit in the vicinity of the groin field.

## Purpose

A recently completed Inlet Management Plan Technical Report (1998) for St. Marys Entrance establishes the need to address historical deficits to the sediment budget for Amelia Island caused by navigation project construction and maintenance. An important element in meeting this goal is a comprehensive program of island-wide beach monitoring. Elements of such a program include the following:

- The evaluation of beach conditions annually,
- Quantification of inlet related deficits to the island-wide sediment budget,
- Determination of candidate disposal sites for material derived from Federal Navigation project maintenance and/or channel improvements (Navy and Corps),
- Justification for comprehensive restoration of the City of Fernandina Beach shoreline,
- Assessment of the performance of an existing beach fill project located along the southernmost 3.2 miles of Amelia Island shoreline -- as well as a terminal groin field sited southward thereof,
- Assisting in the eventual update of the St. Marys Inlet Management Plan,
- Documentation of existing beach conditions for purposes of seeking FEMA or State post-disaster funding for shoreline damages after a major storm,
- Implementation of an island-wide comprehensive Beach Management Plan designed to maintain and protect: infrastructure, tax base, recreational capacity, tourism, public access, environmental quality, etc.

### **Scope-of-Work**

The area of interest for a monitoring program would extend from the south jetty at St. Marys Entrance southward to Nassau Sound (i.e., nominally from DEP reference monument R-10 through R-80). Surveys would be performed twice annually at each historic monument location. Each survey profile would measure the beach and would extend seaward some 2,000 ft, more or less. All survey work would be supervised by a Certified Hydrographer as well as a Florida Professional Surveyor and Mapper.

Annually, Black and White vertical aerial photography would be flown of the oceanfront and inlet shorelines (negative scale of 1" = 500'). Oblique color aerials (8"x10") would be acquired twice annually to assist in photo documentation of overall shoreline conditions, problem areas, federal beach disposal events, etc.

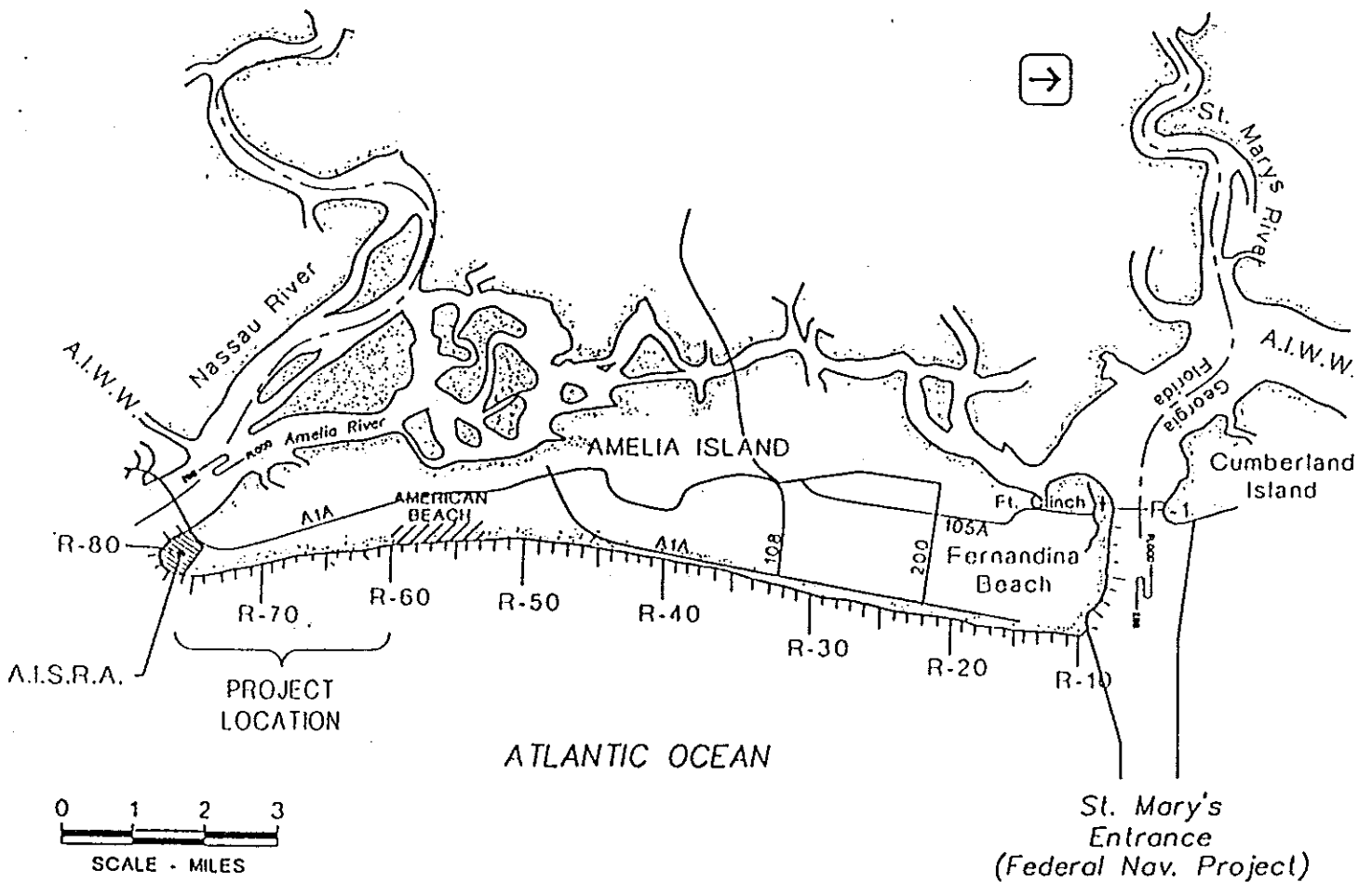
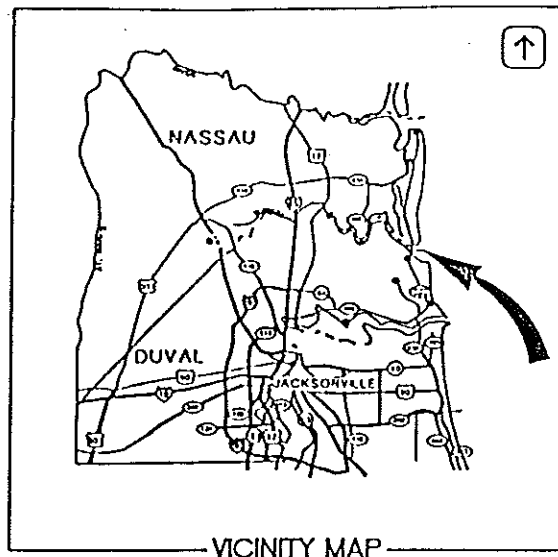
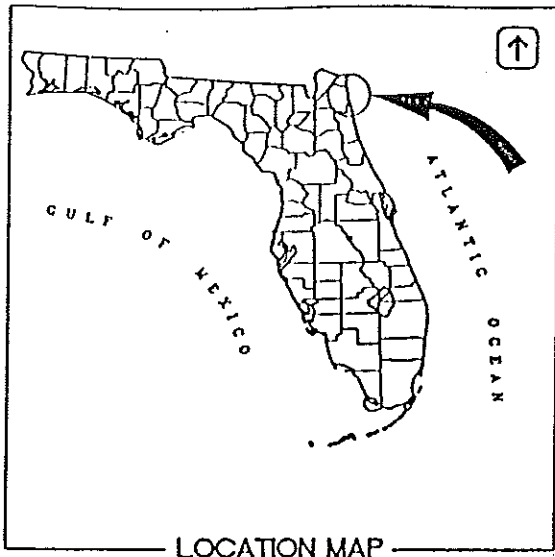
Annually, a coastal engineering analysis would be performed of all survey data with an emphasis on quantifying MHWL trends, an island-wide sediment budget, seasonal or storm effects, beach fill performance, federal beach disposal performance, terminal groin field performance, etc. Twenty (20) copies of an annual report-of-findings would be submitted to the County for intended use and dissemination to other affected parties (i.e., City of Fernandina Beach, SAISSA, etc.). An oral presentation of findings would likewise be presented to the Board of County Commissioners upon request.

**Budget (Annual)**

|   |   |                   |
|---|---|-------------------|
| • | Survey (78 ranges) 2 @ \$34,000.          | \$68,000.         |
| • | Groinfield Condition Survey               | 5,000.            |
| • | Vertical Aerial Photography (once)        | 3,500.            |
| • | Oblique Aerial Photography (twice)        | 1,000.            |
| • | Engineering Analysis/Data Base Management | 35,000.           |
| • | Report Preparation                        | 20,000.           |
| • | Report Reproduction                       | <u>2,000.</u>     |
|   | <b>Total</b>                              | <b>\$134,500.</b> |

**State Funding Request**

|   |        |           |
|---|--------|-----------|
| • | At 50% | \$67,250. |
|---|--------|-----------|



NASSAU COUNTY COMPREHENSIVE BEACH  
MONITORING PROGRAM

olsen associates, inc.

## NASSAU COUNTY BEACH MANAGEMENT PLAN

### SHORT TERM (FY 99/2000)

#### PROJECT ELEMENTS - Action Required For 1999 Funding

- Comprehensive Monitoring of Amelia Island Oceanfront Shoreline (Ft. Clinch to Nassau Sound)
- South Beach Terminal Groinfield (Phase I Analysis)

#### FUNDING REQUIREMENTS/COST SHARING ELIGIBILITY

- Monitoring - \$134,500.  
(With 50% Cost Sharing - \$67,250)
- Terminal Structure (Phase I) - \$100,000 to \$120,000  
(Funding By State/SAISSA)

olsen associates, inc.

## NASSAU COUNTY BEACH MANAGEMENT PLAN

### LONG TERM (FY 2000 and Beyond)

#### PROJECT ELEMENTS - Action Required For Purposes of State Programming (Only)

- Annual Beach Monitoring
- South Beach Terminal Groin Field (Phases II and III)
- City of Fernandina Shore Protection Project (Currently Programmed By City)
- SAISSA Shore Protection Project Maintenance
- Beach Tilling/Scarp Removal
- Inlet Management Plan Implementation



**SAISS-MSBU/Nassau County Long Range  
Beach Erosion Control Program Budget**

**March, 1999**

(all numbers in 1999 dollars)

|   | Fiscal<br>Year<br>2000 | Fiscal<br>Year<br>2001 | Fiscal<br>Year<br>2002 | Fiscal<br>Year<br>2003 | Fiscal<br>Year<br>2004 |
|---|------------------------|------------------------|------------------------|------------------------|------------------------|
| <b>1.0 Monitoring</b>   |                        |                        |                        |                        |                        |
| <b>1.1 Amelia Island Comprehensive Beach Monitoring Program</b> |                        |                        |                        |                        |                        |
| a. Tourist Development Council                                  | 67,250                 | 67,250                 | 67,250                 | 67,250                 | 67,250                 |
| b. State Match (1)  | <u>67,250</u>          | <u>67,250</u>          | <u>67,250</u>          | <u>67,250</u>          | <u>67,250</u>          |
| c. Subtotal   | 134,500                | 134,500                | 134,500                | 134,500                | 134,500                |
| <b>1.2 Beachfill tilling and escarpment removal</b>             |                        |                        |                        |                        |                        |
| a. SAISS-MSBU   | 11,400                 | 11,400                 | 11,400                 | 11,400                 | 11,400                 |
| b. State Match (2)  | <u>3,600</u>           | <u>3,600</u>           | <u>3,600</u>           | <u>3,600</u>           | <u>3,600</u>           |
| c. Subtotal   | 15,000                 | 15,000                 | 15,000                 | 15,000                 | 15,000                 |
| <b>2.0 Terminal Structure</b>                                   |                        |                        |                        |                        |                        |
| <b>2.1 Feasibility study, Phase I</b>                           |                        |                        |                        |                        |                        |
| a. SAISS-MSBU   | 50,000                 |                        |                        |                        |                        |
| b. State match (1)  | <u>50,000</u>          |                        |                        |                        |                        |
| c. Subtotal   | 100,000                |                        |                        |                        |                        |
| <b>2.2 Engineering and Permitting, Phase II</b>                 |                        |                        |                        |                        |                        |
| a. SAISS-MSBU   |                        | 105,500                |                        |                        |                        |
| b. State match (1)  |                        | <u>105,500</u>         |                        |                        |                        |
| c. Subtotal   |                        | 211,000                |                        |                        |                        |
| <b>2.3 Construction, Phase III</b>                              |                        |                        |                        |                        |                        |
| a. SAISS-MSBU   |                        |                        | 1,095,000              |                        |                        |
| b. State match (1)  |                        |                        | <u>1,095,000</u>       |                        |                        |
| c. Subtotal   |                        |                        | 2,190,000              |                        |                        |
| <b>TOTALS</b>   |                        |                        |                        |                        |                        |
| a. SAISS-MSBU   | 61,400                 | 116,900                | 1,173,650              | 11,400                 | 11,400                 |
| b. Tourist Development Council                                  | 67,250                 | 67,250                 | 67,250                 | 67,250                 | 67,250                 |
| c. State match  | <u>120,850</u>         | <u>176,350</u>         | <u>1,098,600</u>       | <u>70,850</u>          | <u>70,850</u>          |
| d. Total  | <u>249,500</u>         | <u>360,500</u>         | <u>2,339,500</u>       | <u>149,500</u>         | <u>149,500</u>         |

Notes:

(1) 50% match

(2) 24% match

## BEACHFILL TILLING AND ESCARPEMENT REMOVAL

### *PROJECT DESCRIPTION*

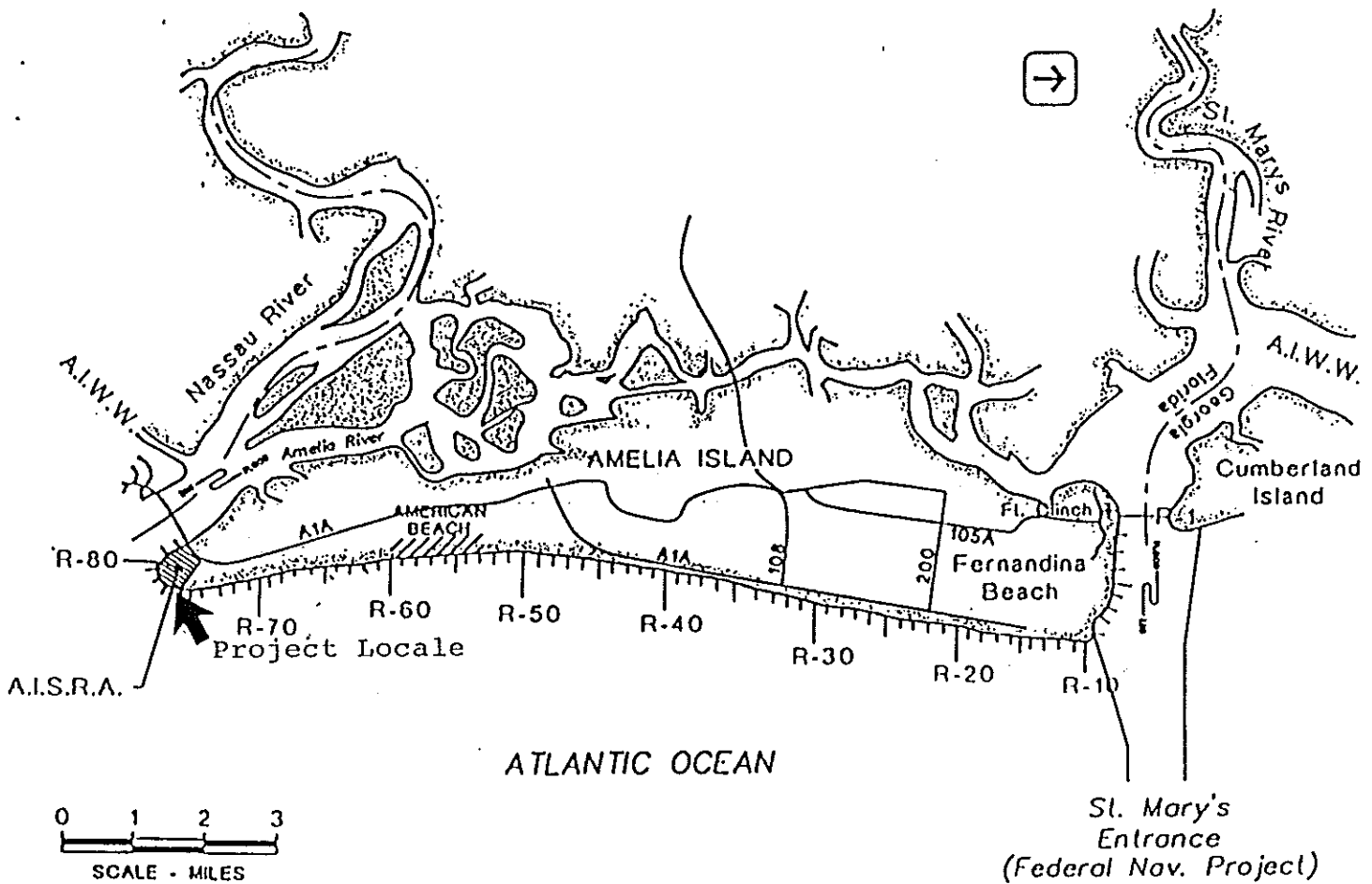
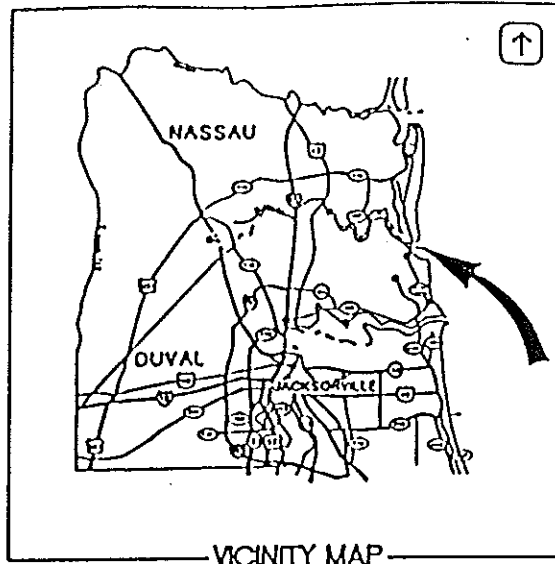
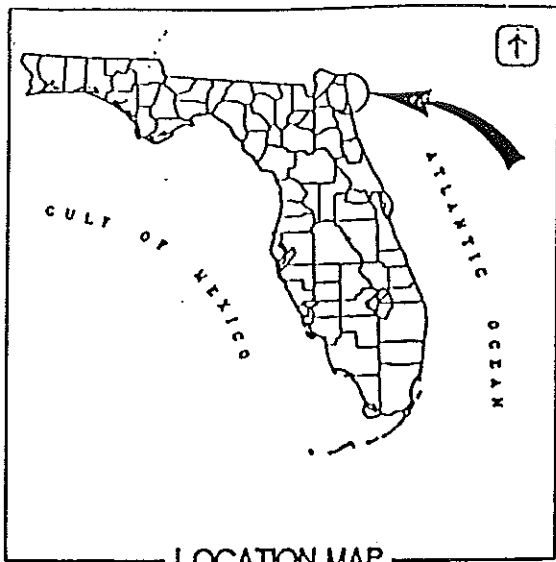
The Sea Turtle Protection Plan implemented by SAISS-MSBU Beach Restoration Project (COE-199301096 IP-ME; DEP-DBS9A0328/45237969) requires that:

- a. The nourished beach be tilled if compaction occurs.
- b. Escarpments along the project shoreline be removed immediately prior to turtle nesting season for up to three (3) years.

This work has been performed each year since the project's completion and is expected to continue. While the requirement to remove any escarpment has technically expired, the steep escarpment is an impediment to turtles and pedestrians alike and needs to be removed along with the tilling.

### *ANNUAL COST (1999)*

|                                |          |
|--------------------------------|----------|
| Tilling and Escarpment Removal | \$15,000 |
|--------------------------------|----------|



AMELIA ISLAND, FLORIDA  
 BEACH STABILIZATION  
 TERMINAL STRUCTURE  
 PHASES I & II

LOCATION MAP  
 NASSAU CTY.

Nassau County, FL.

**AMELIA ISLAND, FLORIDA  
BEACH STABILIZATION**

**TERMINAL STRUCTURE  
ENGINEERING/PERMITTING (PHASE II)  
(Funding Year 00/01)**

During Funding Year 99/00, a Phase I feasibility study is to be performed with respect to the placement of a permanent stabilizing structure or structure field at the south end of Amelia Island, Florida. A temporary sand-filled geotextile tube groin field was constructed in 1995 in that general locale. To date, the structural field has provided significant benefit with respect to minimizing end losses for an updrift 2.3M c.y. beach fill project.

A Phase II effort will provide for the formulation of design documents and permitting of the selected structural alternative. Both State and Federal Permits will be required. A Submerged Lands Lease for each structure will likewise be necessary.

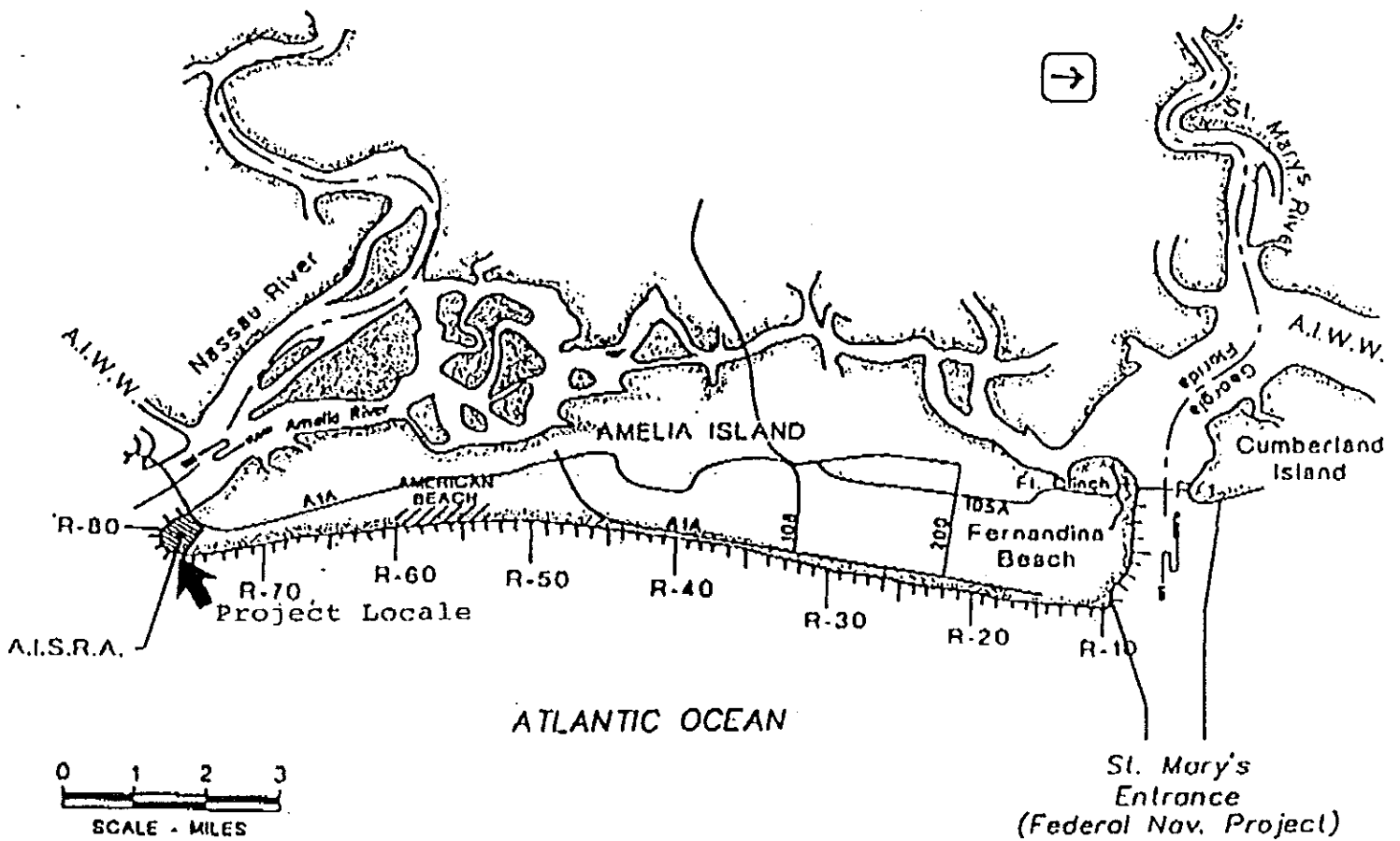
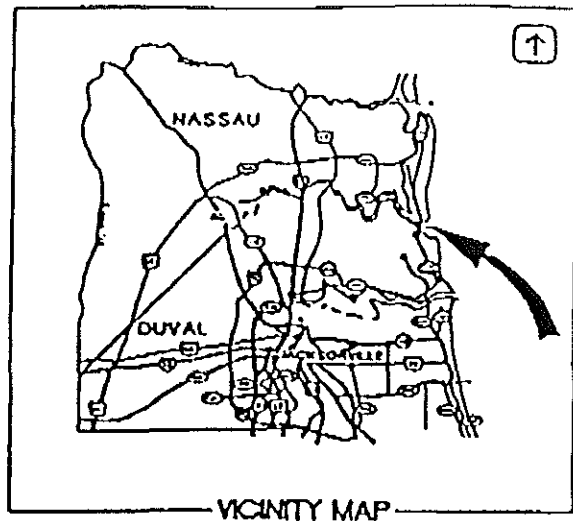
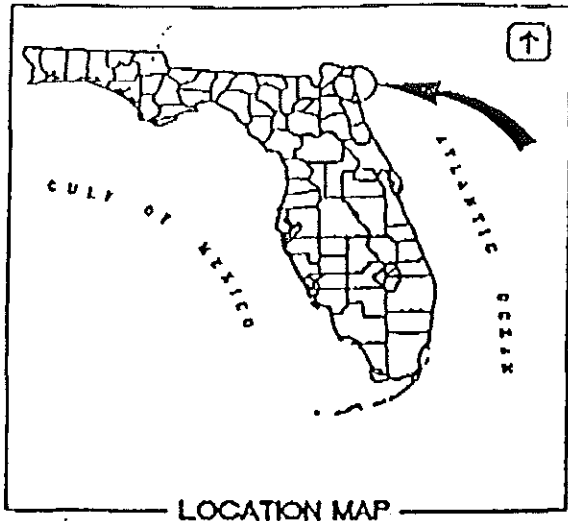
The duration of this Phase II work will be 12 months. A subsequent Phase III effort will address project construction activities.

**Budget**

|  |               |
|--|---------------|
| • Engineering and design documents       | \$140,000.    |
| • Survey - Site condition update         | 6,000.        |
| • Survey - Lease descriptions            | 5,000.        |
| • Permitting                             | 45,000.       |
| • Environmental assessment               | 10,000.       |
| • Coordination with Florida Park Service | <u>5,000.</u> |
| Budget                                   | \$211,000.    |

**State Funding Request (00/01)**

|          |            |
|----------|------------|
| • At 50% | \$105,000. |
|----------|------------|



AMELIA ISLAND, FLORIDA  
 BEACH STABILIZATION  
 TERMINAL STRUCTURE  
 PHASES I & II

LOCATION MAP  
 NASSAU CTY.

Nassau County, FL.

AMELIA ISLAND, FLORIDA  
BEACH STABILIZATION

TERMINAL STRUCTURE CONSTRUCTION (PHASE III)  
(Funding Year 01/02)

During Funding Year 99/00, a Phase I feasibility study is to be performed with respect to the placement of a permanent stabilizing structure or structure field at the south end of Amelia Island, Florida. A temporary sand-filled geotextile tube groin field was constructed in 1995 in that general locale. To date, the structural field has provided significant benefit with respect to minimizing end losses for an updrift 2.3M c.y. beach fill project. The Phase II effort, in funding Year 00/01, will provide for the formulation of design documents and permitting of the selected structural alternative.

The Phase III effort in Funding year 01/02 will address construction activities necessary for project implementation.

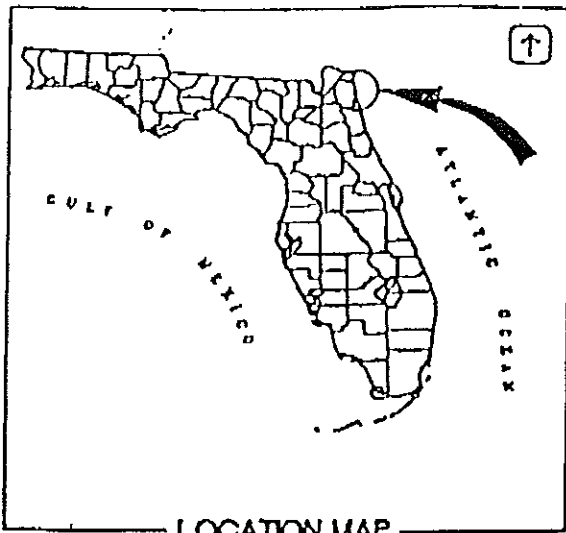
The duration of the work will be 12 months. Anticipated post-construction monitoring required by Permit is also addressed for a 36-month period.

Budget

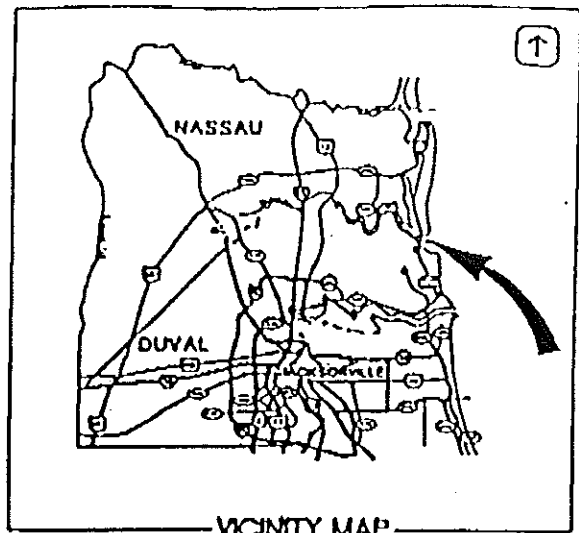
|   |                     |
|---|---------------------|
| • Bid and Contract Award                                | \$15,000.           |
| • Construction Mgt./Coordination                        | 45,000.             |
| • Q/C Survey Verifications                              | 5,000.              |
| • Turbidity Monitoring                                  | 15,000.             |
| • Turtle Monitoring                                     | 5,000.              |
| • Project Construction Budget                           | 2,000,000.          |
| • Post-Construction Monitoring<br>(3-Years @ \$30,000.) | 90,000.             |
| • Annual Scarp Removal<br>(3-Years @ \$5,000.)          | <u>15,000.</u>      |
|   | Budget \$2,190,000. |

State Funding Request (00/01)

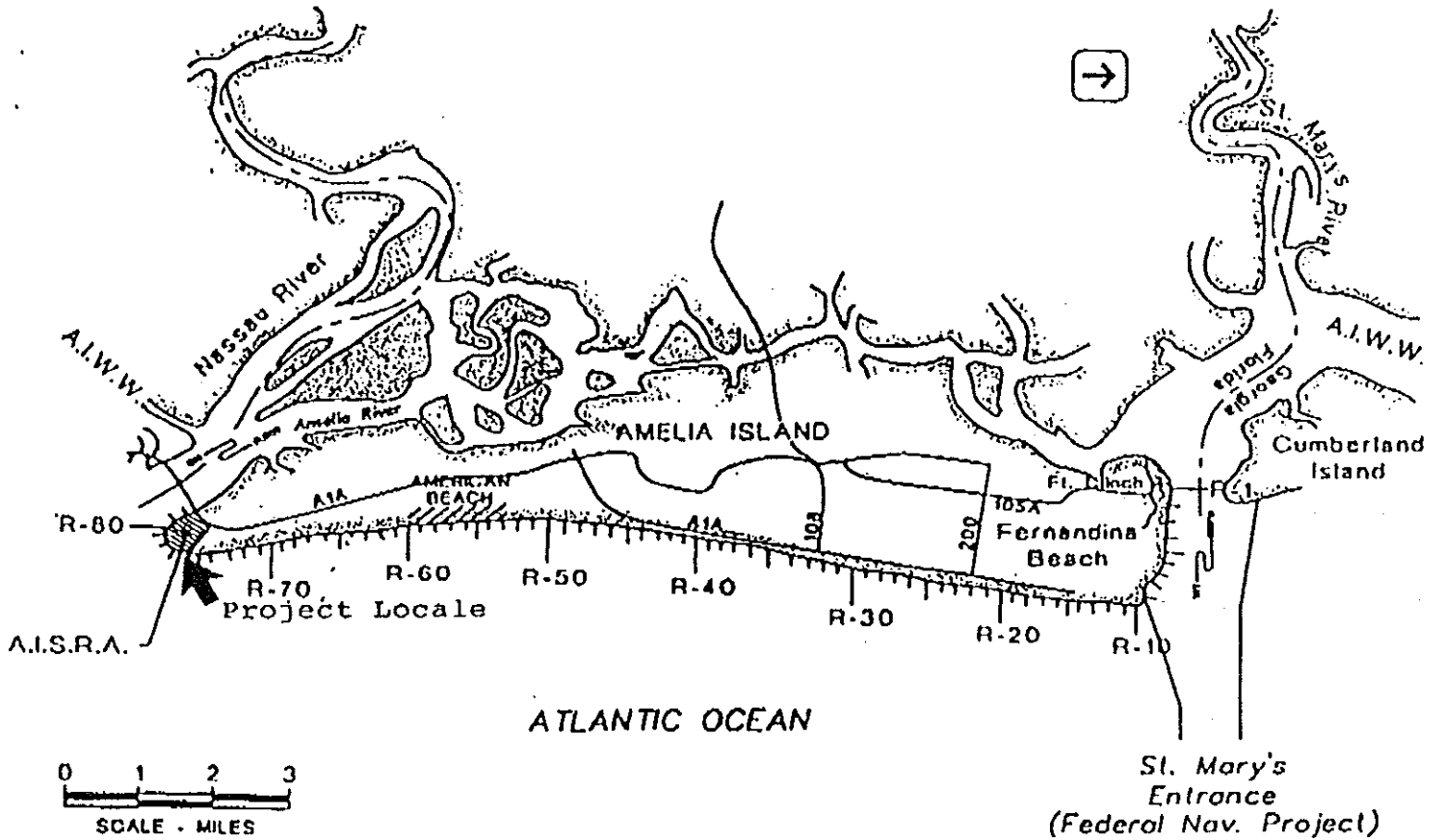
|          |              |
|----------|--------------|
| • At 50% | \$1,095,000. |
|----------|--------------|



LOCATION MAP



VICINITY MAP



AMELIA ISLAND, FLORIDA  
 BEACH STABILIZATION  
 TERMINAL STRUCTURE  
 PHASES I&II

LOCATION MAP  
 NASSAU CTY.