OFFICIAL FILE COPY
CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: April 21, 2009

To: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

From: George M. Burgess
County Manager

Agenda Item No. 5(B)

Resolution No. R-420-09

Subject: Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

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Attached, please find for your consideration an application by Miami-Dade County for a Class I permit. Also, attached is the recommendation of the Director of the Department of Environmental Resources Management and a resolution seeking the Board's approval of the aforesaid Class I permit.

Assistant County Manager

Memorandum

MIAMI-DADE COUNTY

Date: March 30, 2009

To: George M. Burgess
County Manager

From: Carlos Espinosa, P.E., Director
Environmental Resources Management

Subject: Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

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Recommendation

I have reviewed the Class I permit application submitted by Miami-Dade County. Based upon the applicable evaluation factors set forth in Section 24-48.3 of the Code of Miami-Dade County, Florida, I recommend that the Board of County Commissioners (BCC) approve the issuance of a Class I permit for the reasons set forth below.

Scope

The project site is located between 63rd Street and 67th Street in Miami Beach, at 103rd Street in Bal Harbour and between Terracina Avenue and 178th Street in Sunny Isles Beach located in Commission District 4 (Commissioner Heyman) and Commission District 5 (Commissioner Barreiro).

Fiscal Impact/Funding Source

Not applicable.

Track Record/Monitor

Not applicable.

Background

The subject Class I permit application involves the renourishment of three (3) segments of eroded beach through the placement of 304,600 cubic yards of sand between 63rd and 67th Streets in Miami Beach, at 103rd Street in Bal Harbour and between Terracina Avenue and 178th Street in Sunny Isles Beach, Miami-Dade County, Florida. The project is intended to mitigate for recent and continuing erosion to the area, protect infrastructure and property, and improve the beach for recreational and public use. The proposed project is required to be reviewed and approved by the BCC at a public hearing because the scope of work is not specifically referenced in Section 24-48.2 of the Code of Miami-Dade County as work that can be processed administratively with a short form application, and therefore requires a standard form application including a public hearing. Pursuant to Section 24-48.9 of the Code of Miami-Dade County, standard form Class I permit approvals are only valid for a period of three (3) years from the date of approval unless another time period is stated in the approving resolution. Due to the nature of this project, the applicant has requested that the permit for this project be valid for ten (10) years rather than the typical three (3) years to allow for multiple renourishment events as needed.

The subject Class I permit application seeks authorization for the placement of 304,600 cubic yards of sand. 156,080 cubic yards of sand shall be placed landward of the Mean High Water Line (MHWL) and the remaining 148,520 cubic yards of sand shall be placed waterward of the MHWL. A description of sand quantities is provided below:

- Miami Beach: 121,000 cubic yards shall be placed between 63rd and 67th Streets on a 1,900 foot beach segment between 80 - 360 linear feet from the erosion control line. 58,720 cubic yards shall be placed waterward of the MHWL covering an area of six point six (6.6) acres. The remaining 62,280 cubic yards shall be placed landward of the MHWL.

- Bal Harbour: 69,100 cubic yards shall be placed at 103rd Street on a 2,100 foot beach segment between 210 - 410 linear feet from the erosion control line. 34,400 cubic yards shall be placed waterward of the MHWL covering an area of five point five five (5.55) acres. The remaining 34,700 cubic yards shall be placed landward of the MHWL.

- Sunny Isles Beach: 114,500 cubic yards shall be placed between Terracina Avenue and 178th Street on a 5,400 foot beach segment between 20 - 210 linear feet from the erosion control line. 55,400 cubic yards shall be placed waterward of the MHWL covering an area of seven point nine two (7.92) acres. The remaining 59,100 cubic yards shall be placed landward of the MHWL.

The sand will be obtained from the Ortona mines in Central Florida. This source has been previously used for past renourishment projects throughout the state, including Miami-Dade County. The sand will be trucked to each project site utilizing dump trucks, and will either be placed directly on the beach, or temporarily staged at public park areas located west of the dune line. Once delivered, the sand will be loaded into all-terrain dump trucks, delivered to the proposed project sites, and graded to provide the storm protection and recreational benefits associated with the project.

No upland vegetation impacts are anticipated. In addition, a hardbottom survey report revealed that no significant adverse environmental impacts to benthic resources will occur as a result of this project. Hardbottom as well as nearshore habitats are located sufficiently offshore that no direct or indirect impacts are anticipated. In addition, short-term turbidity impacts are anticipated to be negligible. The sand will be placed on the beach dry so turbidity levels generated by the proposed project are anticipated to be very low.

The applicant is also requesting that the Class I permit be valid for a period of ten (10) years. Although standard form Class I permits are valid for three (3) years, staff noted that authorization for a ten (10) year period is consistent with the maximum timeframe allowed for extensions of standard form Class I permits in the Code of Miami-Dade County. DERM recommends approval of the requested ten (10) year permit which would allow for periodic renourishment of eroded segments of the beach as needed in order to maintain the storm protection functions of the beach for upland resources as well as appropriate recreational and environmental functions. The applicant will be required to notify DERM prior to performing any subsequent renourishment events.

The lands within the proposed project sites are owned by the Board of Trustees of the Internal Improvement Trust Fund of the State of Florida. The applicant has obtained a Florida Department of Environmental Protection Environmental Resource Consent of Use that grants Miami-Dade County authorization to conduct the proposed work (see Attachment F).

The proposed project has been designed in accordance with all relevant Miami-Dade County coastal construction criteria and is consistent with all other Miami-Dade County coastal protection provisions. Please find attached a DERM Project Report which sets forth the reasons the proposed project is recommended for approval by DERM pursuant to the applicable evaluation factors set forth in Section 24-48.3 of the Code of Miami-Dade County, Florida. The conditions, limitations, and restrictions set forth in the Project Report attached hereto are incorporated herein by references hereto.

Attachments

Attachment A: Class I Permit Application
Attachment B: Affidavit of Ownership and Hold Harmless Agreement
Attachment C: Owner/Agent Letter, Engineer Certification Letter and Project Sketches
Attachment D: Zoning Memorandum
Attachment E: Names and Addresses of Owners of All Riparian or Wetland Property within Three Hundred (300) Feet of the Proposed Work
Attachment F: Florida Department of Environmental Protection Environmental Resource Consent of Use
Attachment G: US Fish and Wildlife Services Biological Opinion Letter
Attachment H: DERM Project Report

NOTICE OF PUBLIC HEARING ON AN APPLICATION BY MIAMI-DADE COUNTY FOR A CLASS I PERMIT TO RENOURISH THREE (3) SEGMENTS OF ERODED BEACH ON MIAMI BEACH, SUNNY ISLES BEACH, AND BAL HARBOUR THROUGH THE PLACEMENT OF 304,600 CUBIC YARDS OF SAND FOR MULTIPLE RENOURISHMENT EVENTS AND TO AUTHORIZE THE TIME OF COMPLETION OF WORK OF THE SUBJECT PERMIT FOR A PERIOD OF TEN (10) YEARS

BOARD OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

NOTICE IS HEREBY GIVEN pursuant to Article IV, Division 1 of Chapter 24 of the Code of Miami-Dade County that the Board of County Commissioners of Miami-Dade County will hold and conduct a Public Hearing on a request by Miami-Dade County for a Class I permit to renourish three (3) segments of eroded beach on Miami Beach, Sunny Isles Beach, and Bal Harbour through the placement of 304,600 cubic yards of sand for multiple renourishment events and to authorize the time of completion of work of the subject permit for a period of ten (10) years between 63rd and 67th Streets in Miami Beach, at 103rd Street in Bal Harbour, and between Terracina Avenue and 178th Street in Sunny Isles Beach, Miami-Dade County, Florida. Such Public Hearing will be held on the 21st day of April 2009 at 9:30 AM at the County Commission Chambers on the 2nd Floor of the Stephen P. Clark Center at 111 NW 1st Street in Miami, Florida.

Plans and details concerning the work requested in the application may be reviewed by interested persons at the office of the Miami-Dade County Department of Environmental Resources Management, 6th Floor, 701 NW 1st Court, Miami, Florida 33136.

Oral statements will be heard and appropriate records made. For accuracy of records, all important facts and arguments should be prepared in writing in triplicate, with two copies being submitted to the Deputy Clerk of the County Commission at the hearing or mailed to her beforehand (Kay Sullivan, Deputy Clerk), 111 NW 1st Street, Stephen P. Clark Center, Suite 17-202, Miami, Florida 33128; and with one copy being submitted beforehand to the Miami-Dade County Department of Environmental Resources Management, 701 NW 1st Court, Miami, Florida 33136.

A person who decides to appeal any decision made by any Board, Agency, or Commission with respect to any matter considered at its meeting or hearing, will need a record of proceedings. Such person may need to ensure that a verbatim record of the proceedings is made, including the testimony and evidence upon which the appeal is to be based.

BOARD OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

HARVEY RUVIN, CLERK

BY: _____
Kay Sullivan, Deputy Clerk

MEMORANDUM

(Revised)

TO: Honorable Chairman Dennis C. Moss and Members, Board of County Commissioners

DATE: April 21, 2009

FROM: R. A. Cuevas, Jr. County Attorney

SUBJECT: Agenda Item No. 5(B)

Please note any items checked.

_____ "4-Day Rule" ("3-Day Rule" for committees) applicable if raised

_____ 6 weeks required between first reading and public hearing

_____ 4 weeks notification to municipal officials required prior to public hearing

_____ Decreases revenues or increases expenditures without balancing budget

_____ Budget required

_____ Statement of fiscal impact required

_____ Bid waiver requiring County Mayor's written recommendation

_____ Ordinance creating a new board requires detailed County Manager's report for public hearing

_____ Housekeeping item (no policy decision required)

✓ No committee review

Approved _____ Mayor

Veto _____

Override _____

Agenda Item No. 5(B)

4-21-09

RESOLUTION NO. R-420-09

RESOLUTION RELATING TO AN APPLICATION BY MIAMI-DADE COUNTY FOR A CLASS I PERMIT TO RENOURISH THREE (3) SEGMENTS OF ERODED BEACH ON MIAMI BEACH, SUNNY ISLES BEACH, AND BAL HARBOUR THROUGH THE PLACEMENT OF 304,600 CUBIC YARDS OF SAND FOR MULTIPLE RENOURISHMENT EVENTS AND TO AUTHORIZE THE TIME OF COMPLETION OF WORK OF THE SUBJECT PERMIT FOR A PERIOD OF TEN (10) YEARS

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board having considered all the applicable factors contained within Section 24-48.3 of the Code of Miami-Dade County, hereby approves the application by Miami-Dade County for a Class I permit to renourish three (3) segments of eroded beach on Miami Beach, Sunny Isles Beach, and Bal Harbour through the placement of 304,600 cubic yards of sand for multiple renourishment events and to authorize the time of completion of work of the subject permit for a period of ten (10) years between 63rd and 67th Streets in Miami Beach, at 103rd Street in Bal Harbour, and between Terracina Avenue and 178th Street in Sunny Isles Beach, Miami-Dade County, Florida, subject to the conditions set forth in the memorandum from the Director of the Miami-Dade County Department of Environmental Resources Management, a copy of which is attached hereto and made a part hereof. The issuance of this approval does not relieve the applicant from obtaining all applicable Federal, State, and local permits. The Class I Permit granted hereby shall be valid for ten (10) years from the date of issuance of the permit.

The foregoing resolution was offered by Commissioner **Sally A. Heyman**, who moved its adoption. The motion was seconded by Commissioner **Jose "Pepe" Diaz** and upon being put to a vote, the vote was as follows:

Dennis C. Moss, Chairman **aye**
Jose "Pepe" Diaz, Vice-Chairman **aye**

Bruno A. Barreiro	**aye**	Audrey M. Edmonson	**aye**
Carlos A. Gimenez	**aye**	Sally A. Heyman	**aye**
Barbara J. Jordan	**aye**	Joe A. Martinez	**aye**
Dorrin D. Rolle	**aye**	Natacha Seijas	**aye**
Katy Sorenson	**aye**	Rebeca Sosa	**aye**
Sen. Javier D. Souto	**aye**		

The Chairperson thereupon declared the resolution duly passed and adopted this 21st day of April, 2009. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: **Kay Sullivan**
Deputy Clerk

Approved by County Attorney as to form and legal sufficiency. PST

Peter S. Tell

Attachment A

Class I Permit Application

MIAMI-DADE COUNTY

Class I
Permit Application

1. Application number	2. Date Day/Month/Year	3. For official use only
2003-CLI-PER-00221		

4. Applicant Information:

Name: Miami - Dade County
Address: 111 N.W. 1st Street, 29th Floor
Miami, FL Zip Code: 33128
Phone #: 305-375-2911 Fax #:

5. Applicant's authorized permit agent

Name: Marina Blanco-Pape. P.E.
Address: 701 N.W. 1st Court, 5th Floor
Miami, FL Zip Code: 33136
Phone #: 305-372-6950 Fax #: 305-372-6425

6. Describe the proposed activity, its purpose and intended use, including a description of the type of structures, if any, to be erected on fills, or pipe or float-supported platforms, and the type, composition and quantity of materials to be discharged or dumped and means of conveyance.

SEE ATTACHMENT 1

	Dredged/Excavated		Filled/Deposited	
Volume of Material:	CY	CY	CY	CY
	Waterward of O.H.W. or M.H.W.	Landward of O.H.W. or M.H.W.	Waterward of O.H.W. or M.H.W.	Landward of O.H.W. or M.H.W.

7. Proposed Use: (Check One)

- ☐ Private
- ☒ Public
- ☐ Commercial
- ☐ Other

8. Names and addresses of adjoining property owners whose property also adjoins the waterway.

Name: See Attachment 2
Address:
Zip Code

Name: See Attachment 2
Address:
Zip Code

9. Location where proposed activity exists or will occur.

Street Address: See Attachment 3
Latitude Longitude
Section Township Range
State County In City or Town Near City Or Town

10. Name of waterway at location of the activity.

Atlantic Ocean

11. Date activity is proposed to:
Commence April 2009 Be completed January 2011

12. Is any portion of this activity for which authorization is sought now complete?
☐ Yes
☒ No
If answer is "yes", give reasons in the remarks section. Indicate the existing work on the drawings.
Month and Year the activity was completed

13. List all approvals or certifications required by other Federal, state or local agencies for any structures, construction, discharges, deposits or other activities described in this application, including whether the project is a Development of Regional Impacts.

Issuing Agency	Type of Approval	Identification Number	Date of Application	Date of Approval
FDEP	Joint Coastal	JCP0233882-004-JM	April 7,2008	3/24/09
CORPS.	Dredge&Fil	SAJ2008-1684 (LP-Ins)	April 7,2008	Pending

14. Has any other agency denied approval for any activity directly related to the activity described herein?
☐ Yes
☒ No

15. Remarks

16. Estimated project cost = $10,000,000.00

17. Contractor's name and address
Name: Not Yet License #:
Address: Known
Zip Code:
Phone #: Fax #:

18. Application is hereby made for a permit or permit(s) to authorize the activities described herein. I agree to provide any additional information/data that may be necessary to provide reasonable assurance or evidence to show that the proposed project will comply with the applicable State Water Quality Standards or other environmental protection standards both during construction and after the project is completed. I also agree to provide entry to the project site for inspectors from the environmental protection agencies for the purpose of making the preliminary analyses of the site and monitoring permitted works, if permit is granted. I certify that I am familiar with the information contained in this application and that to the best of my knowledge and belief, such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities.
Alex Munoz, Asst. County Manager- Miami-Dade County
Signature of owner
Date 4/1/09

19. To obtain proprietary authorization for work on state-owned submerged lands, please include an additional copy of the following:
☒ 8½ x 11 Location Map
☒ 8½ x 11 Project Drawing
☒ Copy of Application

SUBSCRIBED AND SWORN TO ME THIS 1 DAY OF April, 20 09 BY Alex Munoz.
☒ PERSONALLY KNOWN ☐ PRODUCED IDENTIFICATION (PLEASE CHECK ONE)
TYPE OF ID PRODUCED
NOTARY PUBLIC

INGRID BETHUNE
Notary Public - State of Florida
My Commission Expires Feb 21, 2010
Commission # DD 485901
Bonded By National Notary Assn.

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Class I Permit Application
Beach Renourishment – Miami Beach, Sunny Isles and Bal Harbour

Attachment 1
Description of Proposed Work, Its Purpose and Intended Use

The proposed work is to renourish three (3) segments of eroded beach on Miami Beach, Sunny Isles Beach, and Bal Harbour through the placement of 304,600 cubic yards of sand for multiple renourishment events and to authorize the time of completion of work of the subject permit for a period of ten (10) years

Volume of proposed sand:

- Miami Beach: 121,000 cubic yards shall be placed between 63rd and 67th Streets on a 1,900 foot beach segment between 80 - 360 linear feet from the erosion control line. 58,720 cubic yards shall be placed waterward of the MHWL covering an area of six point six (6.6) acres. The remaining 62,280 cubic yards shall be placed landward of the MHWL.

- Bal Harbour: 69,100 cubic yards shall be placed at 103rd Street on a 2,100 foot beach segment between 210 - 410 linear feet from the erosion control line. 34,400 cubic yards shall be placed waterward of the MHWL covering an area of five point five five (5.55) acres. The remaining 34,700 cubic yards shall be placed landward of the MHWL.

- Sunny Isles Beach: 114,500 cubic yards shall be placed between Terracina Avenue and 178th Street on a 5,400 foot beach segment between 20 - 210 linear feet from the erosion control line. 55,400 cubic yards shall be placed waterward of the MHWL covering an area of seven point nine two (7.92) acres. The remaining 59,100 cubic yards shall be placed landward of the MHWL.

Composition of sand:

All sand shall meet the specifications set forth in the FDEP Permit.

Class I Permit Application
Beach Renourishment – Miami Beach, Sunny Isles and Bal Harbour
Attachment 2

Names & address of adjoining owners whose property also adjoins the waterway within the Sunny Isles Area:

1) Rialco Inc.
   Property Address:
   115 Ocean Blvd.
   Golden Beach, FL 33160

   Folio# 19-1235-003-0030

2) Muriel Scemla.
   Property Address:
   105 Ocean Blvd.
   Golden Beach, FL 33160

   Folio# 19-1235-003-0020

3) Bradely I. Meier
   Property Address:
   101 Ocean Blvd.
   Golden Beach, FL 33160

Folio# 19-1235-003-0010

4) Regalia LLC
   Property Address:
   19505 Collins Avenue
   Sunny Isles Beach, FL 33160

   Folio#31-2202-005-0010

5) Angio Corp.
   242 units
   Property Address:
   19333 Collins Avenue
   Sunny Isles Beach, FL 33160

   Folio# 31-2202-041-2400

6) The Aventura Beach Blub Condo (from Legal Desc.)
   617 units

Property Address:
19201 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-034-0001

7) Ocean Two Condo (From Legal Desc.)
254 units
Property Address:
19111 Collins Avenue
Sunny Isles Beach, FL 33160

Folio # 31-2202-042-0001

8) Miami Beach Club and Motel Condo (From Legal Desc.)
108 units
Property Address:
19051 Collins Avenue
Sunny Isles Beach, FL 33160

Folio#31-2202-016-0001
*Note: there was an error on the PA website that depicts 2 separate folios for this property. The condo section of the PA office was notified of the error on 3/20/08.

9) Ocean Three Condo (From Legal Desc.)
216 units
Property Address:
189111 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-043-0001

10) Playa De Varadero IV Condo (from Legal Desc.)
347 units
Property Address: 18801 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-035-0001

11) M Resort Residences Condo (From Legal Desc.)
235 units
Property Address:
18683 Collins Avenue
Sunny Isles Beach, FL 33160

Folio#31-2202-045-0001

12) Millennium Condo (From Legal Desc.)
128 units
Property Address:
18671 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-040-0001

13) Golden Nugget Beach Club & Hotel Condo (From Legal Desc.)
121 units
Property Address:
18555 Collins Avenue
Sunny Isles Beach, FL 33160

Folio#31-2202-037-0001

14) TB Isle Resort, LP
18501 Collins Avenue
Sunny Isles Beach, FL 33160

Folio#31-2202-003-0190

15) Dezer Hotel Management, Ltd.
Property Address:
18401 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-003-0210

16) Sahara Beach Club Motel Condo. (From Legal Desc.)
147 units
18335 Collins Avenue
Sunny Isles Beach, FL

Folio# 31-2202-019-0001

17) Bluegrass Beach Club Motel Condo.
86 units
18325 Collins Avenue
Sunny Isles Beach, FL 33160

Folio#31-2202-018-0001

18) Royal Florida Revocable Statutory Trust
18101 Collins Avenue

Sunny Isles Beach, FL 33160

Folio# 31-2202-003-0260

19) Royal Florida Revocable Statutory Trust
18225 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-003-0230

20) Seashore Club South Condo (From Legal Desc.)
170 units
Property Address:
18975 Collins Avenue
Sunny Isles Beach, FL 33160

21) Trump Palace Condo (From Legal Desc.)
276 units
18101 Collins Avenue
Miami Beach, FL 33160

Folio# 31-2211-073-0001

22) Sunny Isles Luxury Ventures, Inc.
Property Address:
18001 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-003-0281

23) Golden Strand Ocean villa Resort Condo (From Legal Desc.)
158 units
Property Address:
17901 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 31-2202-017-0001

Names & address of adjoining owners whose property also adjoins the waterway within the Miami Beach Area:

1) North Carillon, LLC. C/o WSG Development Corp.
Property Address:
6899 Collins Avenue.
Miami Beach, FL 33141

Folio# 02-3211-001-0060

2) Carillon South Joint Venture C/o WSG Development Corp.
   Property Address:
   6801 Collins Avenue
   Miami Beach, FL 33141

   Folio# 02-3211-007-0460

3) The Sterling Condominium (from Legal Desc.)
   185 units
   Property Address:
   6767 Collins Avenue.
   Miami Beach, FL 33141

   Folio# 02-3211-009-0001

4) Ocean Sound 6747, LLC.
   Property Address:
   6757-59 Collins Avenue
   Miami Beach, FL 33141

   Folio# 02-3211-007-0430

5) Deauville Hotel Property LLC. (from Legal Desc.)
   540 units
   Property Address:
   6701 Collins Avenue
   Miami Beach, FL 33141

   Folio# 02-3211-054-0001 (F/A/U 02-3211-007-0420)

6) Audrey Lewis Et Al. Joel Sussman Tr. Lessee
   Property Address:
   6565 Collins Avenue
   Miami Beach, FL 33141

   Folio# 02-3211-007-0400

7) Key Monte Carlo LLC.
   Property Address:
   6551 Collins Avenue
   Miami Beach, FL 33141

   Folio # 02-3211-007-0390

8) The Mimosa Residences Condominium (from Legal Desc.)
61 units
Property Address:
6525 Collins Avenue
Miami Beach, FL 33141

Folio# 02-3211-080-0001

9) Bel-Aire on the Ocean Condominium (from Legal Desc.)
130 units
Property Address:
6515 Collins Avenue
Miami Beach, FL 33141

Folio# 02-3211-078-0001

10) City of Miami Beach
Property Address:
Listed as "parking lot"; no address given
Miami Beach, FL 33141

Folio# 02-3211-007-0350

11) City of Miami Beach
Property Address:
Listed as "parking lot"; no address given
Miami Beach, FL 33141

Folio# 02-3211-007-0340

12) City of Miami Beach-Park
Property Address:
6475 Collins Avenue
Miami Beach, FL 33141

Folio# 02-3211-07-0001

Mailing Address: City of Miami Beach
City Hall
1700 Convention Center Drive
Miami Beach, Fl. 33139

13) Mar Del Plata Condominium (from Legal Desc.)
152 units
Property Address:
6423 Collins Avenue
Sunny Isles Beach, FL 33160

Folio# 02-3211-033-0001

14) Akoya Condominium (from Legal Desc.)
421 units
Property Address:
6365 Collins Avenue
Miami Beach, FL 33141

Folio#02-3211-073-0001

15) The Casablanca Condominium (from Legal Desc.)
353 units
6345 Collins Avenue
Miami Beach, FL 33141

Folio# 02-3211-064-0001

Names & address of adjoining owners whose property also adjoins the waterway within the Bal Harbour Area:

1) WCI Communities Inc.
Property Address:
10295 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-05-0030

2) TRG Harbour House, Ltd.
Property Address:
10275 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-05-0010

3) Carlton Terrace Condo. (From Legal Desc.)
89 units
Property Address:
10245 Collins Avenue

Bal Harbour, FL 33154

Folio# 12-2226-024-0001

4) Bellini Condo. (From Legal Desc.)
78 units
Property Address:
10225 Collins Avenue
Bal Harbour, FL 33154

Folio#12-2226-041-0001

5) Kenilworth Condo (From Legal Desc.)
152 units
Property Address:
10205 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-022-0001

6) Bal Harbour Club, Inc.
Property Address:
10201 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-001-0190

7) The Plaza of Bal Harbour Condo (From Legal Desc.)
300 units
Property Address:
10185 Collins Avenue
Bal Harbour, FL 33154

Folio # 12-2226-029-0001

8) The Tiffany of Bal Harbour (From Legal Desc.)
136 units
Property Address:
10175 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-026-0001

9) Bal Harbour 101 Condo (From Legal Desc.)
201 units
Property Address:
10155 Collins Avenue
Bal Harbour, FL 33154

Folio# 12-2226-025-0001

Class I Permit Application
Beach Renourishment – Miami Beach, Sunny Isles and Bal Harbour
Attachment 3

Location where proposed activity exists or will occur:

Miami Beach:

Between 63rd and 67th Street (Oceanside) – Miami Beach, Florida
Latitude: 25°51'02.99"N
Longitude: 80°07'09.96"W
Section: 11
Township: 53S
Range: 42E

Bal Harbour:

In the vicinity of 103rd Street, South of Bakers' Fire Station #21 (Oceanside) – Bal Harbour, Florida
Latitude: 23°53'50.17"N
Longitude: 80°07'19.10"W
Section: 26
Township: 52S
Range: 42E

Sunny Isles

Between Terracina Ave. and 178th Street (Oceanside) – Sunny Isles, Florida
Latitude: 25°56'58.60"N
Longitude: 80°07'08.22"W
Section: 19, 31
Township: 51,52S
Range: 42E

Attachment B

Affidavit of Ownership
Hold Harmless Agreement

Affidavit of Ownership
and Hold Harmless Agreement

Personally Appeared Before Me, Alex Munoz, Assistant County Manager, that
(Property owner, lessee or Corporate Officer if owner is a corporation)
undersigned authority, and hereby swears and affirms under oath as follows:

1. That your affiant is the record owner or lessee of that certain property* more fully described as:

   See Attachment #3

   * may attach legal description from public records or plat book or a copy of the warranty deed

2. That your affiant is also the riparian and/or littoral owner or lessee of that certain property that is the subject matter of Application No. 2008-CLI-PER-00221 for a Class I permit under and pursuant to Section 24-48 of the Code of Miami-Dade County to construct or engage in the following activity:

   Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

3. That your affiant hereby swears and affirms its ownership or leasehold in the above noted property necessary for the work noted in Paragraph 2 above, and hereby agrees to: defend same and hold the County harmless from any and all liability, claims and damages of any nature whatsoever occurring, including or arising as a result of your affiant not having the proper title to all lands or proper leasehold to all lands that are the subject matter of this application.

STATE OF FLORIDA
COUNTY OF DADE

Alex Munoz, Assistant County Manager
Miami-Dade County
Owner/Applicant

BEFORE ME, the undersigned authority, personally appeared Alex Munoz, who, after being duly sworn, deposes and says that he/she has read the foregoing, and that the statements contained therein are true and correct to the best of his/her knowledge and belief.

Sworn to and subscribed before me this 1st (day) of April (month), 2009 (year).

INGRID BETHUNE
Notary Public - State of Florida
My Commission Expires Feb 21, 2010
Commission # DD 485901
Bonded By National Notary Assn.

Notary Signature _____ Notary Seal _____

Class I Permit Application
Beach Renourishment – Miami Beach, Sunny Isles and Bal Harbour
Attachment 3

Location where proposed activity exists or will occur:

Miami Beach:

Between 63rd and 67th Street (Oceanside) – Miami Beach, Florida
Latitude: 25°51'02.99"N
Longitude: 80°07'09.96"W
Section: 11
Township: 53S
Range: 42E

Bal Harbour:

In the vicinity of 103rd Street, South of Bakers' Fire Station #21 (Oceanside) – Bal Harbour, Florida
Latitude: 23°53'50.17"N
Longitude: 80°07'19.10"W
Section: 26
Township: 52S
Range: 42E

Sunny Isles

Between Terracina Ave. and 178th Street (Oceanside) – Sunny Isles, Florida
Latitude: 25°56'58.60"N
Longitude: 80°07'08.22"W
Section: 19, 31
Township: 51,52S
Range: 42E

Attachment C

Owner/Agent Letter, Engineer Certification Letter and Project Sketches

PERMIT APPLICANT/ AUTHORIZED AGENT STATEMENT

Note: Please insert applicable information

Date: February 11, 2009

To:
Miami Dade County DERM
Class I Permitting Program
701 NW 1st Court
Miami FL, 33136

Re: Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

By the attached Class I Standard Form permit application with supporting documents, I, Mrs. Marina Blanco-Pape, P.E., Chief, Water Management Division, DERM, am the Applicant Authorized Permit Agent and hereby request permission to perform the following: Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events. I understand that a Miami-Dade County Class I Standard Form Permit is required to perform this work.

If approval is granted for the proposed work by the Board of County Commissioners, complete and detailed plans and calculations of the proposed work shall be prepared by an engineer registered/licensed in the State of Florida in accordance with the minimum requirements of Chapter 24 of the Code of Miami-Dade County, Florida. Said plans and calculations shall be subject to the review and approval of the Department of Environmental Resources Management. The permit applicant will secure the services of an engineer registered/licensed in the State of Florida to conduct inspections throughout the construction period, and said engineer shall prepare all required drawings of record. In the event that the proposed work which is the subject of this Class I Permit application involves the cutting or trimming of a mangrove tree(s), a detailed plan of the proposed cutting or trimming shall be prepared by a licensed landscape architect and submitted to the Department for review and approval, and the permit applicant will secure the services of a licensed landscape architect to supervise the trimming or cutting.

Respectfully submitted,

Mrs. Marina Blanco-Pape, P.E.
Chief, Water Management Division
Miami-Dade County Department of Environmental Resources Management (DERM)
Applicant Authorized Permit Agent

MIAMI-DADE COUNTY
Carlos Alvarez, Mayor

Department of Environmental Resources Management
Water Management Division
701 NW 1st Court, 5th Floor
Miami, Florida 33136-3912
T 305-372-6529 F 305-372-6425

miamidade.gov

February 11, 2009

Miami-Dade County DERM
Class I Permitting Program
701 NW 1st Court
Miami, Florida 33136

Re: Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

Ladies and Gentlemen:

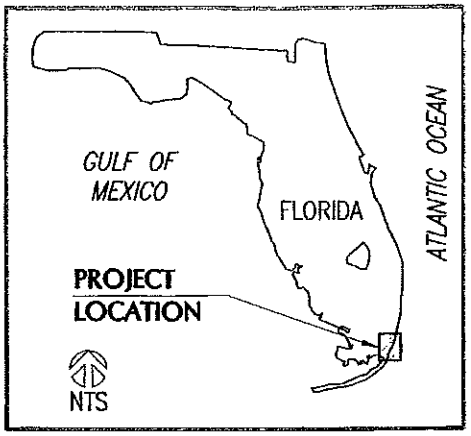
This letter will certify that I am an engineer registered/licensed in the State of Florida, qualified by education and experience in the area of construction, and that to the best of my knowledge and belief, the proposed work does not violate any laws of the State of Florida or any provision of the Code of Miami Dade County which may be applicable, that diligence and recognized standard practices of the engineering profession have been exercised in the engineer's design process for the proposed work, and in my opinion based upon my knowledge and belief, the following will not occur:

a. Harmful obstruction or undesirable alteration of the natural flow of the water within the area of the proposed work.
b. Harmful or increased erosion, shoaling of channels or stagnant areas of water. (Not applicable to Class IV Permits)
c. Material injury to adjacent property.
d. Adverse environmental impacts from changes in water quality or quantity. (Applicable to Class IV Permits only)

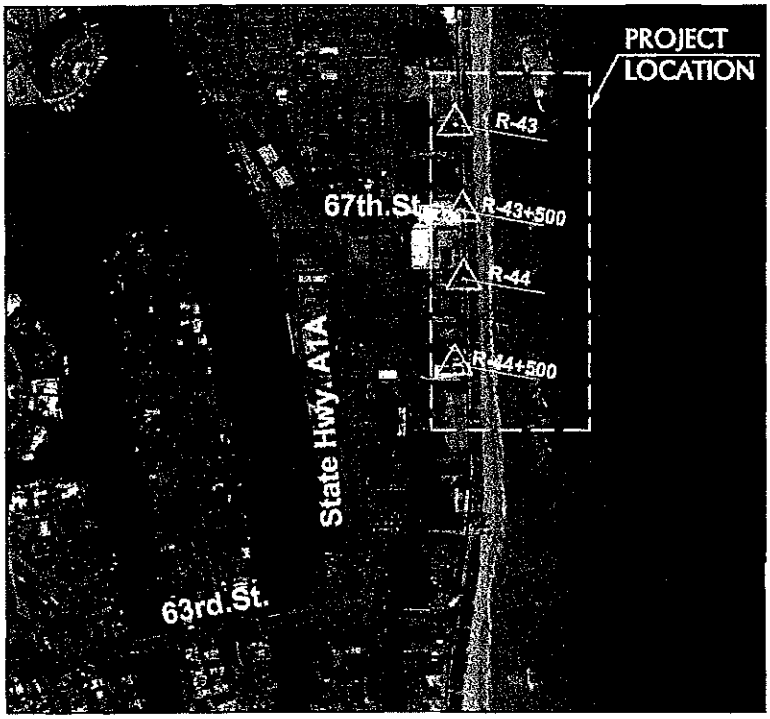
Further, I am, as Chief of DERM's Stormwater Planning Section, responsible to provide inspections throughout the construction period and to prepare a set of reproducible record prints of drawings showing changes made during the construction process based upon the marked-up prints, drawings, and other data furnished by the design engineers and the contractor to me.

Sincerely,

Juan A. Curiel, P.E. (P.E. #63890)
Chief, Stormwater Planning Section
Miami-Dade County-DERM



INDEX OF SHEETS	
Sheet Number	Sheet Title
1	LOCATION MAP
2	PLAN VIEW
3	MONUMENT R-43
4	MONUMENT R-43+500
5	MONUMENT R-44
6	MONUMENT R-44+500
7	GENERAL NOTES



0 500 1000
SCALE IN FEET
1" = 1000'

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APR 0 8 2008

T.K. BLANKENSHIP
FL. REG. 55910

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

APP. NO:	
PROJECT NO:	5687.06
DATUM:	NAVD
DRAWN BY:	GS
CHECKED BY:	AJ

SUBMITTED BY:

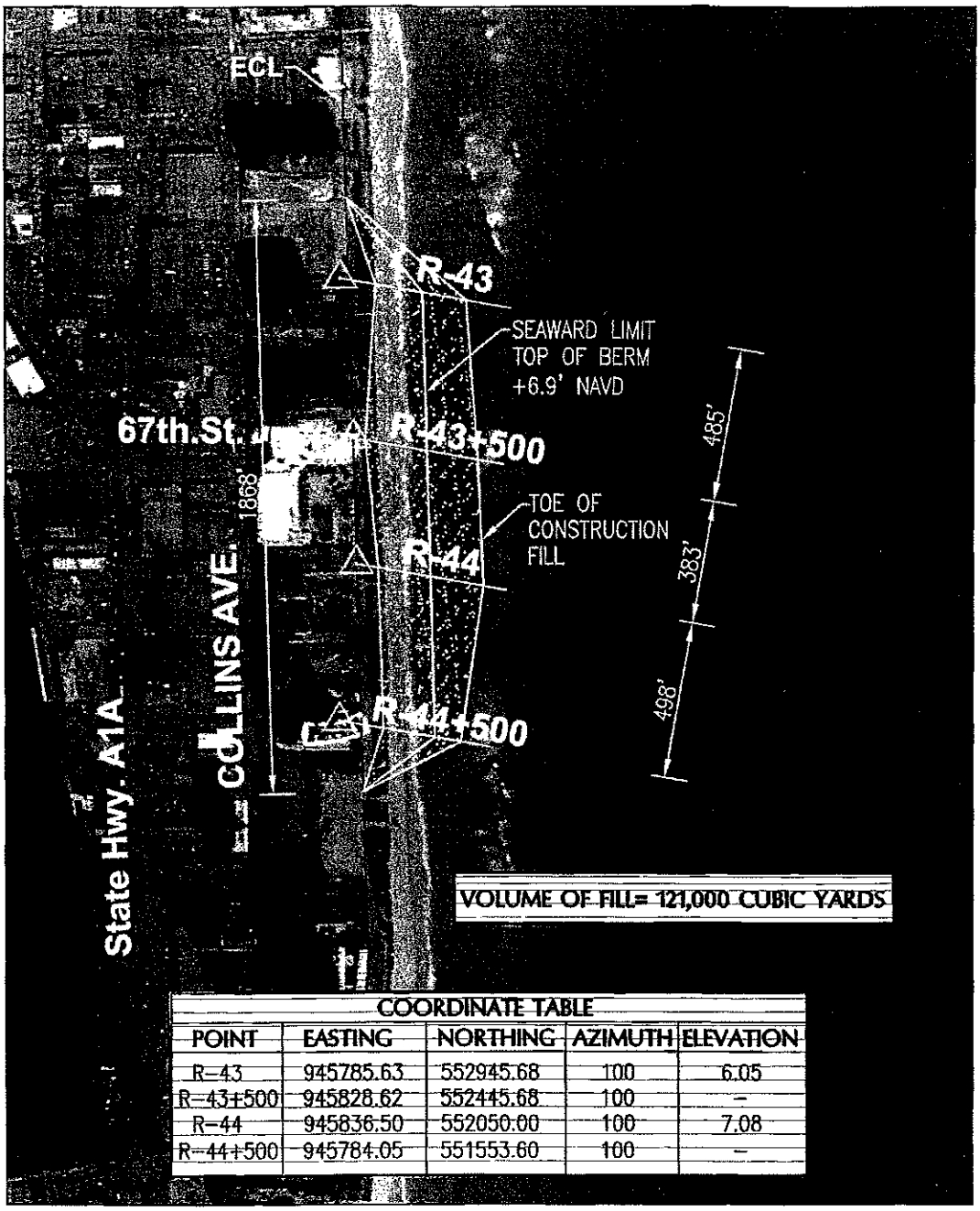
COASTAL SYSTEMS INTERNATIONAL, INC.
464 South Dixie Highway, Coral Gables, Florida 33146
Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsInt.com
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

LOCATION MAP

SHEET 1 OF 7



COORDINATE TABLE				
POINT	EASTING	NORTHING	AZIMUTH	ELEVATION
R-43	945785.63	552945.68	100	6.05
R-43+500	945828.62	552445.68	100	–
R-44	945836.50	552050.00	100	7.08
R-44+500	945784.05	551553.60	100	–

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APR 0 8 2008

T.K. BLANKENSHIP
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701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

PROJECT LOCATION

SHEET 2 OF 7

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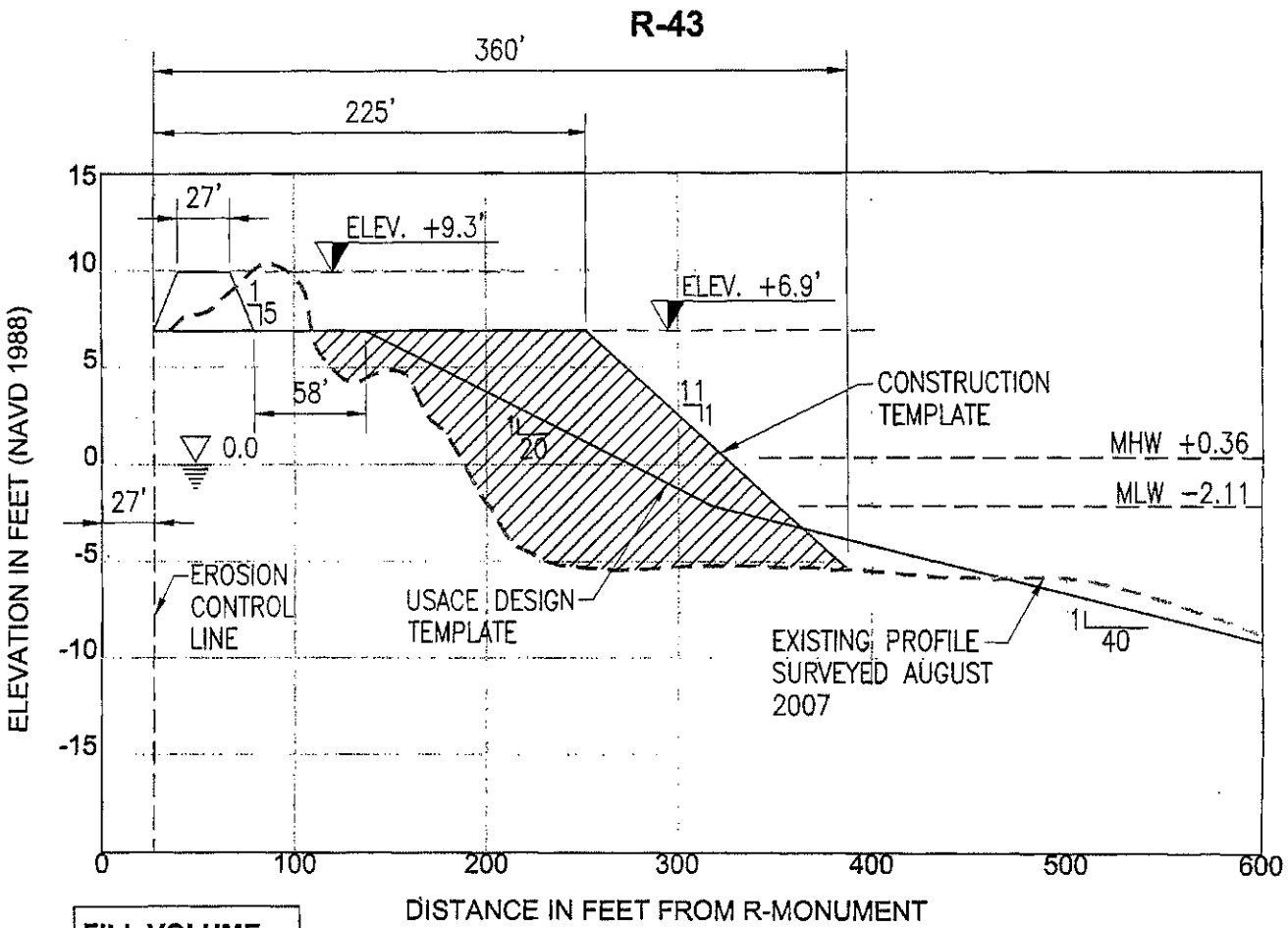

FILL VOLUME:
64.5 CY/FT

T.K. BLANKENSHIP
FL. REG. 55910

COASTAL SYSTEMS INTERNATIONAL, INC.
464 South Dixie Highway, Coral Gables, Florida 33146
Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsIntl.com
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

SUBMITTED BY:

APP. NO:
PROJECT NO: 5687.06
DATUM: NAVD
DRAWN BY: GS
CHECKED BY: AJ

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

MONUMENT R-43

SHEET 3 OF 7

31

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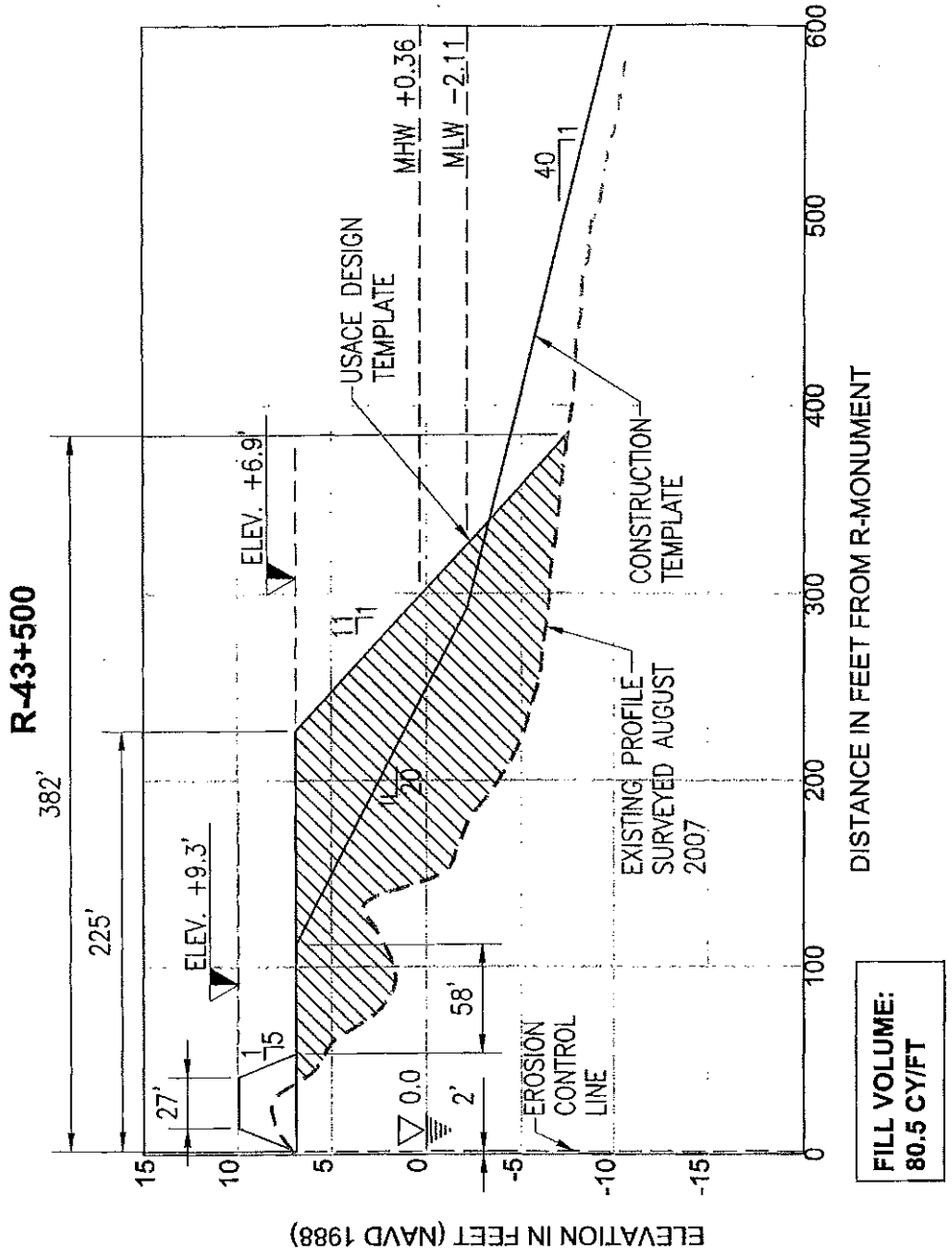

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APR 0 8 2008
T.K. BLANKENSHIP
FL. REG. 55910

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

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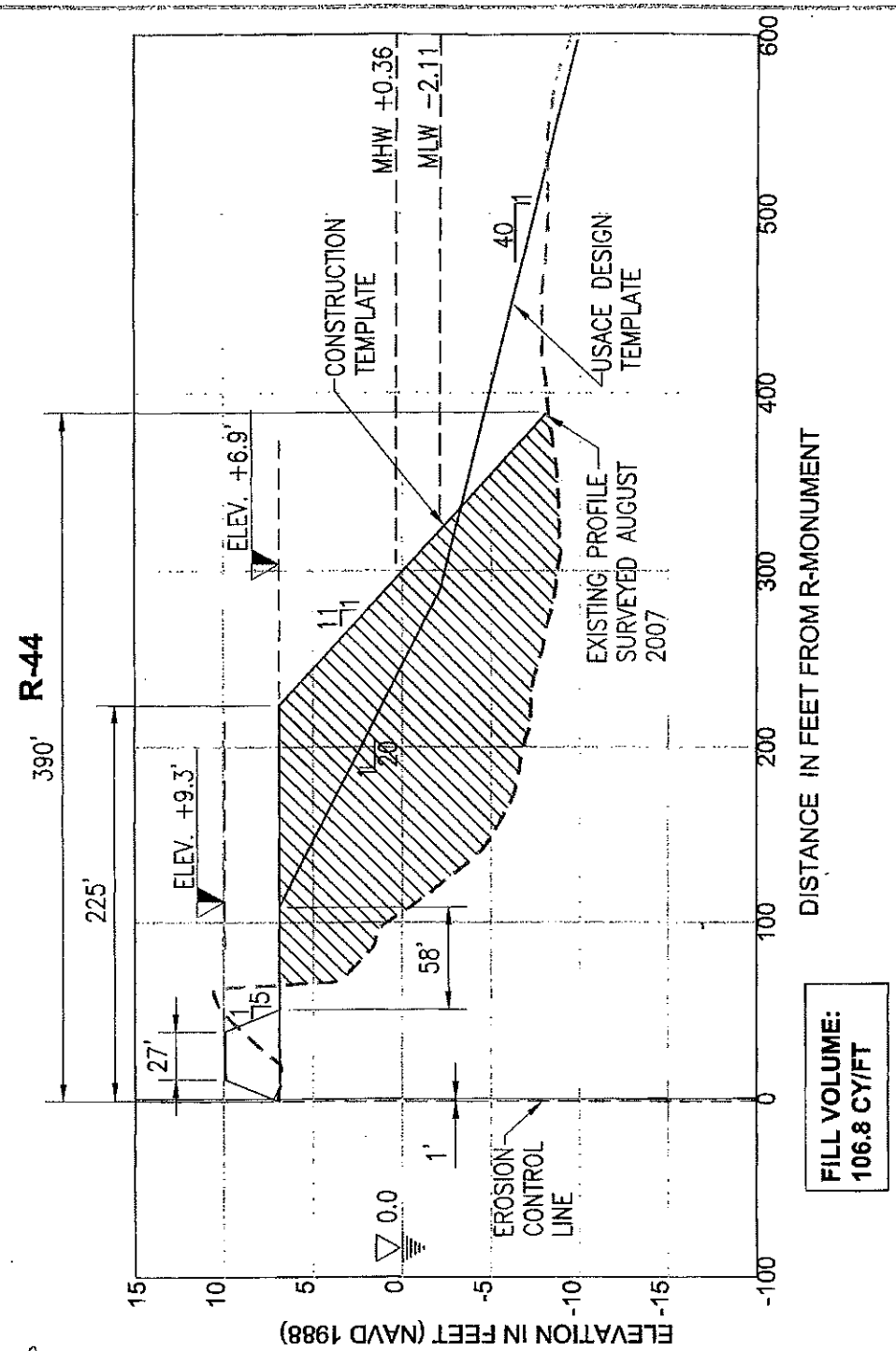
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

MONUMENT R-43+500

SHEET 4 OF 7



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APR 0 8 2008

T.K. BLANKENSHIP
FL. REG. 55910

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

SUBMITTED BY:

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STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

APP. NO:	
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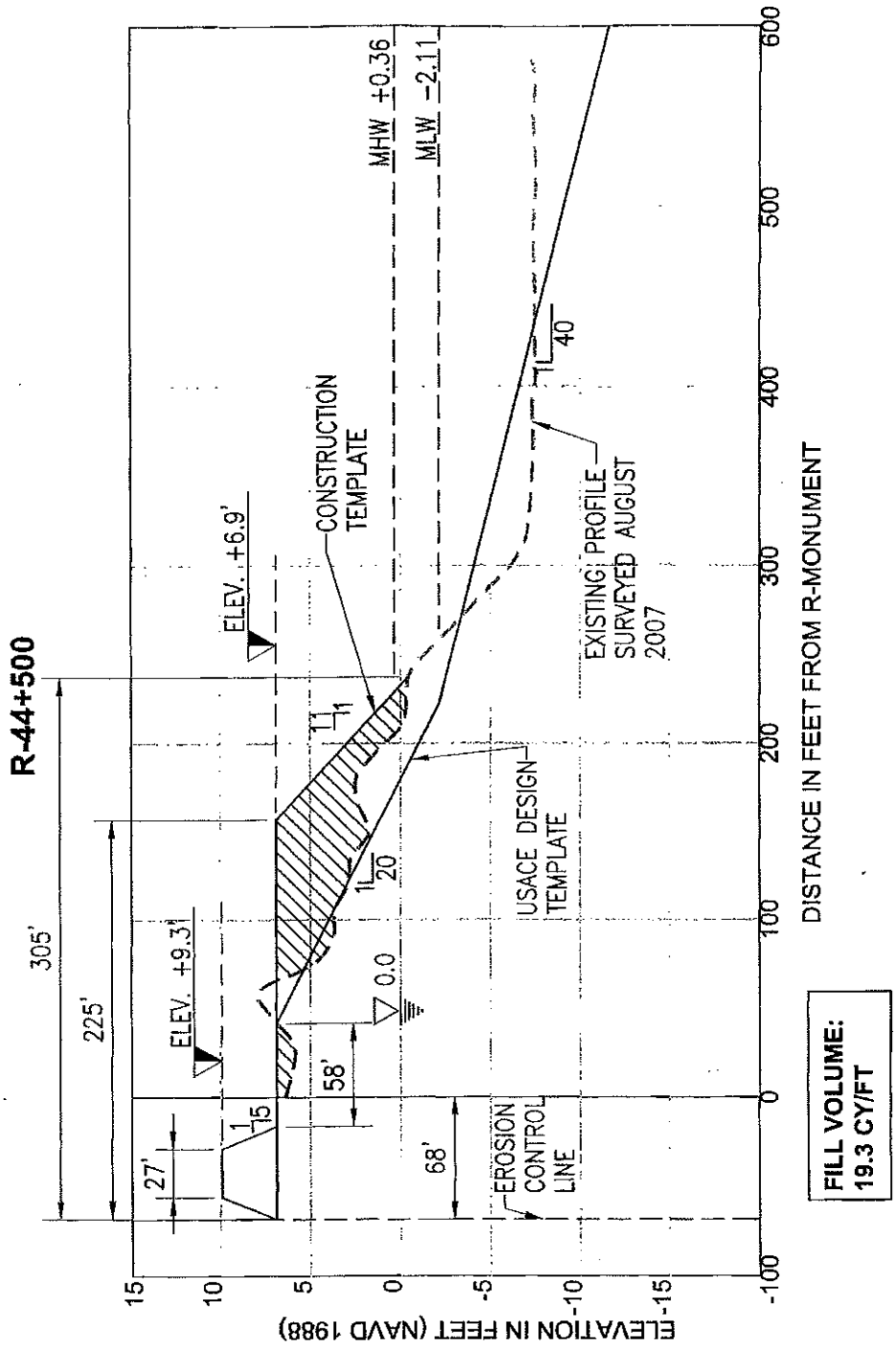
DRAWN BY:	GS
CHECKED BY:	AJ

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

MONUMENT R-44

SHEET 5 OF 7



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3/27/2008	DERM SUBMITTAL	APP. NO:	
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		DATUM:	NAVD
		DRAWN BY:	GS
		CHECKED BY:	AJ

SUBMITTED BY:

T.K. BLANKENSHIP
FL. REG. 55910

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Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

MIAMI BEACH
RENOURISHMENT PROJECT

MONUMENT R-44+500

SHEET 6 OF 7

GENERAL NOTES:

1. TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA WAS COLLECTED BY COASTAL PLANNING & ENGINEERING IN AUGUST 2007 DURING THE ANNUAL MONITORING SURVEY OF MIAMI DADE COUNTY IN CONJUNCTION WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

2. THE PLANE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83), FLORIDA EAST ZONE (0901).

3. THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).

4. MEAN HIGH WATER (MHW) IS +0.36 NAVD, MEAN LOW WATER (MLW) IS −2.11 NAVD. TIDAL DATUM INFORMATION BASED ON NOS TIDE STATION 8723080.

5. SAND TO BE OBTAINED FROM UPLAND SOURCES AND HAULED TO SITE VIA TRUCK.

6. ALL FILL MATERIAL PLACED SHALL BE CLEAN BEACH COMPATIBLE SAND THAT IS SIMILAR TO THAT ALREADY EXISTING AT THE BEACH SITE IN BOTH COLORATION AND GRAIN SIZE DISTRIBUTION AND SUITABLE FOR MARINE TURTLE NESTING. ALL SUCH FILL MATERIAL SHALL BE FREE OF CONSTRUCTION DEBRIS, ROCKS, OR OTHER FOREIGN MATTER, AND SHALL NOT CONTAIN, ON AVERAGE GREATER THAT 5% FINES (i.e. SILT AND CLAY PASSING THE #200 SIEVE) AND SHALL BE FREE OF GRAVEL OR COBBLES.

7. THE PROJECT COVERS AN AREA OF APPROXIMATELY 491,000 SQUARE FEET. THE LENGTH OF THE PROJECT IS 1,870 LINEAR FEET WITH A MAXIMUM SHORE NORMAL WIDTH OF 225 FEET.

8. USACE DESIGN TEMPLATE VERIFIED BY USACE JACKSONVILLE DISTRICT ON MARCH 26, 2008.

9. TOTAL PLACEMENT VOLUME OF FILL TO BE APPROXIMATELY 121,000 CUBIC YARDS.

F:\Project\5687.06\Permit Sketches\Working\(03-18-08) MIAMI BEACH PROFILES\MIAMI BEACH - General.dwg

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

APP. NO:	
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CHECKED BY:	AJ

SUBMITTED BY:

APR 2 8 2008
T.K. BLANKENSHIP
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CLIENT:
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701 N.W. 1st COURT, 5th FLOOR
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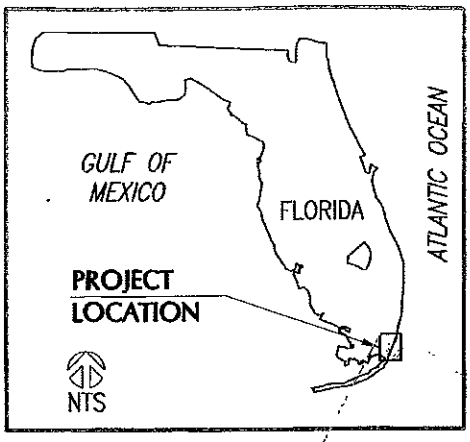
MIAMI BEACH
RENOURISHMENT PROJECT

GENERAL NOTES

SHEET 7 OF 7



INDEX OF SHEETS	
Sheet Number	Sheet Title
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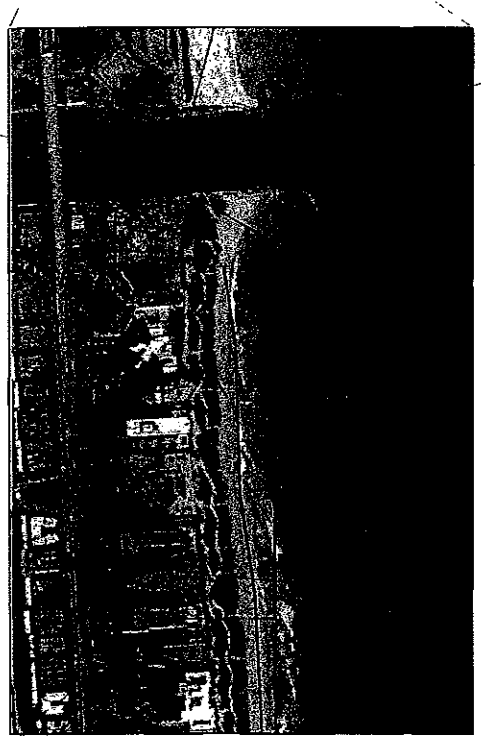
2	PLAN VIEW
3	PROFILES R-27
4	PROFILES R-28
5	PROFILES R-29
6	GENERAL NOTES



NTS

F:\Project\5687.06\Permit Sketches\Working\(03-13-08) BAL HARBOUR CONST. PROFILE\(08-02-08) BAL HARBOUR - Location.dwg

APR 0 8 2008

T.K. BLANKENSHIP
FL. REG. 55910

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

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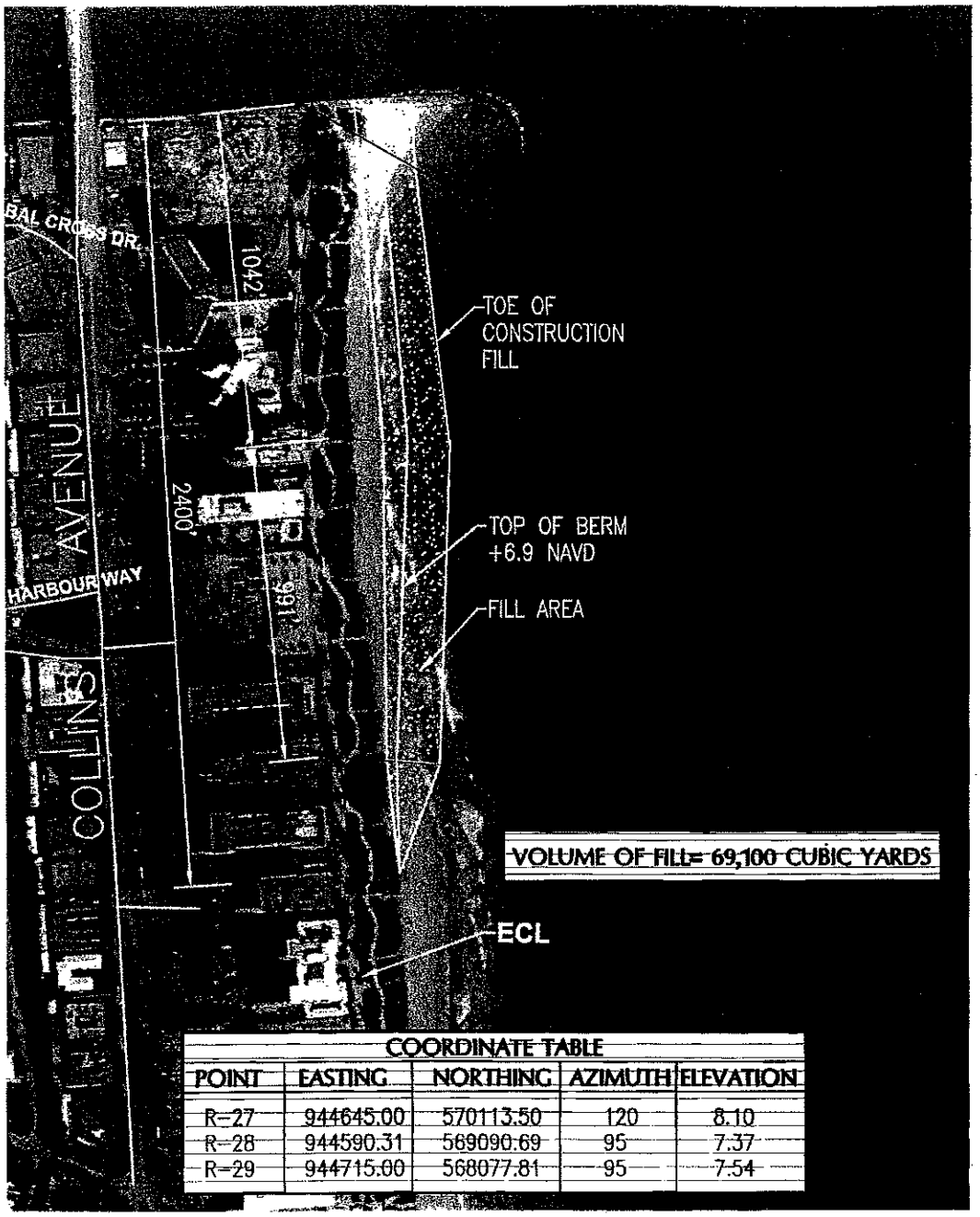
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

BAL HARBOUR BEACH
RENOURISHMENT PROJECT

LOCATION MAP

SHEET 1 OF 6



VOLUME OF FILL= 69,100 CUBIC YARDS

COORDINATE TABLE

POINT	EASTING	NORTHING	AZIMUTH	ELEVATION
R-27	944645.00	570113.50	120	8.10
R-28	944590.31	569090.69	95	7.37
R-29	944715.00	568077.81	95	7.54

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APR 0 8 2008

T.K. BLANKENSHIP
FL. REG. 55910

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

SUBMITTED BY:

COASTAL SYSTEMS INTERNATIONAL, INC.
464 South Dixie Highway, Coral Gables, Florida 33146
Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsInt.com
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

APP. NO:	
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DATUM:	NAVD
DRAWN BY:	GS
CHECKED BY:	AJ

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

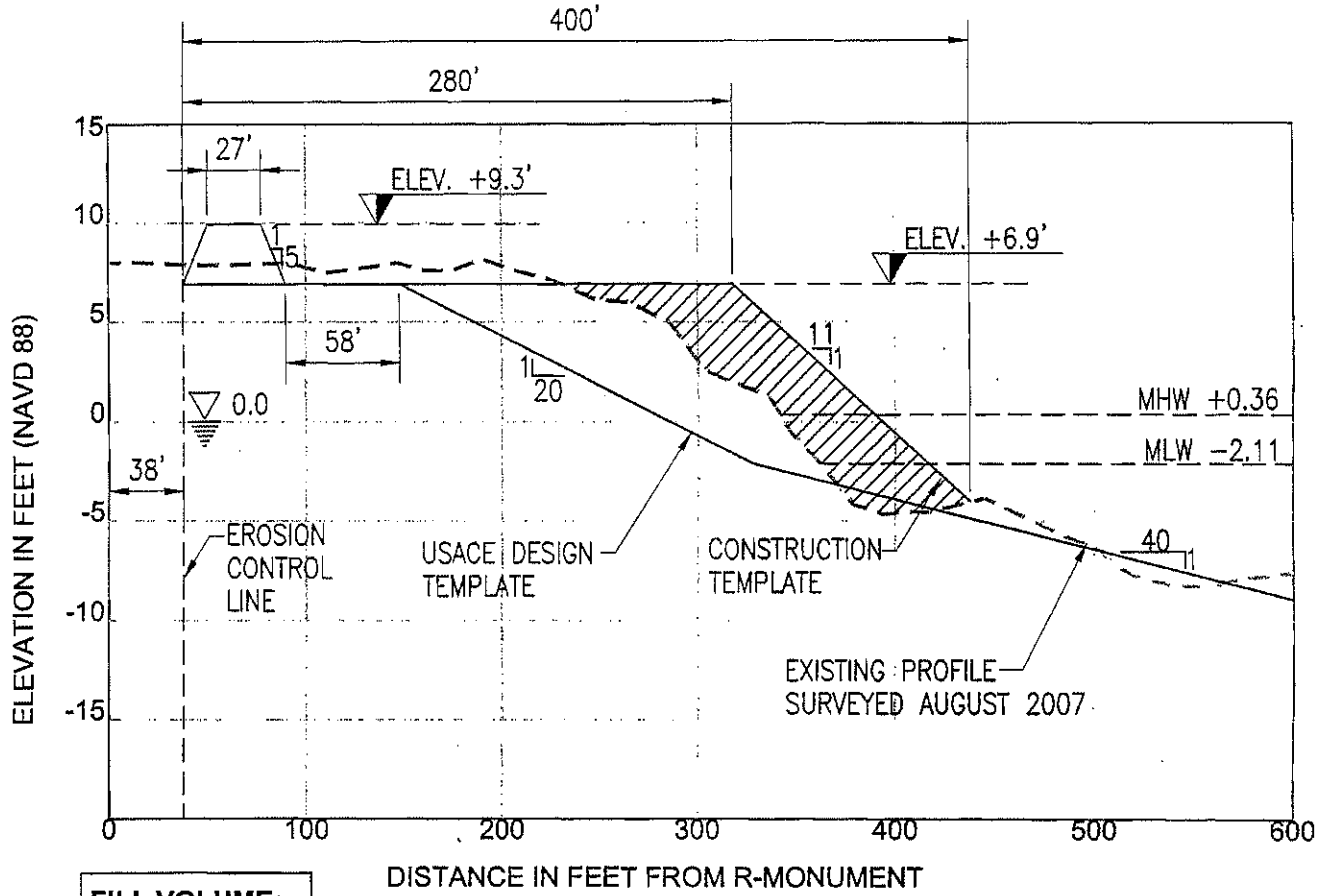
BAL HARBOUR BEACH RENOURISHMENT PROJECT

PLAN VIEW

SHEET 2 OF 6

F:\Project\5687.06\Permit Sketches\Working\(03-13-08) BAL HARBOUR CONST. PROFILE\(08-03-13) BAL HARBOUR R-27 - R-30 -const profile.dwg

R-27



FILL VOLUME:
23.5 CY/FT

APR 0 5 2008

T.K. BLANKENSHIP
FL. REG. 55510

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STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

BAL HARBOUR BEACH
RENOURISHMENT PROJECT

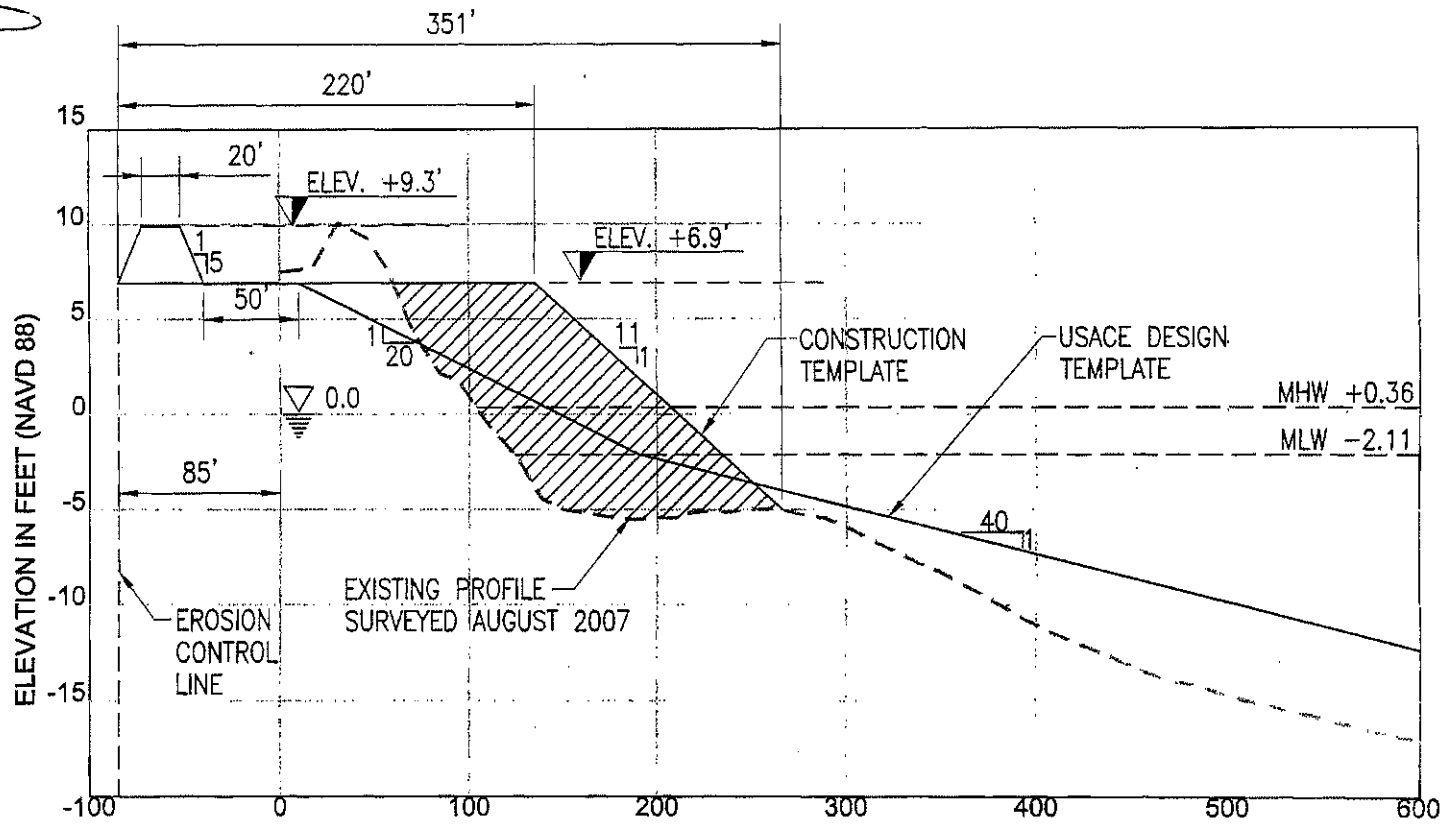
PROFILE R-27

SHEET 3 OF 6

38

F:\Project\5687.06\Permit Sketches\Working\(03-13-08) BAL HARBOUR CONST. PROFILE\(08-03-13) BAL HARBOUR R-27 - R-28 const. profile.dwg

R-28



FILL VOLUME: 45.5 CY/FT

APR 08 2008

T.K. BLANKENSHIP
FL. REG. 55910

APP. NO:	
PROJECT NO:	5687.06
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CHECKED BY:	AJ
DATE:	3/27/2008
DESCRIPTION:	DERM SUBMITTAL
SUBMITTED BY:	

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STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

CLIENT:
MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

BAL HARBOUR BEACH
RENOURISHMENT PROJECT

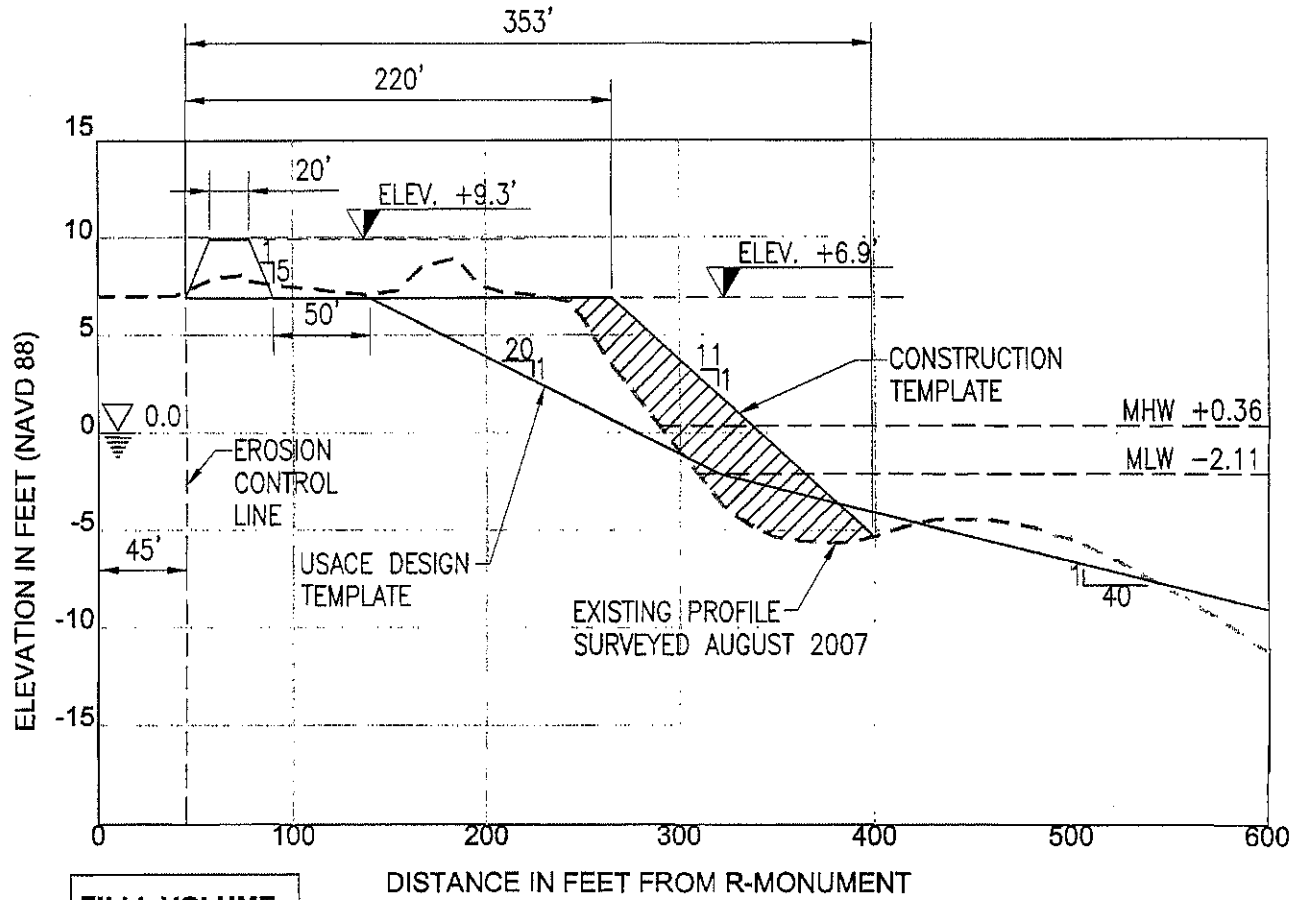
PROFILE R-28

SHEET 4 OF 6

39

F:\Project\5687.06\Permit Sketches\Working\(03-13-08) BAL HARBOUR CONST. PROFILE\(08-03-13) BAL HARBOUR R-27 - R-29-const profile.dwg

R-29



FILLL VOLUME: 20.5 CY/FT

APR 0 9 2008

T.K. BLANKENSHIP
FL. REG. 55910

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3/27/2008 DERM SUBMITTAL

DATE: DESCRIPTION:

SUBMITTED BY:

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CLIENT:

MIAMI-DADE COUNTY DERM
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

BAL HARBOUR BEACH
RENOURISHMENT PROJECT

PROFILE R-29

SHEET 5 OF 6

40

GENERAL NOTES:

1. TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA WAS COLLECTED BY COASTAL PLANNING & ENGINEERING DURING THE ANNUAL MONITORING SURVEY OF MIAMI DADE COUNTY PERFORMED IN AUGUST 2007. IN CONJUNCTION WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

2. THE PLANE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM 1983 (NAD 83), FLORIDA EAST ZONE (0901).

3. THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).

4. MEAN HIGH WATER (MHW) IS +0.36 NAVD, MEAN LOW WATER (MLW) IS −2.11 NAVD. TIDAL DATUM INFORMATION BASED ON NOS TIDE STATION 8723080.

5. SAND TO BE OBTAINED FROM UPLAND SOURCES AND HAULED TO SITE VIA TRUCK.

6. ALL FILL MATERIAL PLACED SHALL BE CLEAN BEACH COMPATIBLE SAND THAT IS SIMILAR TO THAT ALREADY EXISTING AT THE BEACH SITE IN BOTH COLORATION AND GRAIN SIZE DISTRIBUTION AND SUITABLE FOR MARINE TURTLE NESTING. ALL SUCH FILL MATERIAL SHALL BE FREE OF CONSTRUCTION DEBRIS, ROCKS, OR OTHER FOREIGN MATTER, AND SHALL NOT CONTAIN, ON AVERAGE GREATER THAT 5% FINES (i.e. SILT AND CLAY PASSING THE #200 SIEVE) AND SHALL BE FREE OF GRAVEL OR COBBLES.

7. THE PROJECT COVERS AN AREA OF APPROXIMATELY 410,000 SQUARE FEET. THE LENGTH OF THE PROJECT IS 2,400 LINEAR FEET WITH A MAXIMUM SHORE NORMAL WIDTH OF 280 FEET.

8. USACE DESIGN TEMPLATE VERIFIED BY USACE JACKSONVILLE DISTRICT ON JANUARY 25, 2008.

9. TOTAL PLACEMENT VOLUME OF FILL TO BE APPROXIMATELY 69,100 CUBIC YARDS.

F:\Project\5687.06\Permit Sketches\Working\(03-13-08) BAL HARBOUR CONST. PROFILE\(08-02-08) BAL HARBOUR - General.dwg

DATE:	DESCRIPTION:
3/27/2008	DERM SUBMITTAL

APP. NO:	
PROJECT NO:	5687.06
DATUM:	NAVD
DRAWN BY:	GS
CHECKED BY:	AJ

SUBMITTED BY:

COASTAL SYSTEMS INTERNATIONAL, INC.
464 South Dixie Highway, Coral Gables, Florida 33146
Tel: 305-661-3655 Fax: 305-661-1914 www.CoastalSystemsInt.com
STATE OF FLORIDA EB #7087
Coastal, Environmental, Civil Engineering and Management

T.K. BLANKENSHIP
FL. REG. 55910

CLIENT:
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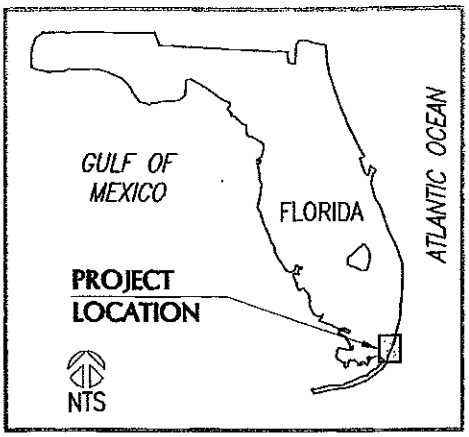
701 N.W. 1st COURT, 5th FLOOR
MIAMI, FL 33136

BAL HARBOUR BEACH
RENOURISHMENT PROJECT

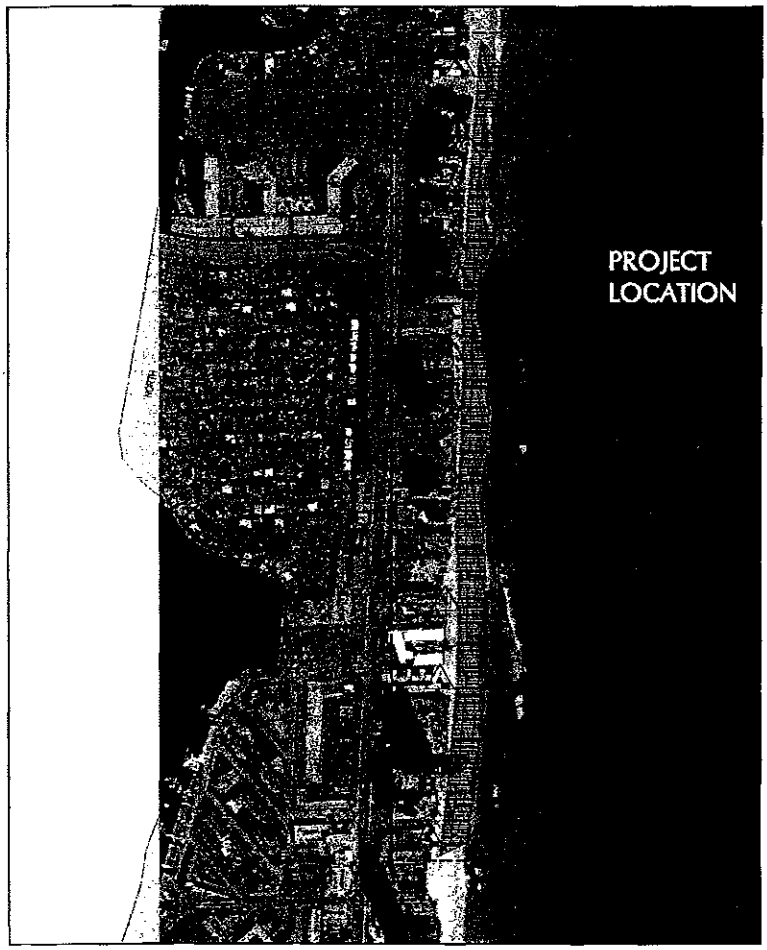
GENERAL NOTES

SHEET 6 OF 6



INDEX OF SHEET

1	LOCATION MAP
2	PROJECT LOCATION 1
3	PROJECT LOCATION 2
4	MONUMENTS R-7 & R-7+500
5	MONUMENTS R-8 & R-8+500
6	MONUMENTS R-9 & R-9+500
7	MONUMENTS R-10 & R-10+500
8	MONUMENTS R-11 & R-11+500
9	MONUMENT R-12
10	GENERAL NOTES



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APR 0 8 2008

T.K. BLANKENSHIP
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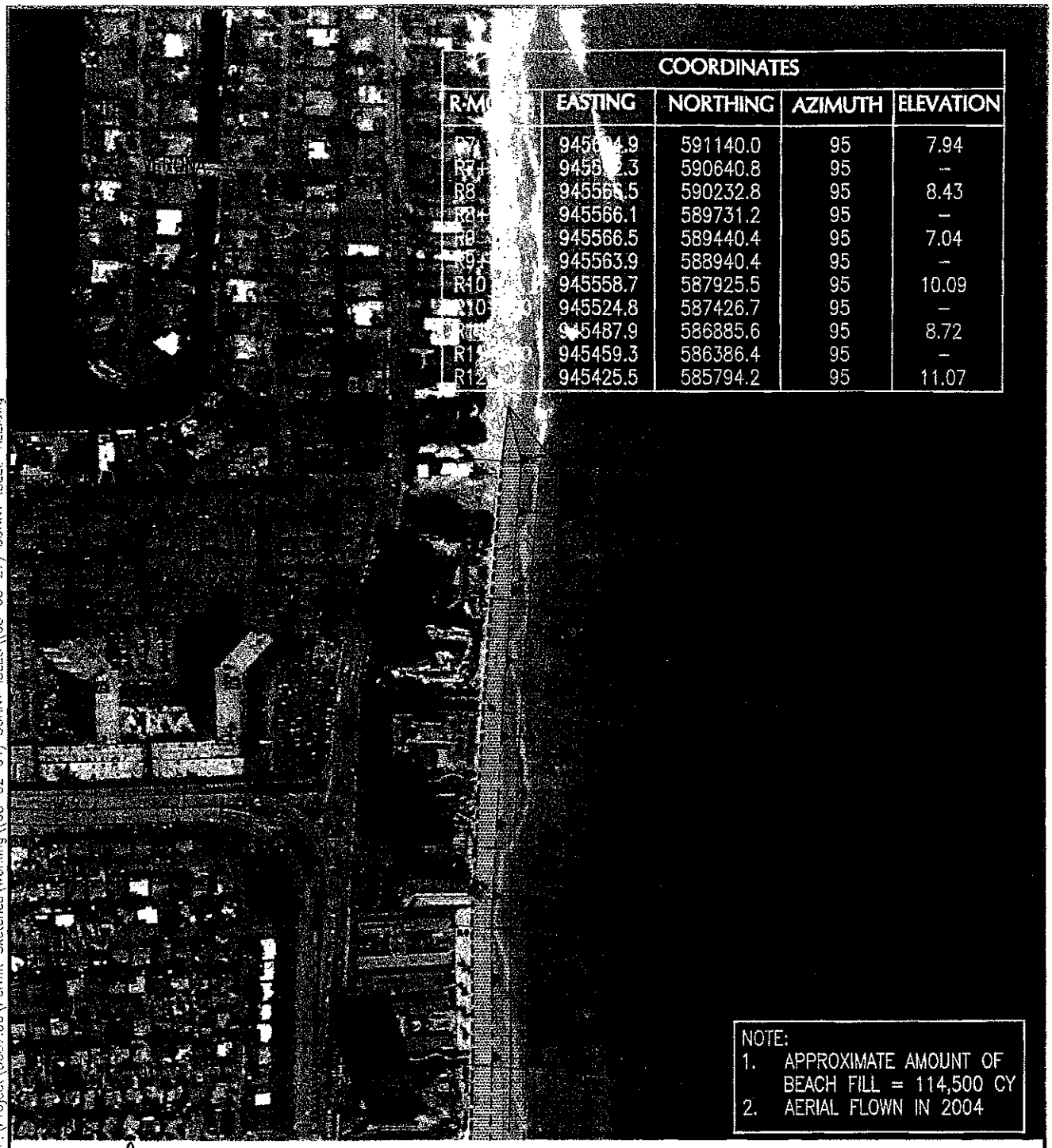
SUNNY ISLES BEACH
RENOURISHMENT PROJECT

LOCATION MAP

SHEET 1 OF 10



COORDINATES				
R-M	EASTING	NORTHING	AZIMUTH	ELEVATION
R7	945[illegible]4.9	591140.0	95	7.94
R7+	9455[illegible].3	590640.8	95	–
R8	945566.5	590232.8	95	8.43
R8+	945566.1	589731.2	95	–
R9	945566.5	589440.4	95	7.04
R9+	945563.9	588940.4	95	–
R10	945558.7	587925.5	95	10.09
R10	945524.8	587426.7	95	–
R1[illegible]	945487.9	586885.6	95	8.72
R1[illegible]	945459.3	586386.4	95	–
R12	945425.5	585794.2	95	11.07

NOTE:
1. APPROXIMATE AMOUNT OF BEACH FILL = 114,500 CY
2. AERIAL FLOWN IN 2004

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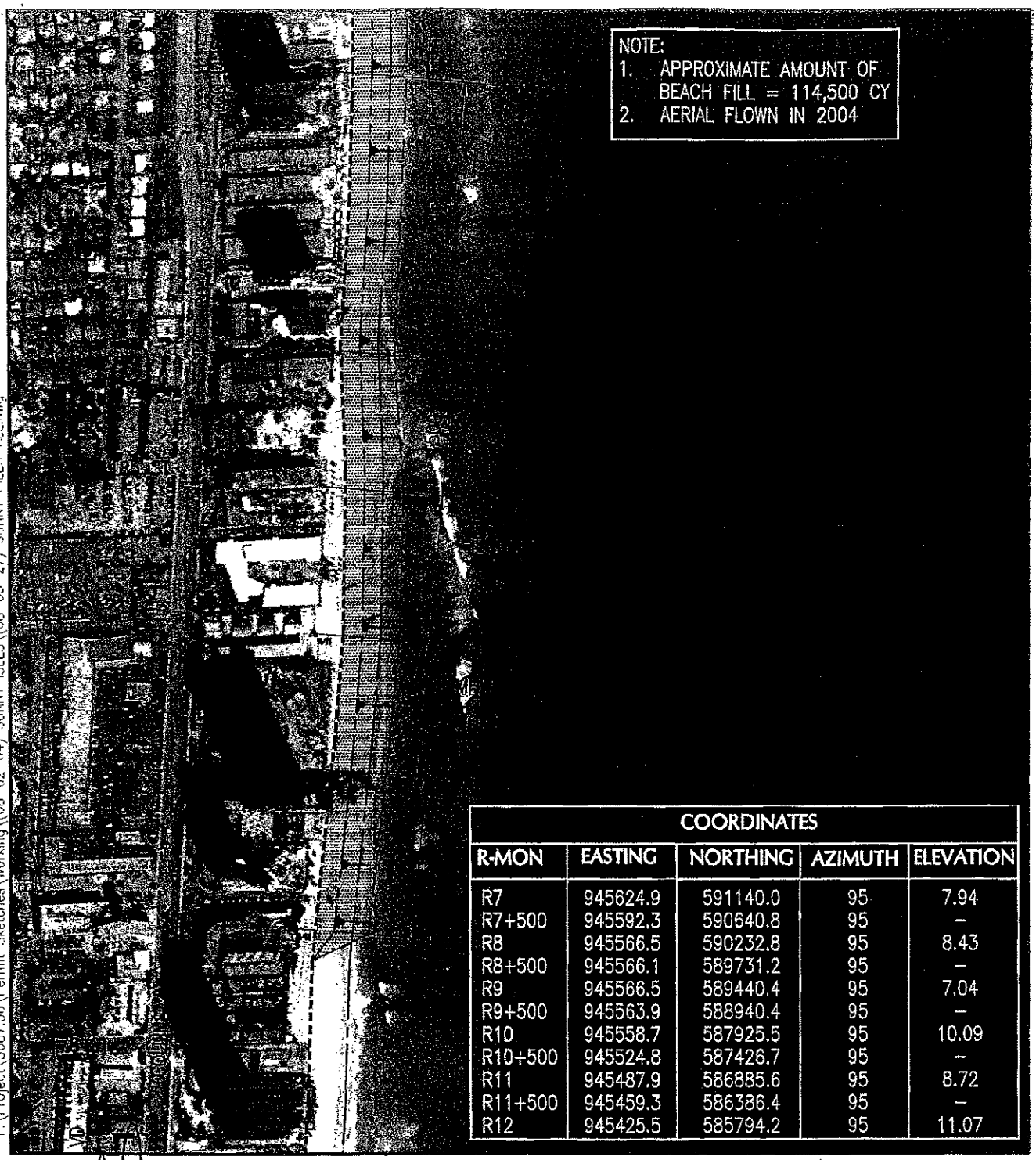
SUNNY ISLES BEACH RENOURISHMENT PROJECT

PROJECT LOCATION 1

SHEET 2 OF 10



NOTE:
1. APPROXIMATE AMOUNT OF BEACH FILL = 114,500 CY
2. AERIAL FLOWN IN 2004

COORDINATES				
R-MON	EASTING	NORTHING	AZIMUTH	ELEVATION
R7	945624.9	591140.0	95	7.94
R7+500	945592.3	590640.8	95	–
R8	945566.5	590232.8	95	8.43
R8+500	945566.1	589731.2	95	–
R9	945566.5	589440.4	95	7.04
R9+500	945563.9	588940.4	95	–
R10	945558.7	587925.5	95	10.09
R10+500	945524.8	587426.7	95	–
R11	945487.9	586885.6	95	8.72
R11+500	945459.3	586386.4	95	–
R12	945425.5	585794.2	95	11.07

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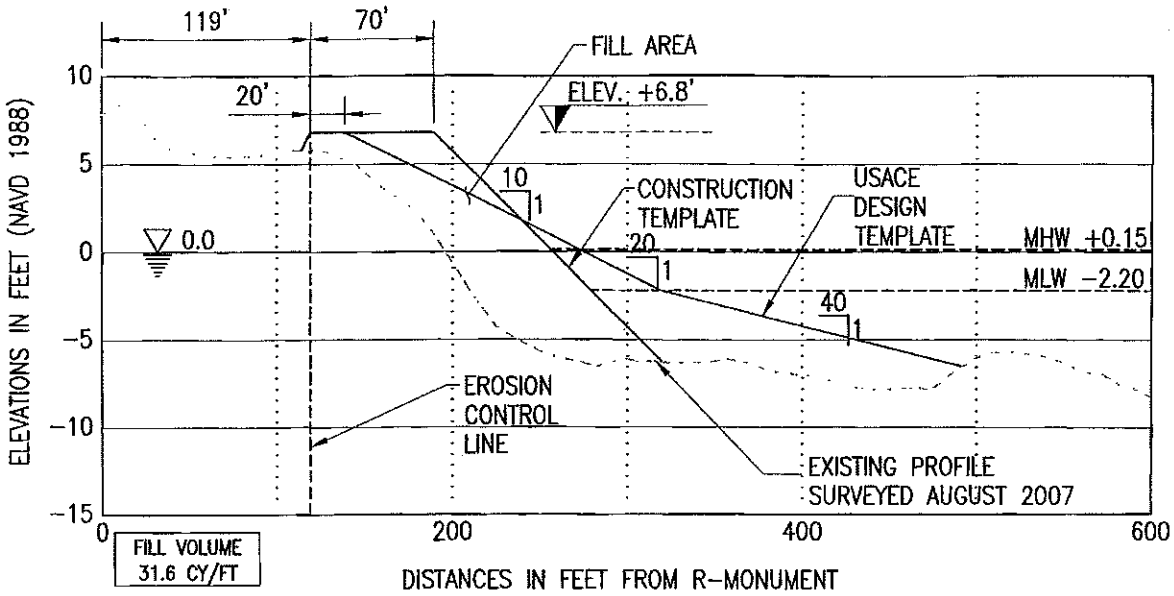
SUNNY ISLES BEACH RENOURISHMENT PROJECT

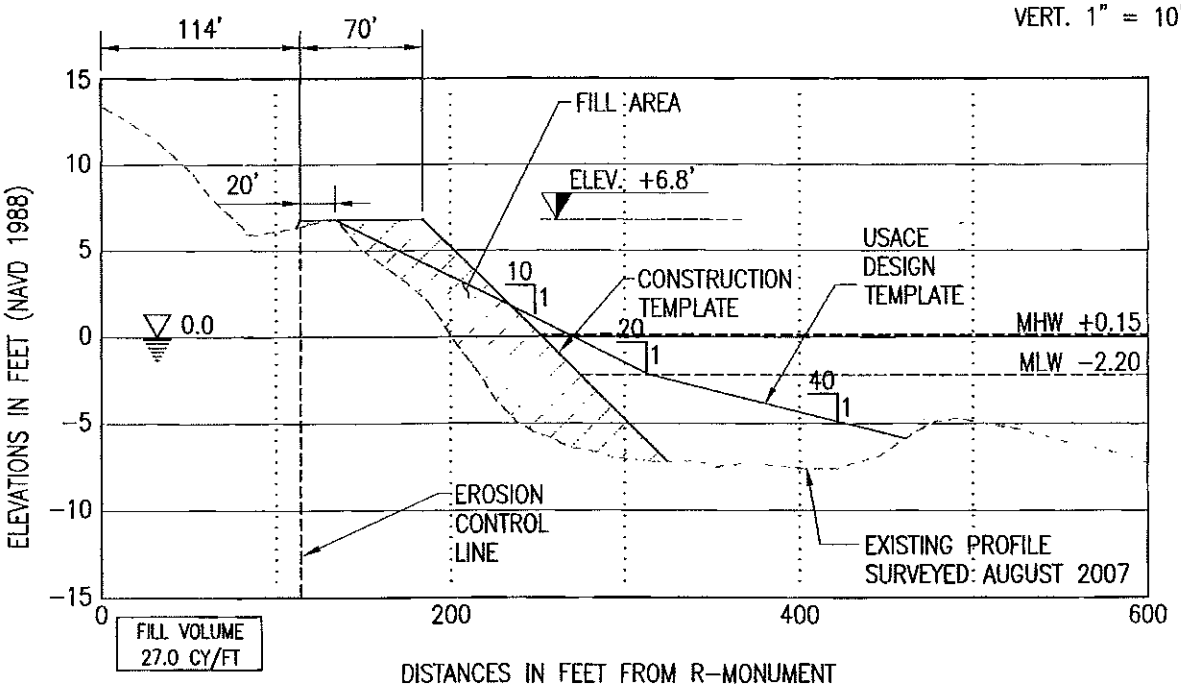
PROJECT LOCATION 2

SHEET 3 OF 10



R-7

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'



R-7+500

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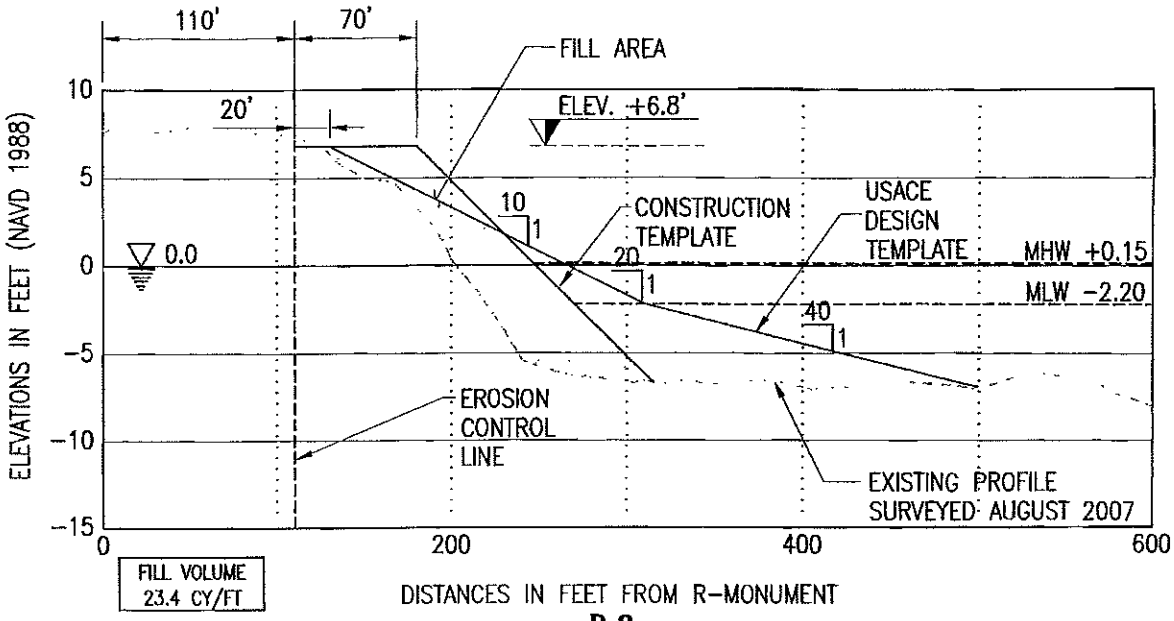
SUNNY ISLES BEACH RENOURISHMENT PROJECT

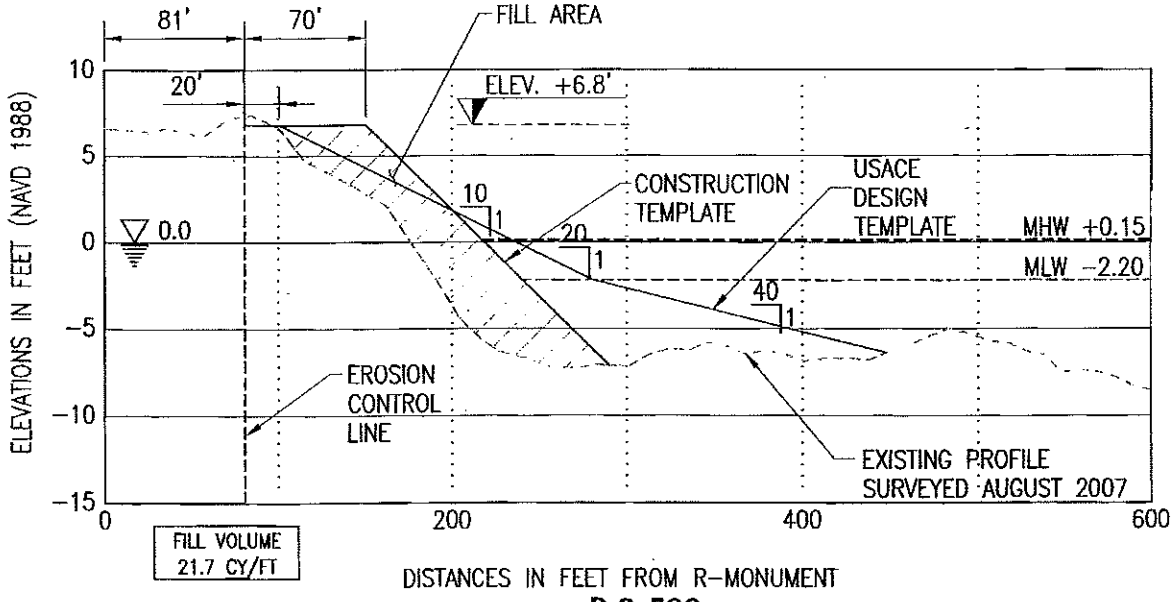
MONUMENT R-7 & R-7+500

SHEET 4 OF 10



R-8

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'



R-8+500

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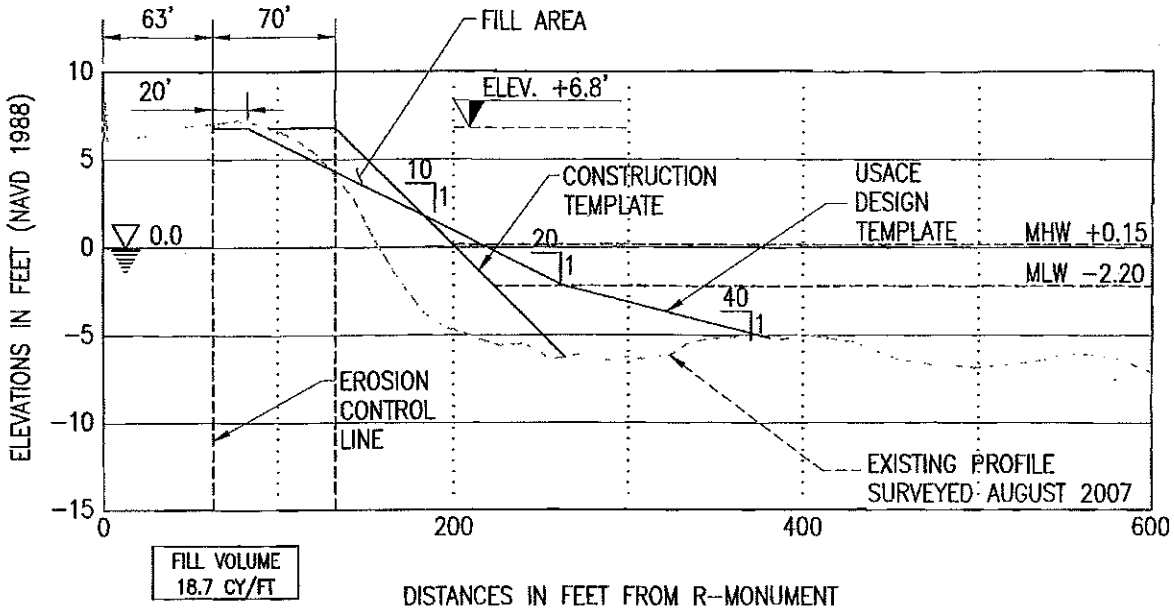
SUNNY ISLES BEACH RENOURISHMENT PROJECT

MONUMENT R-8 & R-8+500

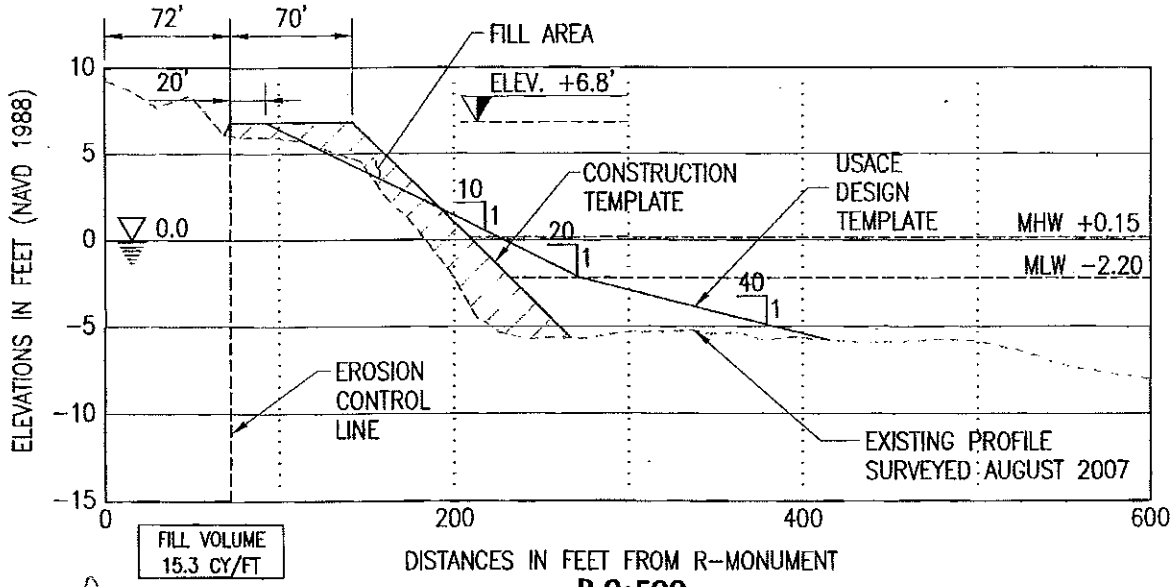
SHEET 5 OF 10

46



R-9

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'



R-9+500

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MIAMI, FL 33136

SUNNY ISLES BEACH RENOURISHMENT PROJECT

MONUMENT R-9 & R-9+500

SHEET 6 OF 10

APR 0 8 2008
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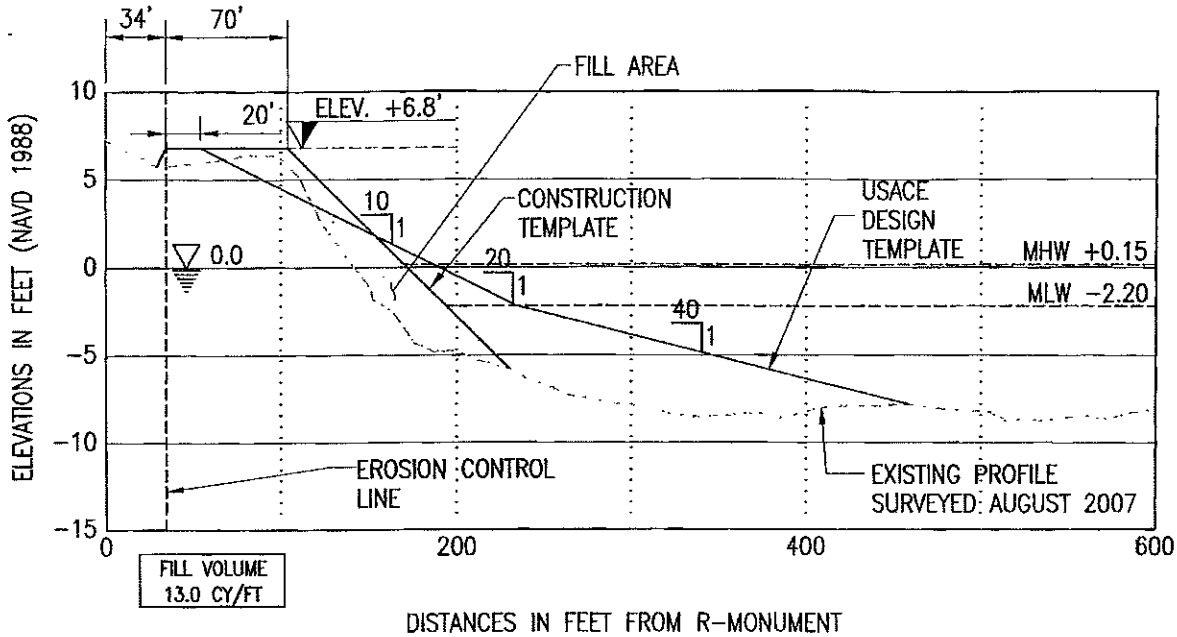
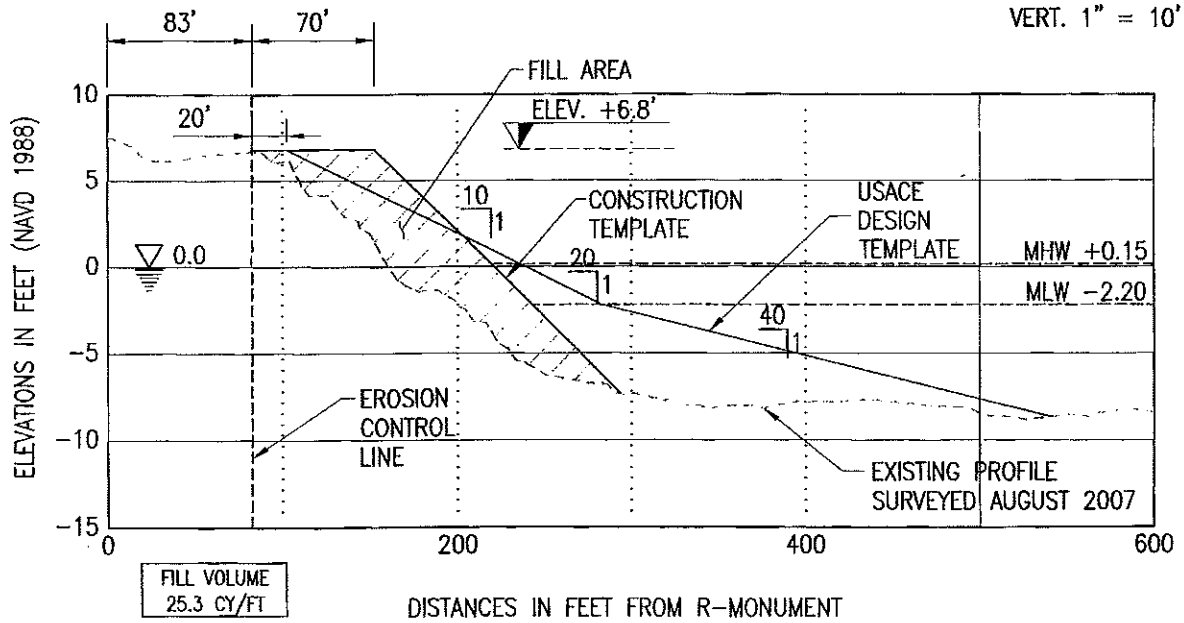


R-10

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'



R-10+500

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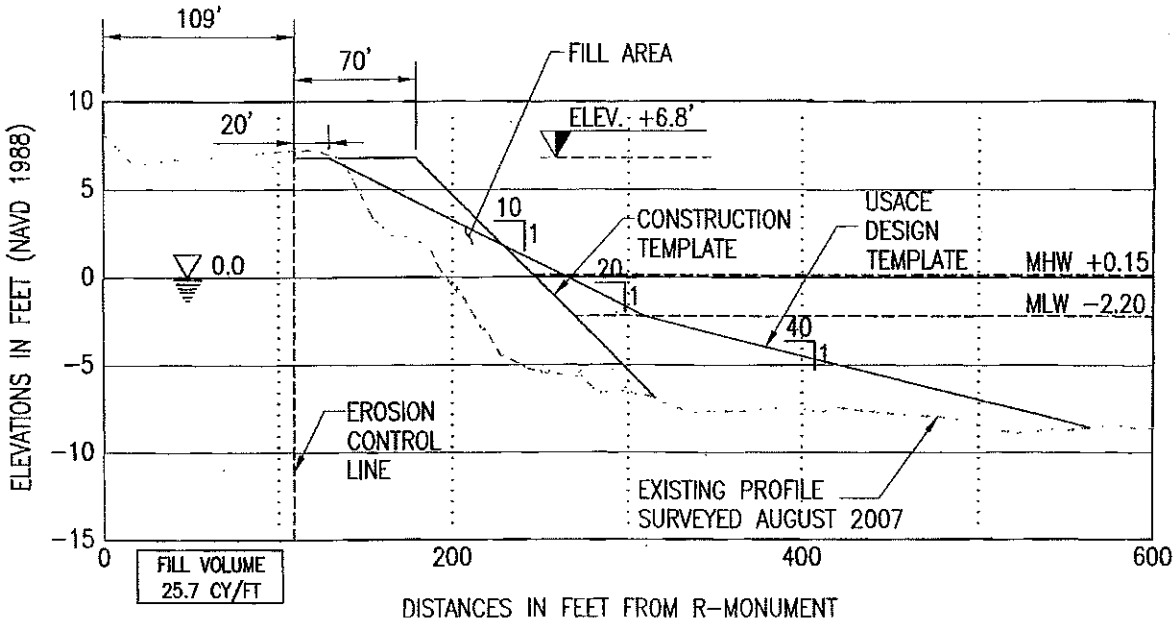
SUNNY ISLES BEACH RENOURISHMENT PROJECT

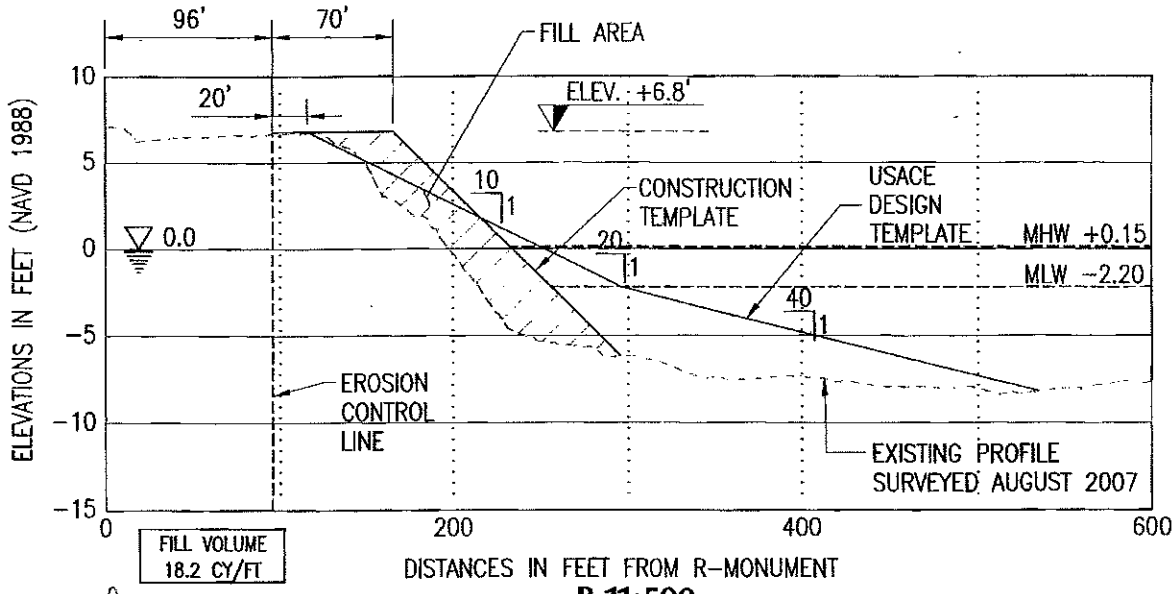
MONUMENT R-10 & R-10+500

SHEET 7 OF 10



R-11

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'



R-11+500

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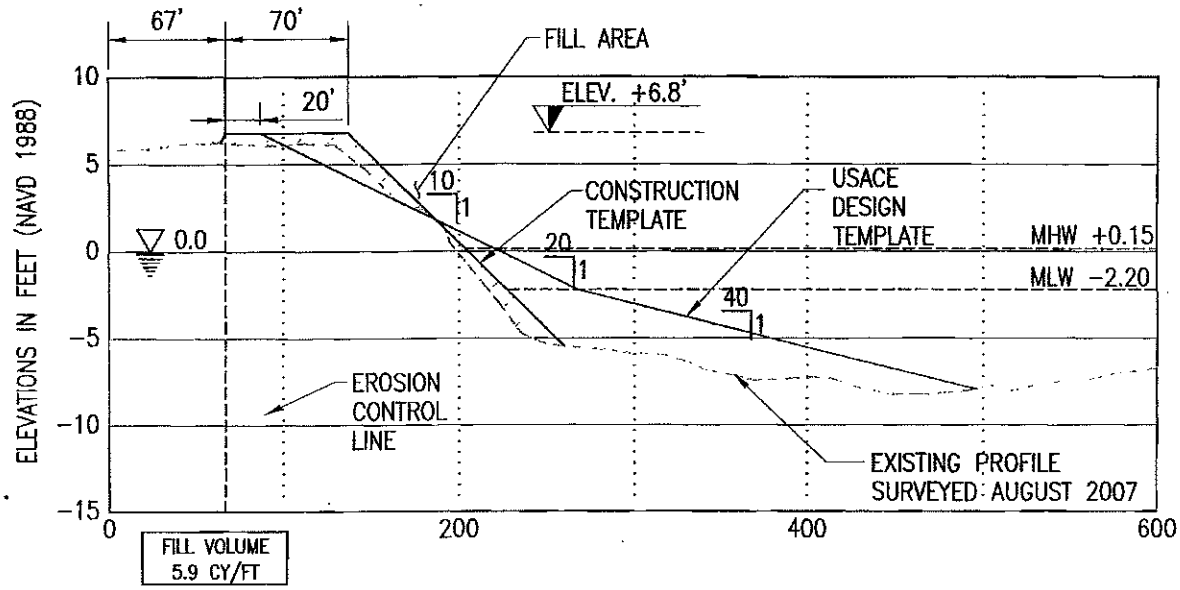
SUNNY ISLES BEACH RENOURISHMENT PROJECT

MONUMENT R-11 & R-11+500

SHEET 8 OF 10



DISTANCES IN FEET FROM R-MONUMENT

R-12

SCALE HORIZ. 1" = 100'
VERT. 1" = 10'

F:\Project\5687.06\Permit Sketches\Working\(08-02-04) SUNNY ISLES\(08-03-27) SUNNY ISLES-ALL.dwg

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SUNNY ISLES BEACH RENOURISHMENT PROJECT

MONUMENT R-12

SHEET 9 OF 10

GENERAL NOTES:

1. TOPOGRAPHIC AND BATHYMETRIC SURVEY DATA WAS COLLECTED BY COASTAL PLANNING & ENGINEERING IN AUGUST 20007 DURING THE ANNUAL MONITORING SURVEY OF DADE COUNTY PERFORMED IN CONJUNCTION WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP).

2. THE PLANE COORDINATES AND BEARINGS SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEMS, NORTH AMERICAN DATUM 1983 (NAD 83), FLORIDA EAST ZONE (0901).

3. THE ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NADV 88).

4. MEAN HIGH WATER (MHW) IS +0.15 NAVD, MEAN LOW WATER (MLW) IS −2.20 NAVD. TIDAL DATUM INFORMATION BASED ON NOS TIDE STATION 8723050.

5. SAND TO BE OBTAINED FROM UPLAND SOURCES AND HAULED TO SITE BY TRUCK.

6. ALL FILL MATERIAL PLACED SHALL BE CLEAN BEACH COMPATIBLE SAND THAT IS SIMILAR TO THAT ALREADY EXISTING AT THE BEACH SITE IN BOTH COLORATION AND GRAIN SIZE DISTRIBUTION AND SUITABLE FOR MARINE TURTLE NESTING. ALL SUCH FILL MATERIAL SHALL BE FREE OF CONSTRUCTION DEBRIS, ROCKS, OR OTHER FOREIGN MATTER, AND SHALL NOT CONTAIN, ON AVERAGE GREATER THAT 5% FINES (i.e. SILT AND CLAY PASSING THE #200 SIEVE) AND SHALL BE FREE OF GRAVEL OR COBBLES.

7. THE PROJECT COVERS AN AREA OF 1,108,000 SQUARE FEET. THE LENGTH OF THE PROJECT IS 5,400 LINEAR FEET WITH A MAXIMUM SHORES NORMAL WIDTH OF 70 FEET.

8. USACE DESIGN TEMPLATE PROVIDED BY MIAMI DADE COUNTY DEPARTMENT OF ENVIRONMENTAL RESOURCES MANAGEMENT ON NOVEMBER 29, 2007.

9. TOTAL PLACEMENT VOLUME OF FILL TO BE APPROXIMATELY 114,500 CUBIC YARDS.

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SUNNY ISLES BEACH RENOURISHMENT PROJECT

GENERAL NOTES

SHEET 10 OF 10

Attachment D

Zoning Memorandum

Memorandum

MIAMI-DADE COUNTY

Date: February 4, 2009

To: Lisa Spadafina, Manager
Coastal Resources
Environmental Resources Management

From: Nicole Fresard, Biologist II
Coastal Resources
Environmental Resources Management

Subject: Class I Permit Application by Miami-Dade County to Renourish Three (3) Segments of Eroded Beach on Miami Beach, Sunny Isles Beach, and Bal Harbour Through the Placement of 304,600 Cubic Yards of Sand for Multiple Renourishment Events and to Authorize the Time of Completion of Work of the Subject Permit for a Period of Ten (10) Years

---

Pursuant to Section 24-48.2(II)(A)(7), Code of Miami-Dade County, Florida, substantiating letters shall be submitted by the applicant stating that the proposed project does not violate any zoning laws. Said letters will be submitted after approval by the Miami-Dade County Board of County Commissioners and prior to issuance of the Class I Permit.

Attachment E

Names and Addresses of Owners of All Riparian or Wetland Property within Three Hundred (300) Feet of the Proposed Work

Rialco Inc.
115 Ocean Blvd.
Golden Beach, FL 33160

Muriel Scemela
105 Ocean Blvd.
Golden Beach, FL 33160

Bradely I. Meier
101 Ocean Blvd.
Golden Beach, FL 33160

Regalia LLC
19505 Collins Avenue
Sunny Isles Beach, FL 33160

Angio Corp.
242 Units
19333 Collins Avenue
Sunny Isles Beach, FL 33160

The Aventura Beach Blub Condo
19201 Collins Avenue
Sunny Isles Beach, FL 33160

Ocean Two Condo
19111 Collins Avenue
Sunny Isles Beach, FL 33160

Miami Beach Club and Motel Condo
10951 Collins Avenue
Sunny Isles Beach, FL 33160

Ocean Three Condo
189111 Collins Avenue
Sunny Isles Beach, FL 33160

Playa De Varadero IV Condo
18801 Collins Avenue
Sunny Isles Beach, FL 33160

M Resort Residences Condo
18683 Collins Avenue
Sunny Isles Beach, FL 33160

Millennium Condo
18671 Collins Avenue
Sunny Isles Beach, FL 33160

Golden Nugget Beach Club & Hotel Condo
18555 Collins Avenue
Sunny Isles Beach, FL 33160

TB Isle Resort, LP
18501 Collins Avenue
Sunny Isles Beach, FL 33160

Dezer Hotel Management, Ltd.
18401 Collins Avenue
Sunny Isles Beach, FL 33160

Sahara Beach Club Motel Condo
18335 Collins Avenue
Sunny Isles Beach, FL 33160

Bluegrass Beach Club Motel Condo
18325 Collins Avenue
Sunny Isles Beach, FL 33160

Royal Florida Revocable Statutory Trust
18101 Collins Avenue
Sunny Isles Beach, FL 33160

Royal Florida Revocable Statutory Trust
18225 Collins Avenue
Sunny Isles Beach, FL 33160

Seashore Club South Condo
18975 Collins Avenue
Sunny Isles Beach, FL 33160

Trump Palace Condo
18101 Collins Avenue
Miami Beach, FL 33160

Sunny Isles Luxury Ventures, Inc.
18001 Collins Avenue
Sunny Isles Beach, FL 33160

Golden Strand Ocean Villa Resort Condo
17901 Collins Avenue
Sunny Isles, FL 33160

North Carillon, LLC C/o WSG Development Corp.
6899 Collins Avenue
Miami Beach, FL 33141

Carillon South Venture C/o WSG
Development Corp.
6801 Collins Avenue
Miami Beach, FL 33141

Ocean Sound 6747, LLC.
6757-59 Collins Avenue
Miami Beach, FL 33141

Deauville Hotel Property LLC
6701 Collins Avenue
Miami Beach, FL 33141

Audrey Lewis Et Al. Joel Sussman Tr.
Lessee
6565 Collins Avenue
Miami Beach, FL 33141

Key Monte Carlo LLC
6551 Collins Avenue
Miami Beach, FL 33141

The Mimosa Residences Condominium
6525 Collins Avenue
Miami Beach, FL 33141

Bel-Air on the Ocean Condominium
6515 Collins Avenue
Miami Beach, FL 33141

City of Miami Beach-Park
1700 convention Center Drive
Miami Beach, FL. 33139

Mar Del Plata Condominium
6423 Collins Avenue
Sunny Isles Beach, FL 33160

Akoya Condominium
6365 Collins Avenue
Miami Beach, FL 33141

The Casablanca Condominium
6345 Collins Avenue
Bal Harbour, FL 33154

WCI Communities Inc.
10295 Collins Avenue
Bal Harbour, FL 33154

TRG Harbour House, Ltd.
10275 Collins Avenue
Bal Harbour, FL 33154

Carlton Terrace Condo
10245 Collins Avenue
Bal Harbour, FL 33154

Bellini Condo
10225 Collins Avenue
Bal Harbour, FL 33154

Kenilworth Condo
10205 Collins Avenue
Bal Harbour, FL 33154

Bal Harbour Club, Inc.
10201 Collins Avenue
Bal Harbour, FL 33154

The Plaza of Bal Harbour Condo
10185 Collins Avenue
Bal Harbour, FL 33154

The Tiffany of Bal Harbour
10175 Collins Avenue
Bal Harbour, FL 33154

The Sterling Condominium
6767 Collins Avenue
Miami Beach, FL 33141

Bal Barbour 101 Condo
10155 Collins Avenue
Bal Harbour, FL 33154

Attachment F

Florida Department of Environmental Protection
Environmental Resource Consent of Use

Attachment G

US Fish and Wildlife Services Biological Opinion Letter

United States Department of the Interior

FISH AND WILDLIFE SERVICE
South Florida Ecological Services Office
1339 20th Street
Vero Beach, Florida 32960

November 12, 2008

Colonel Paul L. Grosskruger
District Commander
U.S. Army Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32232-0019

Service Federal Activity Code:	41420-2008-FA-0776
Corps Application No:	SAJ-2008-1648 (IP-INS)
Date Received:	July 14, 2008
Formal Consultation Initiation Date:	August 26, 2008
Project:	Sand Placement
Applicant:	Miami-Dade County Department of Environmental Resources Management
County:	Miami-Dade

Dear Colonel Grosskruger:

This document transmits the Fish and Wildlife Service's (Service) biological opinion based on our review of a proposal to place sand along Bal Harbour Beach, Sunny Isles Beach, and Miami Beach comprising 1.78 miles of shoreline in Miami-Dade County, Florida. The U.S. Army Corps of Engineers (Corps) determined on July 10, 2008, the proposed project "may affect" the threatened loggerhead sea turtle (*Caretta caretta*), the endangered leatherback sea turtle (*Dermochelys coriacea*), the endangered green sea turtle (*Chelonia mydas*), the endangered hawksbill sea turtle (*Eretmochelys imbricata*), and the endangered Kemp's ridley sea turtle (*Lepidochelys kempii*), and we concur with your determination. This document is provided in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 *et seq.*).

In the July 10, 2008, letter, the Corps also determined the proposed action "may affect," the endangered West Indian manatee (*Trichechus manatus*). Based on discussions with the Service, the Corps requested to revise their determination to "may affect, not likely to adversely affect," the West Indian manatee as outlined in an email to the Service dated October 6, 2008. In order to protect this species, the Corps will ensure specific construction safety precautions are implemented as outlined in the *Standard Manatee Conditions for In-Water Work* (Florida Fish and Wildlife Conservation Commission [FWC] 2005). Based upon implementation of the above stated conditions, the Service concurs with the revised determination in regard to the West Indian manatee.

This biological opinion is based on information provided in the Corps' letter dated July 10, 2008, and Public Notice dated June 27, 2008, and correspondence with the Corps, National Marine

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Fisheries Service (NOAA Fisheries), and FWC. A complete administrative record of this consultation is on file at the South Florida Ecological Services Office, Vero Beach, Florida.

CONSULTATION HISTORY

On June 27, 2008, the Service received a Public Notice dated June 27, 2008, from the Corps for sand placement along three segments of shoreline in Miami-Dade County, Florida.

On June 30, 2008, the Service sent an email to the Corps requesting additional information.

On July 14, 2008, the Service received a letter from the Corps dated July 10, 2008, requesting initiation of formal consultation concerning the West Indian manatee and nesting sea turtles.

On October 6, 2008, the Service received an email from the Corps requesting to revise their determination to "may affect, not likely to adversely affect," for the West Indian manatee.

On October 9, 2008, the Service received the additional requested information and initiated formal consultation.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Miami-Dade County Department of Environmental Resources Management (Applicant) proposes to place beach compatible sand along three shoreline segments comprising 1.78 miles in Miami-Dade County. The first segment involves the placement of approximately 69,100 cubic yards (cy) of sand along 0.40 mile of shoreline in Bal Harbour between Florida Department of Environmental Protection (DEP) monuments R-27 and R-29 (Figure 1). Approximately 34,400 cy of sand will be placed seaward of the mean high water line (MHWL), and the remaining 34,700 cy placed landward of the MHWL. The second segment involves the placement of approximately 114,500 cy of sand along 1.02 miles of shoreline in Sunny Isles Beach between DEP monuments R-7 to R-12 (Figure 2). Approximately 59,100 cy of sand will be placed seaward of the MHWL, and the remaining 55,400 cy placed landward of the MHWL. The third segment involves the placement of approximately 121,000 cy of sand along 0.36 mile of shoreline in Miami Beach between DEP monuments R-43 to R-44+500 feet (Figure 3). Approximately 58,720 cy of sand will be placed seaward of the MHWL, and the remaining 62,280 cy placed landward of the MHWL.

The intent of the project is to renourish the shoreline in order to protect infrastructure and property, improve the shoreline for recreational use, and stop shoreline erosion. The nourishment volumes calculated for each of the three proposed fill templates is required to restore the original design profile of the authorized Federal shore protection project, and therefore represents the volume of material lost at each site.

Beach compatible sand will be obtained from the Ortona mines located in central Florida. This sand source has previously been used for sand placement projects in Florida, including Miami-Dade County, and has been approved by DEP. Sand will be transported to each site utilizing conventional tri-axle dump truck, and placed directly on the beach or temporarily staged at public park areas located west of the dune line. Once delivered, the sand will be loaded into all terrain dump trucks, delivered to the fill sites, and graded to the permitted design specifications with a bulldozer. The design profile will provide a seaward slope of 10:1 or 11:1.

Different corridors and staging areas will be used for each of the three fill template sites. For the Sunny Isles Beach fill template site, an existing beach access corridor located at 192nd Street will be used to deliver sand directly to the beach. At Bal Harbour Beach, trucks will enter at 96th Street, and proceed north behind the dune on an existing access road to the fill template site. For the Miami Beach project site, trucks will use 46th Street to deliver sand to an area west of the dune at a City of Miami Beach park located at the southern limit of the fill template. All access corridors are subject to verification and acceptance by each municipality at the time all respective Right-of-Way-Permits are processed and finalized. Since the project will use existing access corridors, no upland habitat impacts are anticipated.

Sand placement is scheduled to commence as soon as all regulatory authorizations are in place. The Applicant anticipates that the project will take approximately 6 months to complete. If construction extends into the sea turtle nesting season (March 1 to November 30), no work will commence until daily nesting surveys have been completed. Construction activities will take place only during daylight hours.

The action area is defined as all areas to be affected directly or indirectly by the action and not merely the immediate area involved in the action. The Service identifies the action area to include the sand placement fill template (approximately 1.78 miles in Miami-Dade County between DEP monuments R-7 to R-12, R-27 to R-29, and R-43 to R-44+500 feet) and shoreline updrift and downdrift of each fill template.

STATUS OF THE SPECIES/CRITICAL HABITAT

Species/critical habitat description

Loggerhead Sea Turtle

The loggerhead sea turtle, listed as a threatened species on July 28, 1978 (43 FR 32800), inhabits the continental shelves and estuarine environments along the margins of the Atlantic, Pacific, and Indian Oceans. Loggerhead sea turtles nest within the continental U.S. from Louisiana to Virginia. Major nesting concentrations in the U.S. are found on the coastal islands of North Carolina, South Carolina, and Georgia, and on the Atlantic and Gulf coasts of Florida (Hopkins and Richardson 1984).

No critical habitat has been designated for the loggerhead sea turtle.

Green Sea Turtle

The green sea turtle was federally listed on July 28, 1978 (43 FR 32800). Breeding populations of the green turtle in Florida and along the Pacific Coast of Mexico are listed as endangered; all other populations are listed as threatened. The green turtle has a worldwide distribution in tropical and subtropical waters. Major green turtle nesting colonies in the Atlantic occur on Ascension Island, Aves Island, Costa Rica, and Surinam. Within the U.S., green turtles nest in small numbers in the U.S. Virgin Islands and Puerto Rico, and in larger numbers along the east coast of Florida, particularly in Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward Counties (NOAA Fisheries and Service 1991a). Nesting has also been documented along the Gulf coast of Florida on Santa Rosa Island (Okaloosa and Escambia Counties) and from Pinellas County through Collier County. Green turtles have been known to nest in Georgia, but only on rare occasions, and sporadically in North Carolina and South Carolina. Unconfirmed nesting of green turtles in Alabama has also been reported.

Critical habitat for the green sea turtle has been designated for the waters surrounding Culebra Island, Puerto Rico, and its outlying keys (63 FR 46693)

Leatherback Sea Turtle

The leatherback sea turtle, listed as an endangered species on June 2, 1970 (35 FR 8491), nests on shores of the Atlantic, Pacific and Indian Oceans. Nonbreeding animals have been recorded as far north as the British Isles and the Maritime Provinces of Canada and as far south as Argentina and the Cape of Good Hope (Pritchard 1992). Nesting grounds are distributed worldwide, with the Pacific Coast of Mexico supporting the world's largest known concentration of nesting leatherbacks. The largest nesting colony in the wider Caribbean region is found in French Guiana, but nesting occurs frequently, although in lesser numbers, from Costa Rica to Columbia and in Guyana, Surinam, and Trinidad (National Research Council 1990; NOAA Fisheries and Service 1992).

The leatherback regularly nests in the U.S. in Puerto Rico, the U.S. Virgin Islands, and along the Atlantic coast of Florida as far north as Georgia (NOAA Fisheries and Service 1992). Leatherback turtles have been known to nest in Georgia, South Carolina, and North Carolina, but only on rare occasions. Leatherback nesting has also been reported on the northwest coast of Florida (LeBuff 1990); a false crawl (nonnesting emergence) has been observed on Sanibel Island (LeBuff 1990).

Marine and terrestrial critical habitat for the leatherback sea turtle has been designated at Sandy Point on the western end of the island of St. Croix, U.S. Virgin Islands (44 FR 17710).

Hawksbill Sea Turtle

The hawksbill sea turtle was listed as an endangered species on June 2, 1970 (35 FR 8491). The hawksbill is found in tropical and subtropical seas of the Atlantic, Pacific, and Indian Oceans. The species is widely distributed in the Caribbean Sea and western Atlantic Ocean. Within the continental U.S., hawksbill sea turtle nesting is rare and is restricted to the southeastern coast of

Florida (Volusia through Dade Counties) and the Florida Keys (Monroe County) (Meylan 1992; Meylan et al. 1995). However, hawksbill tracks are difficult to differentiate from those of loggerheads and may not be recognized by surveyors. Therefore, surveys in Florida likely underestimate actual hawksbill nesting numbers (Meylan et al. 1995). In the U.S. Caribbean, hawksbill nesting occurs on beaches throughout Puerto Rico and the U.S. Virgin Islands (NOAA Fisheries and Service 1993).

Critical habitat for the hawksbill sea turtle has been designated for selected beaches or waters of Mona, Monito, Culebrita, and Culebra Islands, Puerto Rico (63 FR 46693).

Kemp's Ridley Sea Turtle

The Kemp's ridley sea turtle was listed as endangered on December 2, 1970 (35 FR 18320). The range of the Kemp's ridley includes the Gulf coasts of Mexico and the U.S., and the Atlantic coast of North America as far north as Nova Scotia and Newfoundland. Most Kemp's ridleys nest on the coastal beaches of the Mexican states of Tamaulipas and Veracruz, although a very small number of Kemp's ridleys nest consistently along the Texas coast (Turtle Expert Working Group 1998). In addition, rare nesting events have been reported in Florida, Alabama, South Carolina, and North Carolina. Hatchlings, after leaving the nesting beach, are believed to become entrained in eddies within the Gulf of Mexico, where they are dispersed within the Gulf and Atlantic by oceanic surface currents until they reach about 8 inches in length, at which size they enter coastal shallow water habitats (Ogren 1989). Outside of nesting, adult Kemp's ridleys are believed to spend most of their time in the Gulf of Mexico, while juveniles and subadults also regularly occur along the eastern seaboard of the U.S. (Service and NOAA Fisheries 1992).

No critical habitat has been designated for the Kemp's ridley sea turtle.

Life history

Loggerhead Sea Turtle

Loggerheads are known to nest from one to seven times within a nesting season (Talbert et al. 1980; Lenarz et al. 1981; Richardson and Richardson 1982); the mean is approximately 4.1 (Murphy and Hopkins 1984). The interval between nesting events within a season varies around a mean of about 14 days (Dodd 1988). Mean clutch size varies from about 100 to 126 eggs along the southeastern U.S. coast (NOAA Fisheries and Service 1991b). Incubation ranges from about 45 to 95 days. Nesting migration intervals of 2 to 3 years are most common in loggerheads, but the number can vary from 1 to 7 years (Dodd 1988). Age at sexual maturity is believed to be about 20 to 30 years (Turtle Expert Working Group 1998).

Green Sea Turtle

Green turtles deposit from one to nine clutches within a nesting season, but the overall average is 3.3. The mean interval between nesting events within a season is 13 days (Hirth 1997). Mean clutch size varies widely among populations. Average clutch size reported for Florida was 136 eggs

in 130 clutches (Witherington and Ehrhart 1989). Incubation ranges from about 45 to 75 days. Only occasionally do females produce clutches in successive years. Usually 2, 3, 4, or more years intervene between breeding seasons (NOAA Fisheries and Service 1991a). Age at sexual maturity is believed to be 20 to 50 years (Hirth 1997).

Leatherback Sea Turtle

Leatherbacks nest an average of five to seven times within a nesting season, with an observed maximum of 11 (NOAA Fisheries and Service 1992). The interval between nesting events within a season is about 10 days. Clutch size averages 80 to 85 yolked eggs, with the addition of usually a few dozen smaller, yolkless eggs, mostly laid toward the end of the clutch (Pritchard 1992). Incubation ranges from about 55 to 75 days. Nesting migration intervals of 2 to 3 years were observed in leatherbacks nesting on Sandy Point National Wildlife Refuge, St. Croix, U.S. Virgin Islands (McDonald and Dutton 1996). Leatherbacks are believed to reach sexual maturity in 6 to 10 years (Zug and Parham 1996).

Hawksbill Sea Turtle

Hawksbills nest on average 4.5 times per season at intervals of approximately 14 days (Corliss et al. 1989). In Florida and the U.S. Caribbean, clutch size is approximately 140 eggs, although several records exist of over 200 eggs per nest (NOAA Fisheries and Service 1993). Incubation lasts for about 60 days. On the basis of limited information, nesting migration intervals of 2 to 3 years appear to predominate. Hawksbills are recruited into the reef environment at about 14 inches in length and are believed to begin breeding about 30 years later. The time required to reach 14 inches in length however, is unknown, and growth rates vary geographically. As a result, actual age at sexual maturity is not known.

Kemp's Ridley Sea Turtle

Nesting occurs from April into July during which time the turtles appear off the Tamaulipas and Veracruz coasts of Mexico. Precipitated by strong winds, the females swarm to mass nesting emergences, known as *arribadas* or *arribazones*, to nest during daylight hours. Clutch size averages 100 eggs (Service and NOAA Fisheries 1992). The incubation period ranges from 45 to 70 days. Some females breed annually and nest an average of one to four times in a season at intervals of 10 to 28 days. Age at sexual maturity is believed to be between 7 to 15 years (Turtle Expert Working Group 1998).

Population dynamics

Loggerhead Sea Turtle

Total estimated nesting in the southeastern U.S. is approximately 50,000 to 90,000 nests annually. In 1998, 85,988 nests were documented in Florida alone. However, in 2001, 2002, 2003, and 2004, this number dropped to 69,657, 62,905, 56,852, and 47,173, respectively. An analysis of nesting data from the Florida Index Nesting Beach Survey (INBS) Program from

1989 to 2004, a period encompassing index surveys that are more consistent and more accurate than surveys in previous years, has shown no detectable trend. In more recent years (1998 through 2004), there has been evidence of a declining trend. Given inherent annual fluctuations in nesting and the short time period over which the decline has been noted, caution is warranted in interpreting the decrease in terms of nesting trends.

From a global perspective, the southeastern U.S. nesting aggregation is of paramount importance to the survival of the species and is second in size only to that which nests on islands in the Arabian Sea off Oman (Ross 1982; Ehrhart 1989; NOAA Fisheries and Service 1991b). The Oman loggerhead nesting population is reported to be the largest in the world (Ross 1979). The loggerhead nesting aggregations in Oman, the southeastern U.S., and Australia have been estimated to account for about 88 percent of nesting worldwide (NOAA Fisheries and Service 1991b). About 80 percent of loggerhead nesting in the southeastern U.S. occurs in six Florida counties (Brevard, Indian River, St. Lucie, Martin, Palm Beach, and Broward Counties) (NOAA Fisheries and Service 1991b).

Green Sea Turtle

About 150 to 2,750 females are estimated to nest on beaches in the continental U.S. annually (FWC 2006). In the U.S. Pacific, over 90 percent of nesting throughout the Hawaiian archipelago occurs at the French Frigate Shoals, where about 200 to 700 females nest each year (NOAA Fisheries and Service 1998a). Elsewhere in the U.S. Pacific, nesting takes place at scattered locations in the Commonwealth of the Northern Marianas, Guam, and American Samoa. In the western Pacific, the largest green turtle nesting group in the world occurs on Raine Island, Australia, where thousands of females nest nightly in an average nesting season (Limpus et al. 1993). In the Indian Ocean, major nesting beaches occur in Oman where 30,000 females are reported to nest annually (Ross and Barwani 1995).

Leatherback Sea Turtle

Recent estimates of global nesting populations indicate 26,000 to 43,000 nesting females annually (Spotila et al. 1996). The largest nesting populations at present occur in the western Atlantic in French Guiana (4,500 to 7,500 females nesting per year) and Colombia (estimated several thousand nests annually), and in the western Pacific in West Papua (formerly Irian Jaya) and Indonesia (about 600 to 650 females nesting per year). In the U.S., small nesting populations occur on the Florida east coast (100 females per year) (FWC 2006), Sandy Point, U.S. Virgin Islands (50 to 190 females per year) (Alexander et al. 2002), and Puerto Rico (30 to 90 females per year) (Spotila et al. 1996).

Hawksbill Sea Turtle

About 15,000 females are estimated to nest each year throughout the world with the Caribbean accounting for 20 to 30 percent of the world's hawksbill population. Only five regional populations remain with more than 1,000 females nesting annually (Seychelles, Mexico, Indonesia, and two in Australia). Mexico is now the most important region for hawksbills in the

Caribbean with 3,000 nests per year (Meylan 1999). Other significant, but smaller populations in the Caribbean still occur in Martinique, Jamaica, Guatemala, Nicaragua, Grenada, Dominican Republic, Turks and Caicos Islands, Cuba, Puerto Rico, and U.S. Virgin Islands. In the U.S. Caribbean, about 150 to 500 nests per year are laid on Mona Island, Puerto Rico, and 70 to 130 nests per year on Buck Island Reef National Monument, U.S. Virgin Islands. In the U.S. Pacific, hawksbills nest only on main island beaches in Hawaii, primarily along the east coast of the island of Hawaii. Hawksbill nesting has also been documented in American Samoa and Guam (NOAA Fisheries and Service 1998b).

Kemp's Ridley Sea Turtle

The 40,000 nesting females estimated from a single mass nesting emergence in 1947 reflected a much larger total number of nesting turtles in that year than exists today (Carr 1963; Hildebrand 1963). However, nesting in Mexico has been steadily increasing in recent years from 702 nests in 1985 to over 10,000 nests in 2005 (Service 2005). Despite protection for the nests, turtles have been and continue to be lost to incidental catch by shrimp trawls (Service and NOAA Fisheries 1992).

Status and distribution

Loggerhead Sea Turtle

Genetic research involving analysis of mitochondrial DNA has identified five different loggerhead subpopulations per nesting aggregations in the western North Atlantic: (1) the Northern Subpopulation occurring from North Carolina to around Cape Canaveral, Florida (about 29° N.); (2) South Florida Subpopulation occurring from about 29° N. on Florida's east coast to Sarasota on Florida's west coast; (3) Dry Tortugas, Florida, Subpopulation, (4) Northwest Florida Subpopulation occurring at Eglin Air Force Base and the beaches near Panama City; and (5) Yucatán Subpopulation occurring on the eastern Yucatán Peninsula, Mexico (Bowen et al. 1993; Bowen 1994, 1995; Encalada et al. 1998; Pearce 2001). These data indicate gene flow between these five regions is very low. If nesting females are extirpated from one of these regions, regional dispersal will not be sufficient to replenish the depleted nesting subpopulation. The Northern Subpopulation has declined substantially since the early 1970s. Recent estimates of loggerhead nesting trends from standardized daily beach surveys showed significant declines ranging from 1.5 to 2.0 percent annually. Nest totals from aerial surveys conducted by the South Carolina Department of Natural Resources showed a 3.3 percent annual decline in nesting since 1980. Overall, there is strong statistical evidence to suggest the Northern Subpopulation has sustained a long-term decline.

Data from all beaches where nesting activity has been recorded indicate the South Florida Subpopulation has shown significant increases over the last 25 years. However, an analysis of nesting data from the Florida INBS Program from 1989 to 2002, a period encompassing index surveys that are more consistent and more accurate than surveys in previous years, has shown no detectable trend and, more recently (1998 through 2002), has shown evidence of a declining trend.

Given inherent annual fluctuations in nesting and the short time period over which the decline has been noted, caution is warranted in interpreting the decrease in terms of nesting trends.

A near complete census of the Florida Panhandle Subpopulation undertaken from 1989 to 2002, reveals a mean of 1,028 nests per year, which equates to about 251 females nesting per year (FWC 2006). Evaluation of long-term nesting trends for the Florida Panhandle Subpopulation is difficult because of changes in and expanded beach coverage. Although there are now 8 years (1997 to 2004) of INBS data for the Florida Panhandle Subpopulation, the time series is too short to detect a trend.

A near complete census of the Dry Tortugas Subpopulation undertaken from 1995 to 2001, reveals a mean of 213 nests per year, which equates to about 50 females nesting per year (FWC 2006). The trend data for the Dry Tortugas Subpopulation are from beaches that were not part of the State of Florida's INBS program prior to 2004, but have moderately good monitoring consistency. There are 7 continuous years (1995 to 2001) of data for this Subpopulation, but the time series is too short to detect a trend.

Nesting surveys in the Yucatán Subpopulations have been too irregular to date to allow for a meaningful trend analysis (Turtle Expert Working Group 1998; 2000).

Threats include incidental take from channel dredging and commercial trawling, longline, and gill net fisheries; loss or degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; excessive nest predation by native and nonnative predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; and disease. There is particular concern about the extensive incidental take of juvenile loggerheads in the eastern Atlantic by longline fishing vessels from several countries.

Green Sea Turtle

Total population estimates for the green turtle are unavailable, and trends based on nesting data are difficult to assess because of large annual fluctuations in numbers of nesting females. For instance, in Florida, where the majority of green turtle nesting in the southeastern U.S. occurs, estimates range from 150 to 2,750 females nesting annually (FWC 2006). Populations in Surinam, and Tortuguero, Costa Rica, may be stable, but there is insufficient data for other areas to confirm a trend.

A major factor contributing to the green turtle's decline worldwide is commercial harvest for eggs and food. Fibropapillomatosis, a disease of sea turtles characterized by the development of multiple tumors on the skin and internal organs, is also a mortality factor and has seriously impacted green turtle populations in Florida, Hawaii, and other parts of the world. The tumors interfere with swimming, eating, breathing, vision, and reproduction, and turtles with heavy tumor burdens may die. Other threats include loss or degradation of nesting habitat from coastal development and beach armoring; disorientation of hatchlings by beachfront lighting; excessive nest predation by native and nonnative predators; degradation of foraging habitat; marine pollution and debris; watercraft strikes; and incidental take from channel dredging and commercial fishing operations.

Leatherback Sea Turtle

Declines in leatherback nesting have occurred over the last 2 decades along the Pacific coasts of Mexico and Costa Rica. The Mexican leatherback nesting population, once considered to be the world's largest leatherback nesting population (historically estimated to be 65 percent of the worldwide population), is now less than 1 percent of its estimated size in 1980. Spotila et al. (1996) estimated the number of leatherback sea turtles nesting on 28 beaches throughout the world from the literature and from communications with investigators studying those beaches. The estimated worldwide population of leatherbacks in 1995 was about 34,500 females on these beaches with a lower limit of about 26,200 and an upper limit of about 42,900. This is less than one third the 1980 estimate of 115,000. Leatherbacks are rare in the Indian Ocean and in very low numbers in the western Pacific Ocean. The largest population is in the western Atlantic. Using an age-based demographic model, Spotila et al. (1996) determined leatherback populations in the Indian Ocean and western Pacific Ocean cannot withstand even moderate levels of adult mortality and even the Atlantic populations are being exploited at a rate that cannot be sustained. They concluded leatherbacks are on the road to extinction and further population declines can be expected unless we take action to reduce adult mortality and increase survival of eggs and hatchlings.

The crash of the Pacific leatherback population is believed primarily to be the result of exploitation by humans for the eggs and meat, as well as incidental take in numerous commercial fisheries of the Pacific. Other factors threatening leatherbacks globally include loss or degradation of nesting habitat from coastal development; disorientation of hatchlings by beachfront lighting; excessive nest predation by native and nonnative predators; degradation of foraging habitat; marine pollution and debris; and watercraft strikes.

Hawksbill Sea Turtle

The hawksbill sea turtle has experienced global population declines of 80 percent or more during the past century and continued declines are projected (Meylan and Donnelly 1999). Most populations are declining, depleted, or remnants of larger aggregations. Hawksbills were previously abundant, as evidenced by high-density nesting at a few remaining sites and by trade statistics. The decline of this species is primarily due to human exploitation for tortoiseshell. While the legal hawksbill shell trade ended when Japan agreed to stop importing shell in 1993, a significant illegal trade continues. It is believed individual hawksbill populations around the world will continue to disappear under the current regime of exploitation for eggs, meat, and tortoiseshell, loss of nesting and foraging habitat, incidental capture in fishing gear, ingestion of and entanglement in marine debris, oil pollution, and boat collisions. Hawksbills are closely associated with coral reefs, one of the most endangered marine ecosystems.

Kemp's Ridley Sea Turtle

The decline of this species was primarily due to human activities, including the direct harvest of adults and eggs and incidental capture in commercial fishing operations. Today, under strict

protection, the population appears to be in the early stages of recovery. The recent nesting increase can be attributed to full protection of nesting females and their nests in Mexico resulting from a binational effort between Mexico and the U.S. to prevent the extinction of the Kemp's ridley, and the requirement to use turtle excluder devices in shrimp trawls in both nations.

The Mexico government also prohibits harvesting, and is working to increase the population through more intensive law enforcement, by fencing nest areas to reduce natural predation, and by relocating all nests into corrals to prevent poaching and predation. While relocation of nests into corrals is currently a necessary management measure, this relocation and concentration of eggs into a "safe" area is of concern since it makes the eggs more susceptible to reduced viability due to movement-induced mortality, disease vectors, catastrophic events like hurricanes, and marine predators once the predators learn where to concentrate their efforts.

Analysis of the species/critical habitat likely to be affected

The proposed action has the potential to adversely affect nesting females, nests, and hatchlings within the project area. The effects of the proposed action on sea turtles will be considered further in the remaining sections of this biological opinion. Potential effects include destruction of nests deposited within the boundaries of the proposed project, harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities, and behavior modification of nesting females due to escarpment formation within the project area during the nesting season resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs. In addition, the quality of the placed sand could affect the ability of female turtles to nest, the suitability of the nest incubation environment, and the ability of hatchlings to emerge from the nest.

Critical habitat has not been designated for any sea turtle in the continental U.S.; therefore, the proposed action would not result in an adverse modification.

ENVIRONMENTAL BASELINE

The FWC's marine turtle permit holders conduct annual surveys of sea turtle nesting and nesting activity during the nesting season along various sites in Miami-Dade County (Figure 4).

In 2007, Miami-Dade County beaches supported approximately 5 percent of the overall sea turtle nesting along the east coast of Florida (FWC 2008). In total, 323 loggerhead, green, and leatherback sea turtle nests were recorded in 2007, along the 23.5 miles of County beaches included in the FWC's Florida Statewide Nesting Beach Survey (Table 1). The distribution of nests among species in 2007 included 295 loggerhead sea turtles, 20 green sea turtles, and 8 leatherback sea turtles (Table 1). From 2002 to 2007, there was an average of 342 loggerhead, 9 green, and 5 leatherback sea turtle nests laid within the County annually (Table 1).

Status of the species/critical habitat within the action area

In Miami-Dade County, 13 and 14 sea turtle nests were laid per mile in 2006 and 2007, respectively (Table 1). The nesting density within the action area was 5 and 11 nests per mile in 2006 and 2007, respectively (Table 2).

Loggerhead Sea Turtle

Of the counties along the east coast of Florida in 2007, Miami-Dade County had the eighth highest nesting of loggerhead sea turtles with 295 nests or 12.5 nests per mile (FWC 2008; Table 1). In 2007, loggerhead sea turtles laid 19 nests or 11 nests per mile in the action area (Table 2). In 2007, loggerhead sea turtles made 386 false crawls in Miami-Dade County (Table 1). In the action area, loggerhead turtles made 16 false crawls in 2007 (Table 2).

Green Sea Turtle

In 2007, Miami-Dade County had a green sea turtle nesting density of 0.85 nest per mile (Table 1). No green sea turtle nests were laid within the action area between 2002 and 2007 (Table 2). In Miami-Dade County and the action area, 26 and 0 false crawls were documented in 2007, respectively (Tables 1 and 2).

Leatherback Sea Turtle

In 2007, Miami-Dade County had a leatherback sea turtle nesting density of 0.34 nest per mile (Table 1). Of the three shoreline segments in the action area, leatherback sea turtle nests were only observed along Miami Beach in 2002 and 2007 (Table 2). In Miami-Dade County and the action area, leatherback sea turtles made 12 and 0 false crawls in 2007, respectively (Tables 1 and 2).

Hawksbill Sea Turtle

Although hawksbill sea turtles are known to occur offshore from the action area, no nesting has been reported from the proposed action area.

Kemp's Ridley Sea Turtle

No nesting has been reported in Miami-Dade County for Kemp's ridley turtles. The majority of nesting surveys conducted in Florida occur during the morning hours and are based on interpretation of the tracks left by the turtles as they ascend and descend the beach; the turtles themselves are rarely observed. Because hawksbill and Kemp's ridley turtle tracks are difficult to discern from loggerhead tracks, it is likely that nesting by both species is underreported (Meylan et al. 1995).

Factors affecting the species habitat within the action area

Each of the three fill templates have been nourished on several occasions. Sunny Isles Beach was originally nourished in 1988, with maintenance nourishment projects conducted in 1990 (32,000 cy), 1997 (89,130 cy), and 2001 (707,000 cy). Bal Harbour Beach was originally nourished in 1975, with maintenance nourishment projects conducted in 1990 (225,000 cy), 1998 (282,852 cy), 2003 (45,000 cy), and 2006 (30,000 cy). Miami Beach was originally constructed in 1978, with maintenance nourishment projects conducted in 1985 (110,000 cy), 1998 (18,000 cy), and 2001 (192,000 cy).

As restored beaches equilibrate to a more natural profile, steep vertical escarpments often form along the seaward edge of the constructed beach berm and this presents a physical barrier to nesting turtles. Additionally, as beach profiles equilibrate, losses of nests laid in the seaward portions of the renourished beach due to erosion may be high. Based on long-term studies at Jupiter Island, Steinitz et al. (1998) concluded that at 2 years post renourishment, nesting success was considerably higher than pre renourishment levels and similar to densities found on nearby noneroded beaches. However, the nesting success declined as the renourished beach eroded and narrowed until the next renourishment event. In addition, regular beach maintenance in the form of tractor tilling may disrupt or impact deposited nests and nesting females.

A primary threat to sea turtles along nesting shorelines includes sea turtle hatchling disorientation as a result of artificial lighting along the beach. Typically, sea turtle hatchlings will emerge from the nest and orient themselves towards the brighter, open horizon of the ocean (Salmon et al. 1992). If artificial lights are visible from the beach, sea turtle hatchlings tend to travel toward the artificial lights instead of the ocean. Disorientation events often result in hatchling mortality as a result of dehydration, predation, and motor vehicle strikes.

The Miami Beach segment of the proposed sand placement project is subject to the Miami-Dade County Turtle Nesting Protection Ordinance, which includes measures to reduce impacts of coastal lighting on nesting sea turtles and hatchlings. The City Commission of the City of Sunny Isles Beach has drafted a Sea Turtle Protection Ordinance, which includes measures to reduce impacts of coastal lighting on nesting sea turtles and hatchlings. If this ordinance passes, it will be in affect before the project commences, and sand placement in the Sunny Isles Beach segment will be subject to this ordinance. The Bal Harbour segment of the proposed sand placement project is subject to Bal Harbour municipality Code Section 21-148 and 21-149, which includes measures to reduce impacts of coastal lighting on nesting sea turtles and hatchlings.

EFFECTS OF THE ACTION

The analysis of the direct and indirect effects of the proposed action on sea turtles and the interrelated and interdependent activities of those effects was based on beneficial and detrimental factors.

Factors to be considered

The proposed action has the potential to adversely affect nesting females, nests, and hatchlings within the proposed project area during the construction activities associated with sand placement in Maimi-Dade County, Florida. The effects of the proposed action on sea turtles will be considered further in the remaining sections of this biological opinion. Potential effects include destruction of nests deposited within the boundaries of the proposed project, harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities, and disorientation of hatchling turtles on beaches in and adjacent to the construction area as they emerge from the nest and crawl to the water as a result of coastal lighting that may become visible on the wider, elevated beach.

Analyses for effects of the action

Beneficial effects

The placement of sand on a beach with reduced dry foredune habitat may increase sea turtle nesting habitat if the placed sand is highly compatible (*i.e.*, grain size, shape, color) with naturally occurring beach sediments in the area, and compaction and escarpment remediation measures are incorporated into the project. In addition, a nourished beach that is designed and constructed to mimic a natural beach system may be more stable than the eroding one it replaces, thereby, benefiting sea turtles.

Direct effects

Sand Placement: Placement of approximately 304,600 cy of sand along 1.78 miles of beach in and of itself may not provide suitable nesting habitat for sea turtles. Although placement of beach compatible material may increase the potential nesting area, significant negative impacts to sea turtles may result if protective measures are not incorporated during project construction. Sand placement during the nesting season, particularly on or near high density nesting beaches, can cause increased loss of eggs and hatchlings and along with other mortality sources, may significantly impact the long-term survival of the species. For example, projects conducted during the nesting and hatching season could result in the loss of sea turtles through disruption of adult nesting activity and by burial or crushing of nests or hatchlings. Potential adverse effects during the project construction phase include disturbance of existing nests, which may have been missed, disturbance of females attempting to nest, and disorientation of emerging hatchlings.

Nest relocation: Besides the risk of missing nests during a nest relocation program, there is a potential for eggs to be damaged by their movement, particularly if eggs are not relocated within 12 hours of deposition (Limpus et al. 1979). Nest relocation can have adverse impacts on incubation temperature (and hence sex ratios), gas exchange parameters, hydric environment of nests, hatching success, and hatchling emergence (Limpus et al. 1979; Ackerman 1980; Parmenter 1980; Spotila et al. 1983; McGehee 1990). Relocating nests into sands deficient in oxygen or moisture can result in mortality, morbidity, and reduced behavioral competence of

hatchlings. Nest moisture content is known to influence the incubation environment of the embryos and hatchlings of turtles with flexible-shelled eggs, which has been shown to affect nitrogen excretion (Packard et al. 1984), mobilization of calcium (Packard and Packard 1986), mobilization of yolk nutrients (Packard et al. 1985), hatchling size (Packard et al. 1981; McGehee 1990), energy reserves in the yolk at hatching (Packard et al. 1988), and locomotory ability of hatchlings (Miller et al. 1987). In a 1994 Florida study comparing loggerhead hatching and emergence success of relocated nests with *in situ* nests, Moody (1998) found hatching success was lower in relocated nests at 9 of 12 beaches evaluated and emergence success was lower in relocated nests at 10 of 12 beaches surveyed in 1993 and 1994.

Missed nests: Although a nesting survey and nest marking program would reduce the potential for nests to be impacted by construction activities, nests may be inadvertently missed (when crawls are obscured by rainfall, wind, or tides) or misidentified as false crawls during daily patrols. Even under the best of conditions, about 7 percent of the nests can be misidentified as false crawls by experienced sea turtle nest surveyors (Schroeder 1994).

Equipment: The placement of construction materials, as well as the use of heavy machinery or equipment on the beach during a construction project, may also have adverse effects on sea turtles. They can create barriers to nesting females emerging from the surf and crawling up the beach, causing a higher incidence of false crawls and unnecessary energy expenditure. The equipment can also create impediments to hatchling sea turtles as they crawl to the ocean.

Indirect effects

Many of the direct effects of sand placement may persist over time and become indirect impacts. These indirect effects include increased susceptibility of relocated nests to catastrophic events, the consequences of potential increased beachfront development, changes in the physical characteristics of the beach, the formation of escarpments, and future sand migration.

Increased susceptibility to catastrophic events: Nest relocation may concentrate eggs in an area making them more susceptible to catastrophic events. Hatchlings released from concentrated areas may also be subject to greater predation rates from both land and marine predators, because the predators learn where to concentrate their efforts (Glenn 1998; Wyneken et al. 1998).

Increased beachfront development: Pilkey and Dixon (1996) state that beach replenishment frequently leads to more development in greater density within shorefront communities that are then left with a future of further replenishment or more drastic stabilization measures. Dean (1999) also notes that the very existence of a sand placement project can encourage more development in coastal areas. Following completion of a sand placement project in Miami during 1982, investment in new and updated facilities substantially increased tourism in the area (National Research Council 1995). Increased building density immediately adjacent to the beach often resulted as older buildings were replaced by much larger ones that accommodated more beach users. Overall, shoreline management creates an upward spiral of initial protective measures resulting in more expensive development which leads to the need for more and larger protective measures. Increased shoreline development may adversely affect sea turtle nesting

success. Greater development may support larger populations of mammalian predators, such as foxes and raccoons, than undeveloped areas (National Research Council 1990), and can also result in greater adverse effects due to artificial lighting, as discussed above.

Changes in the physical environment: Sand placement activities may result in changes in sand density (compaction), beach shear resistance (hardness), beach moisture content, beach slope, sand color, sand grain size, sand grain shape, and sand grain mineral content if the placed sand is dissimilar from the original beach sand (Nelson and Dickerson 1988a). These changes could result in adverse impacts on nest site selection, digging behavior, clutch viability, and emergence by hatchlings (Nelson and Dickerson 1987; Nelson 1988).

Beach compaction and unnatural beach profiles that may result from sand placement activities could negatively impact sea turtles regardless of project timing. Very fine sand or the use of heavy machinery can cause sand compaction on nourished beaches (Nelson et al. 1987; Nelson and Dickerson 1988a). Significant reductions in nesting success (*e.g.*, increase in false crawls) have been documented on severely compacted nourished beaches (Fletemeyer 1980; Raymond 1984; Nelson and Dickerson 1987; Nelson et al. 1987), and increased false crawls may result in increased physiological stress to nesting females. Sand compaction may increase the length of time required for female sea turtles to excavate nests and also cause increased physiological stress to the animals (Nelson and Dickerson 1988b). Nelson and Dickerson (1988c) concluded that, in general, beaches nourished from offshore borrow sites are harder than natural beaches, and while some may soften over time through erosion and accretion of sand, others may remain hard for 10 years or more.

These impacts can be minimized by using suitable sand and by tilling compacted sand after project completion. The level of compaction of a beach can be assessed by measuring sand compaction using a cone penetrometer (Nelson 1987). Tilling of a nourished beach with a root rake may reduce the sand compaction to levels comparable to unnourished beaches. However, a pilot study by Nelson and Dickerson (1988b) showed that a tilled nourished beach will remain uncompacted for up to 1 year. Therefore, the Service requires multiyear beach compaction monitoring and, if necessary, tilling to ensure project impacts on sea turtles are minimized.

A change in sediment color on a beach could change the natural incubation temperatures of nests in an area, which, in turn, could alter natural sex ratios. To provide the most suitable sediment for nesting sea turtles, the color of the nourished sediments must resemble the natural beach sand in the area. Tilling, natural reworking of sediments, and bleaching from exposure to the sun would help to lighten dark nourishment sediments; however, the timeframe for sediment mixing and bleaching to occur could be critical to a successful sea turtle nesting season.

Escarpment formation: On nourished beaches, steep escarpments may develop along their waterline interface as they adjust from an unnatural construction profile to a more natural beach profile (Coastal Engineering Research Center 1984; Nelson et al. 1987). These escarpments can hamper or prevent access to nesting sites (Nelson and Blihovde 1998). Researchers have shown that female turtles coming ashore to nest can be discouraged by the formation of an escarpment, leading to situations where they choose marginal or unsuitable nesting areas to deposit eggs

(*e.g.,* in front of escarpments, which often results in failure of nests due to prolonged tidal inundation). This impact can be minimized by leveling any escarpments prior to the nesting season.

Species' response to a proposed action

Ernest and Martin (1999) conducted a comprehensive study to assess the effects of sand placement on loggerhead nesting and reproductive success. The following findings illustrate sea turtle responses to and recovery from a nourishment project. A significantly larger proportion of turtles emerging on nourished beaches abandoned their nesting attempts than turtles emerging on control or prenourished beaches. This reduction in nesting success was most pronounced during the first year following project construction and is most likely the result of changes in physical beach characteristics associated with the nourishment project (*e.g.,* beach profile, sediment grain size, beach compaction, and frequency and extent of escarpments). During the first postconstruction year, the time required for turtles to excavate an egg chamber on the untilled, hard packed sands of one treatment area increased significantly relative to control and background conditions. However, in another treatment area, tilling was effective in reducing sediment compaction to levels that did not significantly prolong digging times. As natural processes reduced compaction levels on nourished beaches during the second postconstruction year, digging times returned to background levels.

During the first postconstruction year, nests on the nourished beaches were deposited significantly farther from both the toe of the dune and the tide line than nests on control beaches. Furthermore, nests were distributed throughout all available habitat and were not clustered near the dune as they were in the control area or prenourished beach. As the width of nourished beaches decreased during the second year, among treatment differences in nest placement diminished. More nests were washed out on the wide, flat beaches of the nourished treatments than on the narrower steeply sloped beaches of the control beach. This phenomenon persisted through the second postconstruction year monitoring and resulted from the placement of nests near the seaward edge of the beach berm where dramatic profile changes, caused by erosion and scarping, occurred as the beach equilibrated to a more natural contour.

As with other sand placement projects, Ernest and Martin (1999) found the principal effect of nourishment on sea turtle reproduction was a reduction in nesting success during the first year following project construction. Although most studies have attributed this phenomenon to an increase in beach compaction and escarpment formation, Ernest and Martin (1999) indicate changes in beach profile may be more important. Regardless, as a nourished beach is reworked by natural processes in subsequent years and adjusts from an unnatural construction profile to a more natural beach profile, beach compaction and the frequency of escarpment formation decline, and nesting and nesting success return to levels found on natural beaches.

Similar short-term effects to listed sea turtle species and their habitat are anticipated to occur as a result of construction activities related to the proposed project. Generally, these adverse effects are limited to the first year after construction. Nonetheless, an increase in sandy beach may not necessarily equate to an increase in suitable sea turtle nesting habitat.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. The Service has considered potential cumulative effects of this project on sea turtles and, in this instance, there are no cumulative effects.

CONCLUSION

It is the Service's biological opinion that the project, as proposed, is not likely to jeopardize the continued existence of loggerhead, green, leatherback, hawksbill, and Kemp's ridley sea turtles. This conclusion is based on the following:

1) The proposed project will affect 1.78 miles during sand placement. This represents 0.0013 percent of the approximately 1,400 miles of available sea turtle nesting habitat in the southeastern United States.

2) Research has shown that the principal effect of sand placement on sea turtle reproduction is a reduction in nesting success, and this reduction is most often limited to the first year following the initial nourishment and subsequent renourishment events.

3) Research has shown that the impacts of a nourishment project on sea turtle nesting habitat are typically short-term because a nourished beach will be reworked by natural processes in subsequent years, and beach compaction and the frequency of escarpment formation will decline.

4) Take of sea turtles will be minimized by implementation of the Reasonable and Prudent Measures, and Terms and Conditions outline below. These measures have been shown to help minimize adverse impacts to sea turtles.

5) The Service's review of the current status of sea turtles, the environmental baseline for the action area, the effects of the proposed sand placement, and the cumulative effects.

6) No critical habitat has been designated for the loggerhead, green, leatherback, Kemp's Ridley, and hawksbill sea turtles in the continental U.S.; therefore, none will be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered or threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage

in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are nondiscretionary, and must be implemented by the Corps so they become binding conditions of any permit issued to the Applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity covered by this incidental take statement. If the Corps (1) fails to assume and implement the terms and conditions or, (2) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Corps must report the progress of the action and its impacts on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

AMOUNT OR EXTENT OF TAKE

The Service anticipates approximately 1.78 miles of nesting beach habitat could be taken as a result of the proposed action; however, incidental take of sea turtles will be difficult to detect for the following reasons:

1. Turtles nest primarily at night and all nests are not located because
    a. Natural factors, such as rainfall, wind, and tides may obscure crawls; and
    b. Human-induced factors, such as pedestrian and vehicular traffic, may obscure crawls, and result in nests being destroyed because they were missed during a nesting survey and egg relocation program;
2. The total number of hatchlings per undiscovered nest is unknown;
3. The reduction in percent hatching and emerging success per relocated nest over the natural nest site is unknown;
4. An unknown number of females may avoid the project beach and be forced to nest in a less than optimal area;
5. Escarpments may form and obstruct an unknown number of females from accessing a suitable nesting site; and
6. The number of nests lost due to erosion of the nourished beach template is unknown.

However, the level of take of these species can be anticipated by the disturbance and nourishment of suitable turtle nesting beach habitat because: (1) turtles nest within the project area; (2) project construction may occur during a portion of the nesting season; and (3) sand placement will modify the incubation substrate, beach slope, and sand compaction.

Take is expected to be in the form of: (1) destruction of all nests that may be constructed and eggs that may be deposited and missed by a nest survey and egg relocation program within the boundaries of the proposed project; (2) destruction of all nests deposited during the period when a nest survey and egg relocation program is not required to be in place within the boundaries of the proposed project; (3) reduced hatching success due to egg mortality during relocation and adverse conditions at the relocation site; (4) harassment in the form of disturbing or interfering with female turtles attempting to nest within the construction area or on adjacent beaches as a result of construction activities; (5) behavior modification of nesting females due to escarpment formation within the project area during a nesting season, resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs; and (6) destruction of nests from escarpment leveling within a nesting season when such leveling has been approved by the Service.

EFFECT OF THE TAKE

In this biological opinion, the Service determined this level of anticipated take is not likely to result in jeopardy to the species. Critical habitat has not been designated in the project area; therefore, the project will not result in destruction or adverse modification of critical habitat. Incidental take of nesting and hatchling sea turtles is anticipated to occur during project construction and during the life of the project. Take will occur on nesting habitat along 1.78 miles of beach within the project area.

REASONABLE AND PRUDENT MEASURES

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize take of loggerhead, green, leatherback, hawksbill, and Kemp's ridley sea turtles in the proposed action area.

1. Beach quality sand suitable for sea turtle nesting, successful incubation, and hatchling emergence must be used on the project site.

2. If sand placement activities are conducted during the period from March 1 through November 30, surveys for nesting sea turtles must be conducted. If nests are constructed in the area of sand placement, the eggs must be relocated.

3. Immediately after completion of the project and prior to the next three nesting seasons, beach compaction must be monitored and tilling conducted as required by March 1 to reduce the likelihood of impacting sea turtle nesting and hatching activities. The March 1 deadline is required to reduce impacts to leatherbacks that are early nesters, and that nest in greater frequency along the South Atlantic coast of Florida than elsewhere in the continental U.S.

4. Immediately after completion of the project and prior to the next three nesting seasons, monitoring must be conducted to determine if escarpments are present and escarpments must be leveled as required to reduce the likelihood of impacting sea turtle nesting and hatching activities.

5. The Applicant must ensure that contractors performing the sand placement work fully understand the sea turtle protection measures detailed in this incidental take statement.

6. During the nesting season (March 1 through November 30), construction equipment and supplies must be stored in a manner that will minimize impacts to sea turtles to the maximum extent practicable.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Corps must insure that the Applicant complies with the following terms and conditions, which implement the reasonable and prudent measures described above, and outline required reporting and monitoring requirements. These terms and conditions are nondiscretionary.

Protection of sea turtles

1. In accordance with the 2001 rule change under subsection 62B-41.007, Florida Administrative Code, all fill material placed on the beach must be analogous to that which naturally occurs within the project location or vicinity in quartz to carbonate ratio, color, median grain size, and median sorting. Specifically, such material shall be predominately of carbonate, quartz, or similar material with a particle size distribution ranging between 0.62 millimeter (mm) and 4.76 mm (classified as sand by either the Unified Soil Classification System or the Wentworth classification). The material shall be similar in color and grain size distribution (sand grain frequency, mean and median grain size, and sorting coefficient) to the material in the existing coastal system at the nourishment site and shall not contain:

   1a. Greater than 5 percent, by weight, silt, clay, or colloids passing the #230 sieve;
   1b. Greater than 5 percent, by weight, fine gravel retained on the #4 sieve;
   1c. Coarse gravel, cobbles, or other material retained on the 0.75-inch sieve in a percentage size greater than found on the native beach; and
   1d. Construction debris, toxic material or other foreign matter; and not result in contamination or cementation of the beach.

These standards must not be exceeded in any 10,000 square foot section, extending through the depth of the nourished beach. If the natural beach exceeds any of the limiting parameters listed above, then the fill material must not exceed the naturally occurring level for that parameter.

2. Daily early morning surveys for sea turtle nests will be required if any portion of the sand placement construction occurs during the period from March 1 through November 30. Nesting surveys must be initiated 65 days prior to nourishment construction activities, or by March 1, whichever is later. Nesting surveys must continue through the end of the project or through September 30, whichever is earlier. If nests are constructed in areas where they may be affected by construction activities, eggs must be relocated per the following requirements:

2a. Nesting surveys and egg relocations will only be conducted by personnel with prior experience and training in nesting survey and egg relocation procedures. Surveyors must have a valid FWC Permit. Nesting surveys must be conducted daily between sunrise and 9 a.m. The contractor must not initiate work until daily notice has been received from the sea turtle permit holder that the morning survey has been completed. Surveys must be performed in such a manner so as to ensure that construction activities do not occur in any location prior to completion of the necessary sea turtle protection measures.

2b. Only those nests that may be affected by construction activities will be relocated. Nests requiring relocation must be moved no later than 9 a.m. the morning following deposition to a nearby self-release beach site in a secure setting where artificial lighting will not interfere with hatchling orientation. Nest relocations in association with construction activities must cease when construction activities no longer threaten nests.

2c. Nests deposited within areas where construction activities have ceased or will not occur for 65 days must be marked and left in *in situ* unless other factors threaten the success of the nest. The sea turtle permit holder must install an on-beach marker at the nest site and a secondary marker at a point as landward as possible to assure the future location of the nest will be possible should the on-beach marker be lost. A series of stakes and highly visible survey ribbon or string must be installed to establish a 10-foot radius around the nest. No activity will occur within this area nor will any activity occur which could result in impacts to the nest. Nest sites must be inspected daily to assure nest markers remain in place and that the nest has not been disturbed by the sand placement activity.

3. Immediately after completion of the project and prior to March 1 for 3 subsequent years, sand compaction must be monitored in the area of sand placement in accordance with a protocol agreed to by the Service, DEP, and the Applicant. At a minimum, the protocol provided under 3a and 3b below must be followed. If required, the area must be tilled to a depth of 36 inches. All tilling activity must be completed prior to March 1. Each pass of the tilling equipment must be overlapped to allow more thorough and even tilling. If the project is completed during the nesting season, tilling will not be performed in areas where nests have been left in place or relocated. (NOTE: The requirement for compaction monitoring can be eliminated if the decision is made to till regardless of postconstruction compaction levels. Additionally, out-year compaction monitoring and remediation are not required if placed material no longer remains on the dry beach).

3a. Compaction sampling stations must be located at 500 foot intervals along the project area. One station must be at the seaward edge of the dune per bulkhead line (when material is placed in this area), and one station must be midway between the dune line and the high water line (normal wrack line).

At each station, the cone penetrometer will be pushed to a depth of 6, 12, and 18 inches

three times (three replicates). Material may be removed from the hole if necessary to ensure accurate readings of successive levels of sediment. The penetrometer may need to be reset between pushes, especially if sediment layering exists. Layers of highly compact material may lie over less compact layers. Replicates will be located as close to each other as possible, without interacting with the previous hole or disturbed sediments. The three replicate compaction values for each depth will be averaged to produce final values for each depth at each station. Reports will include all 18 values for each transect line, and the final six averaged compaction values.

3b. If the average value for any depth exceeds 500 pounds per square inch (psi) for any two or more adjacent stations, then that area must be tilled prior to March 1. If values exceeding 500 psi are distributed throughout the project area, but in no case do those values exist at two adjacent stations at the same depth, then consultation with the Service will be required to determine if tilling is required. If a few values exceeding 500 psi are present randomly within the project area, tilling will not be required.

4. Visual surveys for escarpments along the action area must be made immediately after completion of the project and prior to March 1 for three subsequent years. All escarpments shall be leveled, or the beach profile reconfigured, to minimize escarpment formation. In addition, weekly surveys of the action area shall be conducted during the three nesting seasons following completion of sand placement as follows:

4a. The number of escarpments and their location relative to DEP reference monuments shall be recorded during each weekly survey and reported relative to the length of the beach survey (*e.g.*, 50 percent escarpments). Notations on the height of these escarpments shall be included (0 to 2 feet, 2 to 4, and 4 feet or higher) as well as the maximum height of all escarpment.

4b. Escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet must be leveled to the natural beach contour by April 30. An escarpment removal shall be reported relative to R-monument locations. The Service and FWC must be contacted immediately if subsequent reformation of escarpments that interfere with sea turtle nesting or that exceed 18 inches in height for a distance of 100 feet occurs and persists for more than one week during the peak nesting and hatching season (May 1 to October 31) to determine the appropriate action to be taken. If it is determined escarpment leveling is required during the nesting or hatching season, the Service and FWC will provide written authorization that describes methods to be used to reduce the likelihood of impacting existing nests. An annual summary of escarpment surveys and actions taken must be submitted to the Service.

5. The Applicant must arrange a meeting between representatives of the contractor, the Service, the FWC, and the sea turtle permit holder responsible for egg relocation at least 30 days prior to the commencement of work on this project. At least 10 days advance notice must be provided prior to conducting this meeting. This will provide an opportunity for explanation or clarification of the sea turtle protection measures.

6. From March 1 through November 30, staging areas for construction equipment must be located off the beach to the maximum extent practicable. Nighttime storage of construction equipment not in use must be off the beach to minimize disturbance to sea turtle nesting and hatching activities.

7. A preconstruction lighting survey shall be conducted followed by a lighting survey 30 days postconstruction to ensure no lights or light sources are visible from the project area. A report summarizing all lights visible, using standard survey techniques for such surveys, shall be submitted to the Service and FWC 30 days postconstruction documenting compliance with the sea turtle protection ordinance associated with Miami-Dade County, the City Commission of the City of Sunny Isles Beach, and Bal Harbour municipality. Additional lighting surveys shall be conducted annually prior to April 30 and reports submitted to the Service and FWC.

Reporting

8. A report describing the actions taken to implement the terms and conditions of this incidental take statement must be submitted to the FWC, Imperiled Species Management Section, Tallahassee office as well as the Service's South Florida Ecological Services Office, Vero Beach, Florida within 60 days postconstruction. This report will include the dates of actual construction activities, names and qualifications of personnel involved in nest surveys and relocation activities, descriptions and locations of self-release beach sites, nest survey and relocation results, and hatching success of nests.

9. In the event a sea turtle nest is excavated during construction activities, the sea turtle permit holder responsible for egg relocation for the project must be notified so the eggs can be moved to a suitable site.

10. Upon locating a dead, injured, or sick endangered or threatened sea turtle specimen, initial notification must be made to the Service's Office of Law Enforcement (10426 NW 31st Terrace, Miami, Florida 33172; 305-526-2610). Additional notification must be made to FWC at 1-888-404-3922. Care should be taken in handling sick or injured specimens to ensure effective treatment and care and in handling dead specimens to preserve biological materials in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured endangered or threatened species or preservation of biological materials from a dead animal, the finder has the responsibility to ensure evidence intrinsic to the specimen is not unnecessarily disturbed.

The Service believes incidental take will be limited to the 1.78 miles of beach that has been identified for sand placement. The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed action. The Service believes no more than the following types of incidental take will result from the proposed action: (1) destruction of all nests that may be constructed and eggs that may be deposited and missed by a nest survey and egg relocation

program within the boundaries of the proposed project; (2) destruction of all nests deposited during the period when a nest survey and egg relocation program is not required to be in place within the boundaries of the proposed project; (3) reduced hatching success due to egg mortality during relocation and adverse conditions at the relocation site; (4) harassment in the form of disturbing or interfering with female turtles attempting to nest within the sand placement area or on adjacent beaches as a result of construction activities; (5) behavior modification of nesting females due to escarpment formation within the project area during a nesting season, resulting in false crawls or situations where they choose marginal or unsuitable nesting areas to deposit eggs; and (6) destruction of nests from escarpment leveling within a nesting season when such leveling has been approved by the Service.

The amount or extent of incidental take for sea turtles will be considered exceeded if the project results in more than a one time placement of sand on the 1.78 miles of beach identified for sand placement. If, during the course of the action, this level of incidental take is exceeded, such incidental take represents new information requiring reinitiation of consultation and review of the reasonable and prudent measures provided. The Applicant must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. Surveys for nesting success of sea turtles should be continued for a minimum of 3 years following sand placement to determine whether sea turtle nesting and hatchling success has been adversely impacted.

2. To increase public awareness about sea turtles, informational signs should be placed at beach access points where appropriate. The signs should explain the importance of the beach to sea turtles and the life history of sea turtle species that nest in the area.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action outlined in the request. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the

agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Should you have additional questions or require clarification, please contact Jeff Howe at 772-562-3909, extension 283.

Sincerely yours,

Paul Souza
Field Supervisor
South Florida Ecological Services Office

cc:
Corps, Miami, Florida (Ingrid Sotelo) electronic copy only
DEP, Tallahassee, Florida (Stephanie Gudeman) electronic copy only
EPA, West Palm Beach, Florida
FWC, Tallahassee, Florida (Robbin Trindell) electronic copy only
NOAA Fisheries, West Palm Beach, Florida (Jocelyn Karazsia) electronic copy only
Service, St. Petersburg, Florida (Anne Marie Lauritsen) electronic copy only
Service, Atlanta, Georgia (Noreen Walsh) electronic copy only
USGS, Florida Integrated Science Center, Gainesville, Florida (Susan Walls)

Attachment H

DERM Project Report

PROJECT REPORT

CLASS I PERMIT APPLICATION NO. 2008-CLI-PER-00221

MIAMI-DADE COUNTY TO RENOURISH THREE (3) SEGMENTS OF ERODED BEACH ON MIAMI BEACH, SUNNY ISLES BEACH, AND BAL HARBOUR THROUGH THE PLACEMENT OF 304,600 CUBIC YARDS OF SAND FOR MULTIPLE RENOURISHMENT EVENTS AND TO AUTHORIZE THE TIME OF COMPLETION OF WORK OF THE SUBJECT PERMIT FOR A PERIOD OF TEN (10) YEARS

February 4, 2009

Staff's recommendation of approval for the above-referenced permit application is based on the applicable evaluation factors under Section 24-48.3 of the Code of Miami-Dade County, Florida. The following is a summary of the proposed project with respect to each applicable evaluation factor:

1. **Potential Adverse Environmental Impact** – The potential for any adverse environmental impact from the proposed project is minimal.

2. **Potential Cumulative Adverse Environmental Impact** – The potential cumulative adverse environmental impact related to this project is minimal.

3. **Hydrology** – The proposed project is not reasonably expected to adversely affect existing patterns or volumes of flow in the area.

4. **Water Quality** – The proposed project is expected to affect surface water quality. However, these impacts will be temporary in nature and will be minimized to the maximum extent practicable by the implementation of proper turbidity control measures. Minor increases in turbidity above background levels may occur during fill placement directly in the water; however, the sand is expected to have a low silt content (<1%) and will be placed on the beach dry, therefore, little or no turbidity is expected. The Class I permit will require the applicant to employ appropriate turbidity control devices such as, but not limited to, turbidity curtains during the renourishment events.

5. **Wellfields** – Not applicable.

6. **Water Supply** – Not applicable.

7. **Aquifer Recharge** – Not applicable.

8. **Aesthetics** – The proposed project is designed to be aesthetically compatible with the surrounding area. Specifically, the beach renourishment is designed to enhance an existing beach by restoring the eroded beach areas.

9. **Navigation** – The proposed project is not reasonably expected to adversely affect navigation.

10. **Public Health** - The proposed project is not reasonably expected to adversely affect the public health.

11. **Historic Values** - The proposed project is not reasonably expected to adversely affect historic values.

12. **Archaeological Values** - The proposed project is not reasonably expected to adversely affect archaeological values.

13. **Air Quality** – The proposed project is not reasonably expected to adversely affect air quality due to the operation of heavy equipment and associated vehicular traffic.

14. **Marine and Wildlife Habitats** – The proposed areas of beach renourishment do not contain any significant hardbottom, seagrass/algal communities or other significant benthic communities. Therefore, the project is not reasonably expected to adversely affect benthic communities. In addition, the proposed project is not reasonably expected to adversely

affect any rare, threatened or endangered species. The proposed project will temporarily disturb marine fauna. However, the impacts are temporary in nature and suitable marine habitat will be available for the re-establishment of marine fauna.

15. **Wetland Soils Suitable for Habitat** – The proposed project does not involve any work in wetland soils.

16. **Floral Values** – The proposed project is not reasonably expected to adversely affect marine flora. There are no seagrass resources located in the proposed project locations.

17. **Fauna Values** - The proposed project will disturb marine fauna. Specifically, marine epifauna (animals living in the sediment surface or on the surface of other plants or animals) and infauna (animals living within submerged sediments) will be temporarily impacted from the placement of the sand. However, these impacts are temporary in nature and suitable marine habitat will be available for the re-establishment of marine fauna.

18. **Rare, Threatened and Endangered Species** – The project is not reasonably expected to adversely affect any rare, threatened or endangered species. The United States Fish and Wildlife Services' (USFWS) Biological Opinion Letter (Attachment G) concluded that the proposed project is not likely to jeopardize the continued existence of the loggerhead, leatherback, green, hawksbill, and Kemp's ridley sea turtles and the project is not reasonably expected to destroy or adversely modify designated essential habitat. In addition, the proposed project areas are not located within essential habitat of the West Indian Manatee (*Trichechus manatus*) and no endangered seagrasses were found in these areas during the biological assessment. The Class I Permit will require that all renourishment activities be coordinated with the Florida Fish and Wildlife Conservation Commission (FFWCC) and the Miami-Dade Park and Recreation Department's Sea Turtle Nesting and Relocation Program. Ultimately this project will result in an increase in habitat suitable for nesting of sea turtles.

19. **Natural Flood Damage Protection** - The proposed project is not reasonably expected to affect natural flood damage protection.

20. **Wetland Values** – Not applicable.

21. **Land Use Classification** – Pursuant to Section 24-48.2(II)(A)(7), of the Code of Miami-Dade County, Florida, substantiating letters shall be submitted stating that the proposed project does not violate any zoning laws. Said letters will be submitted after the approval by the Board of County Commissioners and prior to the issuance of a Class I Permit.

22. **Recreation** - The proposed project is not reasonably expected to adversely affect recreation. The proposed project does not conflict with the Miami-Dade County Comprehensive Development Master Plan and Biscayne Bay Management Plan recreation elements.

23. **Other Environmental Values Affecting the Public Interest** – The proposed project is expected to enhance the dune system, provide enhanced public amenities due to the increase in available recreational beach area, provide enhanced protection to upland structures during severe storm events, and provide additional sea turtle nesting habitat. Furthermore, since this project will occur over state-owned lands, the Florida Department of Environmental Protection has granted an Environmental Resouce Consent of Use to Miami-Dade County to conduct the proposed work.

24. **Conformance with Standard Construction Procedures and Practices and Design and Performance Standards** –The proposed project complies with the standard construction procedures and practices and design and performance standards of the applicable portions of the following:

    - Miami-Dade County Public Works Manual
    - Biscayne Bay Management Plan (Sections 33D-1 through 33D-4 of the Code)
    - Chapter 33B of the Code of Miami-Dade County
    - Biscayne Bay Management Plan (Sections 33D-1 through 33D-4 of the Code)

25. **Comprehensive Environmental Impact Statement (CEIS)** - In the opinion of the Director, the proposed project is not reasonably expected to result in either adverse environmental impacts or cumulative adverse environmental impacts. Therefore a CEIS was not required by DERM to evaluate the project.

26. **Conformance with All Applicable Federal, State and Local Laws and Regulations** – The proposed project is in conformance with the following applicable State, Federal and local laws and regulations:
    - Federal Endangered Species Act (US Fish and Wildlife Service)
    - United States Clean Water Act (US Army Corps of Engineers Permit)
    - Florida Department of Environmental Protection Regulations
    - Rules of the South Florida Water Management District
    - Basis of Review for Surface Water Management Permit Applications Within the South Florida Water Management District
    - Chapter 24 of the Code of Miami-Dade County
    - Biscayne Bay Aquatic Preserve Act

27. **Conformance with the Miami-Dade County Comprehensive Development Master Plan (CDMP)** - In the opinion of DERM, the proposed project is in conformance with the CDMP. The following is a summary of the proposed project as it relates to the CDMP:

LAND USE ELEMENT I

Objective 2/Policy 2A - Level of Service - The proposed project does not involve new or significant expansion of existing urban land uses

Objective 3/Policies 3A, 3B, 3C - Protection of natural resources and systems – The proposed project is consistent with the Conservation and Coastal Management Elements of the CDMP and will enhance protected natural resources and systems. The project is compatible with surrounding land uses in Biscayne Bay and does not involve development in the Big Cypress area of Critical State concern or the East Everglades.

TRANSPORTATION ELEMENT II

Aviation Subelement/Objective 9 - Aviation System Expansion - There is no aviation element to the proposed project.

Port of Miami River Subelement/Objective 3 - Minimization of impacts to estuarine water quality and marine resources - The proposed project is not located within the Miami River and adjacent land uses.

CONSERVATION, AQUIFER RECHARGES AND DRAINAGE ELEMENT IV:

Objective 3/Policies 3A, 3B, 3D - Wellfield protection area protection - The proposed project is not located within a wellfield protection area and does not involve agricultural uses.

Objective 3/Policy 3E - Limestone mining within the area bounded by the Florida Turnpike, the Miami-Dade/Broward Levee, N.W. 12 Street and Okeechobee Road - The proposed project is not located within this area.

Objective 4/Policies 4A, 4B, 4C - Water storage, aquifer recharge potential and maintenance of natural surface water drainage - The proposed project will not adversely affect water storage, aquifer recharge potential or natural surface water drainage.

Objective 5/Policies 5A, 5B, 5F - Flood protection and cut and fill criteria – The proposed project will provide enhanced flood protection from storm events through the restoration of the beach and dune system.

Objective 6/Policy 6A - Areas of highest suitability for mineral extraction - The proposed project is not located in an area proposed or suitable for mineral extraction.

Objective 6/Policy 6B - Guidelines for rock quarries for the re-establishment of native flora and fauna - The proposed project is not located in a rock quarry.

Objective 6/Policy 6D - Suitable fill material for the support of development – The proposed project does not involve the removal of any fill appropriate for the support of development.

Objective 7/Policy 7A - No net loss of high quality, relatively unstressed wetlands – The proposed project will not result in a net loss of high quality wetlands.

Objective 9/Policies 9A, 9B, 9C – The project is not reasonably expected to adversely affect any rare, threatened or endangered species. The United States Fish and Wildlife Services' (USFWS) Biological Opinion Letter (Attachment G) concluded that the proposed project is not likely to jeopardize the continued existence of the loggerhead, leatherback, green, hawksbill, and Kemp's ridley sea turtles and the project is not reasonably expected to destroy or adversely modify designated essential habitat. In addition, the proposed project areas are not located within essential habitat of the West Indian Manatee (*Trichechus manatus*) and no endangered seagrasses were found in these areas during the biological assessment. The Class I Permit will require that all renourishment activities be coordinated with the Florida Fish and Wildlife Conservation Commission (FFWCC) and the Miami-Dade Park and Recreation Department's Sea Turtle Nesting and Relocation Program. Ultimately this project will result in an increase in habitat suitable for nesting of sea turtles.

COASTAL MANAGEMENT ELEMENT VII:

Objective 1/Policy 1A - Tidally connected mangroves in mangrove protection areas – There are no mangroves in the project area and the project is not located within a designated "Mangrove Protection Area."

Objective 1/ Policy 1B - Natural surface flow into and through coastal wetlands – The project will not affect natural surface flow into and through coastal wetlands.

Objective 1/ Policy 1C - Elevated boardwalk access through mangroves – The project does not involve access through a Mangrove Protection Area.

Objective 1/Policy 1D - Protection and maintenance of mangrove forests and related natural vegetational communities - The proposed project does not involve work in mangrove forests, coastal hammock, or other natural vegetational communities.

Objective 1/Policy 1E - Mitigation for the degradation and destruction of coastal wetlands. Monitoring and maintenance of mitigation areas – There are no tidally connected emergent wetlands within or adjacent to the project area.

Objective 1/Policy 1G - Prohibition on dredging or filling of grass/algal flats, hard bottom or other viable benthic communities except as provided for in Chapter 24 of the Code of Miami-Dade County, Florida - The proposed project has been designed to minimize impacts to viable benthic communities. The proposed filling work as related to the beach renourishment project is consistent with three of the dredge and fill criteria listed in Section 24-48.3(2) of the Code of Miami-Dade County, Florida. No other filling of grass/algal flats, hard bottom or other viable benthic communities is proposed with this project.

Objective 2/Policies 2A, 2B - Beach restoration and renourishment objectives - The proposed beach renourishment project has been designed and will be managed to minimize impacts to offshore seagrass beds and dune vegetation as described in Evaluation Factors #14 and #18 above.

Objective 3/Policy 3E, 3F - Location of new cut and spoil areas for proper stabilization and minimization of damage - The proposed project does not involve the development or identification of new cut or spoil areas.

Objective 5/Policy 5B - Existing and new areas for water-dependent uses - The proposed project will enhance existing water-dependent uses associated with a beach.

Objective 5/Policy 5D - Consistency with Chapter 33D, Miami-Dade County Code (shoreline access, environmental compatibility of shoreline development) - The proposed project does not require review by the Shoreline Development Review Committee.

Objective 5/Policy 5F - The siting of water dependent facilities - The proposed project does not involve the creation of any new water dependent facilities.

28. **Conformance with Chapter 33B, Code of Miami-Dade County** (East Everglades Zoning Overlay Ordinance) – Not applicable.

29. **Conformance with the Code of Miami-Dade County Ordinance 81-19** (Biscayne Bay Management Plan Sections 33D-1 through 33D-4 of the Code) - The project is not located within Biscayne Bay.

30. **Conformance with the Miami-Dade County Manatee Protection Plan** – The project area is not located within essential habitat for the West Indian Manatee (*Trichechus manatus*).

31. **Consistency with Miami-Dade County Criteria for Lake Excavation** – Not applicable.

32. **Municipality Recommendation** – Pursuant to Section 24-48.2(II)(A)(7), of the Code of Miami-Dade County, Florida, substantiating letters shall be submitted stating that the

proposed project does not violate any zoning laws. Said letters will be submitted after the approval by the Board of County Commissioners and prior to the issuance of the Class I Permit.

33. **Coastal Resources Management Line** - A coastal resources management line was not required for the proposed project, pursuant to Section 24-48.2(II)(A)(10)(b) of the Code of Miami-Dade County, Florida.

34. **Maximum Protection of a Wetland's Hydrological and Biological Functions** – The proposed project is not reasonably expected to impact wetland hydrological and biological functions.

35. **Class I Permit Applications Proposing to Exceed the Boundaries Described in Section D-5.03(2)(a) of the Miami-Dade County Public Works Manual** – DERM has considered the following factors:

    i) **Whether the proposed exceedance is the minimum necessary to avoid seagrasses or other valuable environmental resources** – Not applicable.
    ii) **Whether the proposed exceedance is the minimum necessary to achieve adequate water depth for mooring of a vessel** – Not applicable.
    iii) **Whether the applicant has provided notarized letters of consent to DERM from adjoining riparian property owners** – Not applicable.
    iv) **Whether any letters of objection from adjoining riparian property owners were received by DERM** – Not applicable.

The proposed project was also evaluated for compliance with the standards contained in Section 24-48.3(2),(3), and (4) of the Code of Miami-Dade County, Florida. The following is a summary of how the standards relate to the proposed project:

24-48.3 (2) Dredging and Filling for Class I Permit - The proposed project complies with the following criteria:

- Minimum dredging and spoiling for public navigation or public necessity.
- An alteration of physical conditions as may be necessary to enhance the quality or utility of adjacent waters.
- A physical modification necessary to protect public or private property.

24-48.3 (3) Minimum Water Depth Required for Boat Slips Created by the Construction or Placement of Fixed or Floating Docks and Piers, Piles and Other Structures Requiring a Permit Under Article IV, Division 1 of Chapter 24 of the Code of Miami-Dade County - The proposed project does not involve the construction or placement of fixed or floating docks and piers, piles and other strucures for mooring purposes.

24-48.3 (4) Clean Fill in Wetlands – The proposed project involves the placement of sand on three (3) segments of eroded beach. All of the sand proposed for this project will meet the definition of clean fill as set forth in Section 24-5 of the Code of Miami-Dade County.

BASED ON THE FOREGOING, IT IS RECOMMENDED THAT A CLASS I PERMIT BE APPROVED.

Lisa Spadafina, Manager
Coastal Resources Section

Nicole Fresard, Biologist II
Coastal Resources Section