

APPENDIX C – Seagrass and Coral Survey

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Miami Beach Coast Guard Station

Seagrass and Coral Survey

FINAL

August 2013

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EXECUTIVE SUMMARY

The Miami Beach U.S. Coast Guard Station (Station) is located on a man-made island, north of the Port of Miami on the Intracoastal Waterway. The U.S. Corps of Engineers contracted Dial Cordy and Associates (DC&A) to conduct seagrass and coral surveys around the island under contract W912EP-13-F-0016. The seagrass resource study area included the entire perimeter of the Station within 4.6 meters (m) (15 feet) of the station and a sufficient buffer to account for side slope, with transects spaced 15.2m (50 feet) apart, perpendicular to the bulkhead. The berth of the USCG *Cutter Hudson*, located on the eastern side of the station was surveyed for seagrasses out to 30m (98 feet). A survey for scleractinian corals was conducted along the entire bulkhead, from the base of the bulkhead wall to the mean low water mark. Scleractinian coral data collected included coral species, size, orientation, latitude, longitude and height on the bulkhead wall. Surveys were conducted from May 28-30 and June 12, 2013 in support of the FDEP permit application for dredging around the station and bulkhead improvements.

Approximately 0.42 acres of seagrasses were documented within the project area between 16m (52.5 feet) 30m (98 feet) from the east bulkhead wall adjacent to the *Cutter Hudson* berth. The predominant seagrasses were *Halophlia decipiens* and *Halodule wrightii*, although *Syringodium filiforme* and *Thalassia testudinum* were also present. No *H. johnsonii* was documented in the survey. Despite surveying seagrass transects around the entire island, no seagrasses were found anywhere else in the project area.

Coral surveys resulted in the documentation of 580 scleractinian coral colonies on all four bulkhead walls. Of these, 33% exceeded 10cm in their greatest (longest) measured dimension. The total area of wall surface covered by all 580 corals is 50.2 m². This is approximately 0.2% of the surface area available for colonization that is below mean low water. In total 18 species of scleractinian coral were identified. These species are commonly identified on the reefs and hardbottom communities of southeast Florida (Jaap 1984; Porter 1987). Of these, *Oculina diffusa* was the most common coral comprising 66% of all coral species present. *O. diffusa* also comprised more than half of all large (>10cm) corals, however, the three largest individual colonies identified were *Porites astreoides*. The density of corals was greatest on the south wall and the south parts of the east and west walls. Coral density decreased on the northern reaches of the east and west walls. The density on the west wall was lower than on the south and east walls.

Additional scleractinian corals were noted at the base of the north, east and south walls, where they have colonized rubble and debris. Although these coral were not quantified under this contract, pre-construction surveys should include this area, as many of these corals were larger than 10cm and would be considered relocatable.

While seagrass and coral surveys at the Station documented a small area of seagrass (0.42 acres) on the east side of the island and 580 scleractinian corals on the walls surrounding the island, pre-project mitigation measures can prevent time lag habitat losses. Mitigation options may include seagrasses transplantation and coral relocation as effective ways of saving, preserving and enhancing these resources within a regional context.

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1.0 INTRODUCTION

The Miami Beach U.S. Coast Guard (USCG) Station (Station) is located on a man-made island, north of the Port of Miami on the Intracoastal Waterway (Figure 1). The U.S. Corps of Engineers contracted Dial Cordy and Associates (DC&A) to conduct coral and seagrass surveys around the island under contract W912EP-13-F-0016. The seagrass resource study area included the entire perimeter of the Station within 4.6 meters (m) (15 feet) of the station and a sufficient buffer to account for side slope, with transects spaced 15.2m (50 feet) apart, perpendicular to the bulkhead. The berth of the USCG *Cutter Hudson*, located on the eastern side of the station was surveyed for seagrasses out to 30m (98 feet). A survey for scleractinian corals was conducted along the entire bulkhead, from the base to the mean low water mark. Scleractinian coral data collected included coral species, size, orientation, latitude, longitude, and height on the bulkhead wall. Surveys were conducted from May 28-30 and June 12, 2013 in support of the FDEP permit application for dredging around the station.

2.0 METHODS

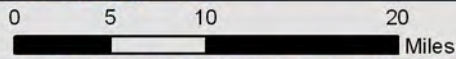
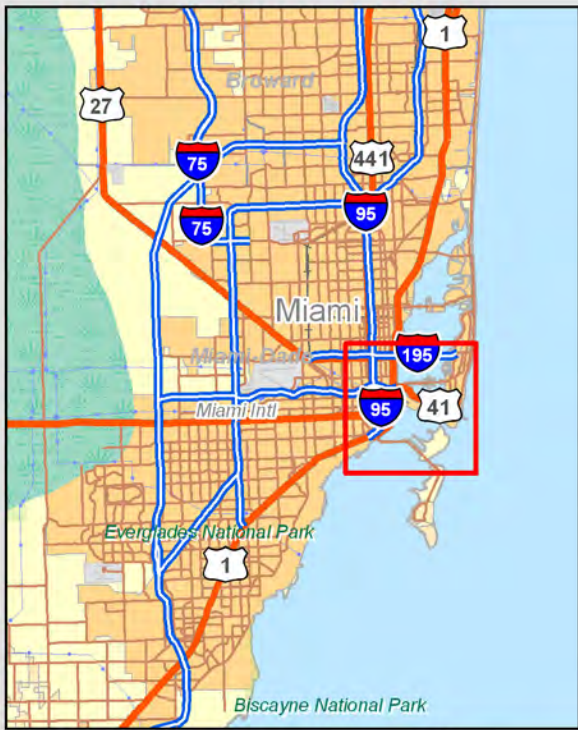
This section describes the methods used to collect and analyze data associated with the seagrass survey and coral survey at the Station. Seagrass and coral surveys were conducted from May 28-30 and on June 12, 2013. The weather was overcast with gusting winds and occasional rain between May 28-30, on June 12 skies were clear with winds 5-10 knots out of the southeast. Currents were strong (1-3 knots) around most of the island, regardless of tide stage, except in the middle of the north wall.

2.1 Seagrass Survey Methods

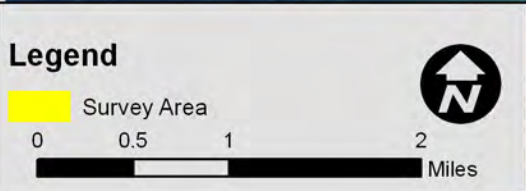
Fifty-seven transects were sampled to describe the seagrass distribution around the Station. Seagrass transects spaced 15m (50 feet) apart were surveyed around the island as shown in Figure 2. All transects along the west and north bulkheads were 15m in length. Transects on the east bulkhead were 15m (50 feet), except within the *Cutter Hudson* berth area, where transects were 30m (98 feet). Transects along the south bulkhead were 10m (33 feet) in length due to diver safety considerations.

Seagrass survey transects began at the bulkhead in all cases, where the transect was secured to a weighted buoy marking the transect origin. Transects origins and ends were recorded using a Differential Global Positioning (DGPS). Diver 1 swam a heading using a wrist compass while unreeling a 30m (98 feet) survey transect tape for the appropriate distance, depending upon the transect location, see paragraph above. Diver 2 recorded video of the substratum along the transect tape and collected quantitative and qualitative benthic data.

Quantitative data within quadrats (1m²) was collected every 5m only in areas where seagrass occurred. Quantitative data included seagrass species frequency of occurrence, or the number of occupied sub-units within a quadrat; Braun-Blanquet abundance score (Braun-Blanquet 1965; Table 1); and density of seagrasses. Qualitative data included the transition of habitats (i.e. sand, seagrass) within 2m of the transect line.



Survey Area Location



Location Map	
Miami Beach Coast Guard Station Seagrass and Coral Survey	
Scale: 1 inch = 1 mile	Drawn By: MDR
Date: July 2013	Approved By: MLR
 DIAL CORDY AND ASSOCIATES INC <i>Environmental Consultants</i>	J13-1265
	Figure 1



Survey Transects

Miami Beach Coast Guard Station
Seagrass and Coral Survey

Scale: 1 inch = 50 meters

Drawn By: MDR

Date: July 2013

Approved By: MLR



J13-1265

Figure 2

Table 1 Braun-Blanquet Abundance Score Values

0	Species absent from quadrat
0.1	Species represented by a solitary short shoot, <5% cover
0.5	Species represented by a few (< 5%) short shoots, <5% cover
1.0	Species represented by many (> 5%) short shoots, <5% cover
2.0	Species represented by many (> 5%) short shoots 5% - 25% cover
3.0	Species represented by many (> 5%) short shoots 25%- 50% cover
4.0	Species represented by many (> 5%) short shoots 50%- 75% cover
5.0	Species represented by many (> 5%) short shoots 75%-100% cover

2.2 Coral Survey Methods

The goals of the coral survey were to locate, identify, measure the sizes of, and document the condition of all scleractinian coral colonies along the bulkhead of the Station in preparation for bulkhead improvements.

A pair of divers performed the survey with supporting personnel both on shore, walking along the edge of the bulkhead, and in a vessel. Before entering the water, the team used a tape measure to mark off sections along the wall. Most sections were 20m in linear distance along the wall, but a few were slightly shorter or longer as needed to accommodate obstacles such as fenders or moored vessels. All of the measurements began at either the southeast or southwest corners of the island so that the cumulative linear distance along the wall of the start and end of each section was known. At these known locations marking the boundaries between sections, a numbered and weighted line was dropped so that the divers could tell what section of the wall they were in while underwater.

Each dive began and ended at one of the weighted lines marking a section boundary. While underwater, the divers visually inspected the bulkhead. After locating a colony, the divers noted the time of day, the depth of the colony, its species and condition, height perpendicular to the wall, then took a digital photograph and/or short video clip of the colony with a scale bar in the field of view. Identification was performed to species level following Cairns et al. 2002; Budd et al. 2012. Condition included estimates of the percent of the colony with living tissue, and assessment of the presence or absence of coral disease and/or bleaching (see Bruckner and Bruckner 1998). The surface support crew walked along the wall keeping pace with the divers and with hand-held GPS units recording position every 5 seconds. The east and north walls were shallow enough that a single pass was sufficient to visually inspect the entire wall. The west and south walls, however, were deeper and required two passes for most sections to inspect the entire vertical span of the bulkhead.

Time was the essential variable linking measurements of position, taken from the GPS and by the divers noting the time they passed section boundaries, with the photographs and *in situ* assessment made for each colony. At the beginning of each day, the divers synchronized their watches and cameras with GPS time, so temporal offsets between these data sources were known.

Processing the position data consisted of three steps. First, the coordinates of the corners of the wall were taken from high-resolution aerial photography available in Google Earth. Second, the coordinates of the boundaries between all of the sections were determined by interpolating between the known corners of the island by the known distances between the

section boundaries. Third, knowing the start time and end time of each of the sections, the distance along each section was interpolated at one-minute intervals using the GPS tracks acquired by shore personnel following the divers.

Processing the diver data consisted of four steps. First, the diver data sheets were transcribed to an electronic spreadsheet format. In the spreadsheet, each row represents one coral colony. Second, the image corresponding to each coral colony in the spreadsheet was identified using the image time stamps and the time of observation recorded by the diver. Third, the images were then placed into ImageJ software (available as a free-ware program from the National Institute of Health, NIH 2013) and calculations of length and width were made (see Abràmoff et al. 2004). Each coral was inspected to verify information recorded in the field and to make detailed, length and width measurements. Fourth, the depth for each coral was corrected to mean high water using the NOAA tide predictions available from www.co-ops.nos.noaa.gov. Following these steps all work sheets and coral identification from digital images were QA/QC'd by a coral expert.

Fusing the position and condition data was done by merging the fields based on time. Note that the diver recorded the time of observation to the nearest minute, which is why position was interpolated from the GPS tracks to the nearest minute. This means that there are some corals with identical UTM zone 17R easting and northing coordinates, though generally not identical depth coordinates.

3.0 RESULTS

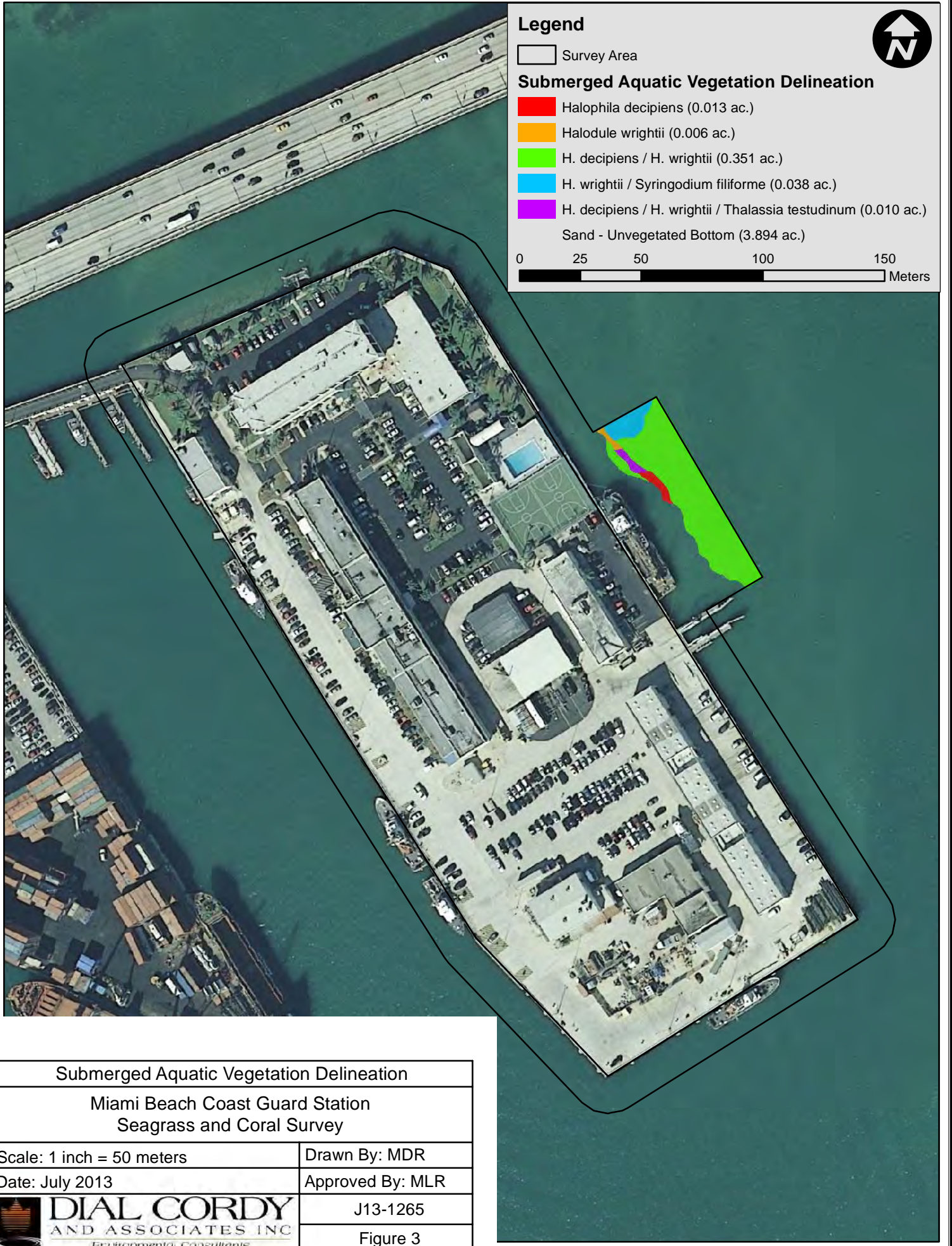
Results for the seagrass survey and coral survey are presented below, including tables, graphs, and discussion of results.

3.1 Seagrass Results

The Station seagrass survey was conducted from May 28-30 and June 12, 2013. The weather was overcast with gusting winds and occasional rain between May 28-30, on June 12 skies were clear with winds 5-10 knots out of the southeast. Depth ranged from 2 feet to 30 feet across transects. Fifty-seven transects were surveyed for seagrasses. Seagrasses were documented along five transects on the east side of the island, north of the *Cutter Hudson* berth (Figure 3). Seagrasses were found between 16m and 30m north of the bulkhead in 8-12 feet of water. No *Halophila johnsonii* was documented during surveys.

Seagrasses documented along survey transects included *Halophila decipiens*, *Halodule wrightii*, *Syringodium filiforme*, and *Thalassia testudinum*. The predominant seagrasses were mixed beds of *H. decipiens* and *H. wrightii*. See Appendix A (DVD) for seagrass data and Appendix B (DVD) for seagrass transect video. Appendix C (attached), at the end of this report includes a cross over document that ties each video clip to a seagrass transect.

Approximately 0.42 acres of seagrasses occur within the project area out to ~100 feet from the east bulkhead wall adjacent to the *Cutter Hudson* berth (Figure 3). Seagrass species frequency of occurrence, abundance and density data are summarized in Table 2. Frequency of occurrence values were relatively low for all species. *S. filiforme* had the highest value (0.5 out of a possible 1.0), which was highly abundant and dense in a localized area. *T. testudinum* had the lowest frequency score (0.1 out of a possible 1) as it was sparsely distributed and low in abundance (BB score = 1 or <5% cover) and density.



Legend

- Survey Area
- Halophila decipiens* (0.013 ac.)
- Halodule wrightii* (0.006 ac.)
- H. decipiens* / *H. wrightii* (0.351 ac.)
- H. wrightii* / *Syringodium filiforme* (0.038 ac.)
- H. decipiens* / *H. wrightii* / *Thalassia testudinum* (0.010 ac.)
- Sand - Unvegetated Bottom (3.894 ac.)



Submerged Aquatic Vegetation Delineation

Miami Beach Coast Guard Station
Seagrass and Coral Survey

Scale: 1 inch = 50 meters

Drawn By: MDR

Date: July 2013

Approved By: MLR



J13-1265

Figure 3

Table 2 Frequency of occurrence, abundance, and density for seagrass species within the project area.

	Frequency of Occurrence	Abundance	Density
<i>Halophila decipiens</i>	0.3	0.8	0.4
<i>Halodule wrightii</i>	0.2	1.0	0.4
<i>Syringodium filiforme</i>	0.5	3.0	1.5
<i>Thalassia testudinum</i>	0.1	1.0	0.2

Frequency of occurrence = Number of occupied sub-units/total number of sub-units

Abundance = Sum of abundance scale values/number of occupied quadrats

Density = Sum of abundance scale values/total number of quadrats

3.2 Seagrass Discussion

Mixed seagrasses and monospecific beds of several seagrass species including *Halophila decipiens*, *Halodule wrightii*, *Syringodium filiforme*, and *Thalassia testudinum* were only documented north of the *Cutter Hudson* berth (Figure 3). These seagrass beds represent 0.42 acres of seagrass within the project area. Mixed beds of *H. decipiens* and *H. wrightii* covered the most area, while *S. filiforme* was the most abundant and dense in a localized area with blades extending as much as 30cm. *T. testudinum* was present but in low abundance and density. Notably, no *H. johnsonii* was documented in the survey area.

Seagrasses were found along transects within the *Cutter Hudson* survey area at ~16m from the bulkhead, so it is possible that the length of transects outside of the *Cutter Hudson* area on the east side were not of sufficient length to detect existing seagrass beds that may exist beyond 15m north and south of the *Cutter Hudson* berth. Although disturbance and shading from the *Cutter Hudson* may explain the lack of seagrasses found within the berth area and immediately adjacent to it, presumably this effect would not extend as far beyond the vessel as the entire side of the island. Currents moving through the area can be strong (up to 4 knots), because of the channelization of water between the Station and the southern portion of Miami Beach. These currents may impede the establishment of seagrasses along the edge of the bulkhead.

Although some seagrass transects were not surveyed due to diver safety issues related to currents and/or boat traffic (transects 1, 34, 41-45 and 66-67), the adjacent surveyed transects did not include seagrasses.

Before dredging activities begin, seagrasses may be harvested from the potential impact area and transplanted into prop scars within northern Biscayne Bay or into other seagrass mitigation site locations, such as the Julia Tuttle Seagrass Mitigation site associated with the Port Miami deepening and widening project.

3.3 Coral Survey Results

In total, 580 corals were identified, photographed, and measured on all four bulkhead walls (Figure 4). Of these, 197 colonies (33%) were equal to or exceeded 10cm in their greatest (longest) measured dimension. The total area of wall surface covered by all 580 corals is 50.2 m². This is approximately 0.2% of the surface area available for colonization, which is below mean low water. In total, 18 species of scleractinian coral were identified (Table 3). These are all species commonly identified on the reefs and hardbottom communities of southeast Florida (Jaap 1984; Porter 1987). Of these, *Oculina diffusa* was the most common coral comprising 66% of all coral species present. *O. diffusa* also comprised 53% of all large (>10cm) corals. The three largest individuals identified were all *Porites astreoides*. The rank abundance of corals is shown in Figure 5. The abundance of large colonies sorted by species is shown in Figure 6. The density of corals was greatest on the south wall and the south parts of the east and west walls. Coral density decreased on the northern reaches of the east and west walls. That being said the density on the west wall was much lower than on the south and east walls. As for position on the wall there was more *Oculina diffusa* toward the base (closer to the sediment/water interface) but it was also the most common species throughout the survey area. Accordingly, *Oculina diffusa* was the most dominant with a range of sizes (although most were encrusting and not branching due to their growth on the vertical wall surface). As for other corals, their size frequency distribution seemed to be bimodal with both small and large colonies present. See Appendix D (DVD) for coral data and Appendix E (DVD) for all coral photos.

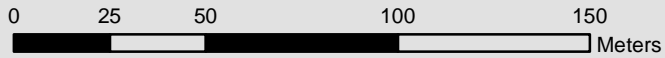
Table 3 Species list of corals documented on bulkhead surrounding the Station, May and June 2013.

Species Name
<i>Oculina diffusa</i>
<i>Montastraea cavernosa</i>
<i>Orbicella faveolata</i>
<i>Orbicella franksi</i>
<i>Diploria strigosa</i>
<i>Diploria labyrinthiformis</i>
<i>Diploria clivosa</i>
<i>Dichocoenia stokesi</i>
<i>Siderastrea siderea</i>
<i>Siderastrea radians</i>
<i>Favia fragum</i>
<i>Porites astreoides</i>
<i>Manicina areolata</i>
<i>Colpophyllia natans</i>
<i>Phylangia americana</i>
<i>Mycetophyllia ferox</i>
<i>Stephanocoenia intercepta</i>
<i>Isophyllia sinuosa</i>



Legend

- Coral Colony Location (x,y)
- Yellow shaded area: Potential Location For Hard Corals
- Black outline: Survey Area



Coral Colony Locations

Miami Beach Coast Guard Station
Seagrass and Coral Survey

Scale: 1 inch = 50 meters

Drawn By: MDR

Date: July 2013

Approved By: MLR



J13-1265

Figure 4

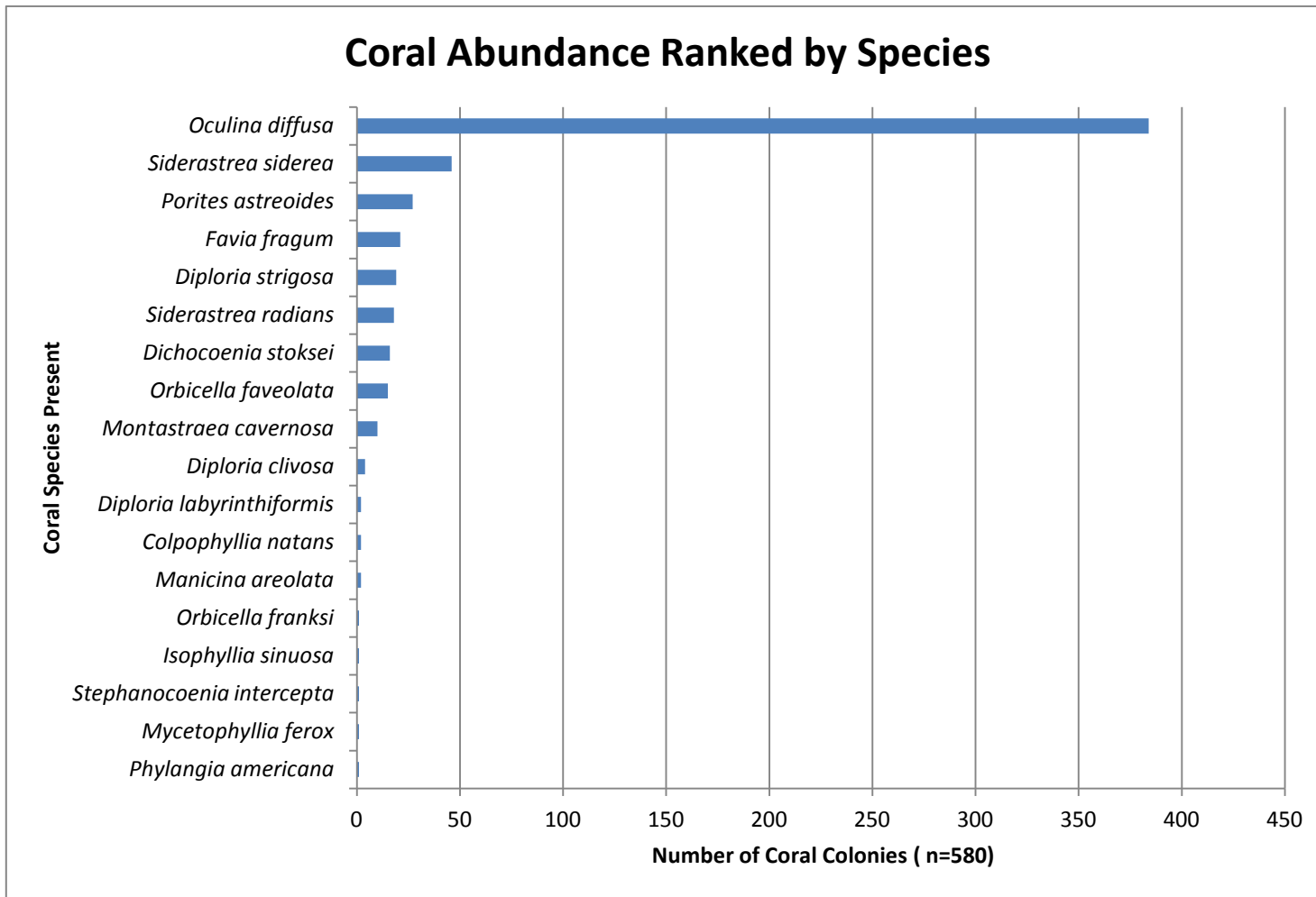


Figure 5 Coral colony abundance (richness) by species.

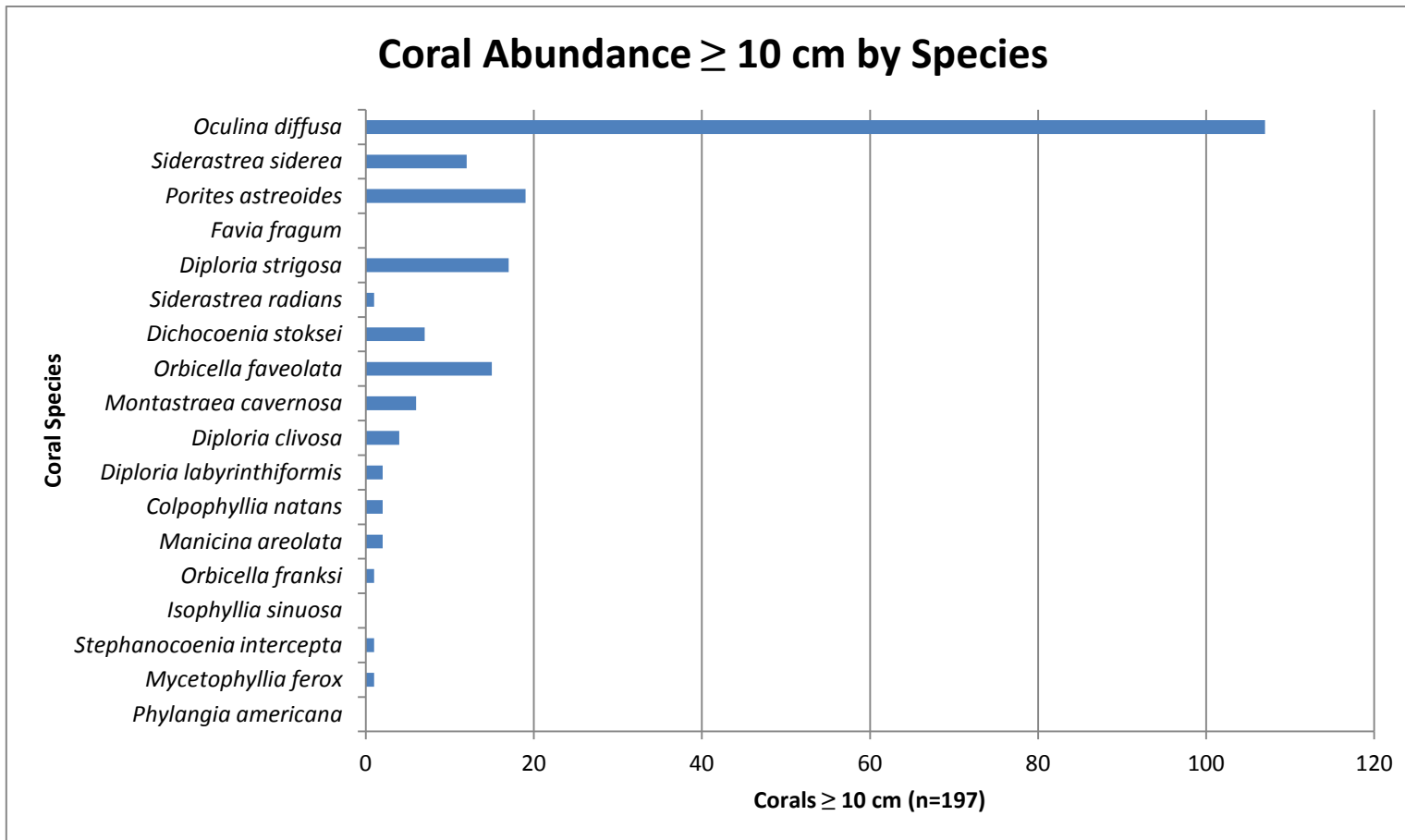


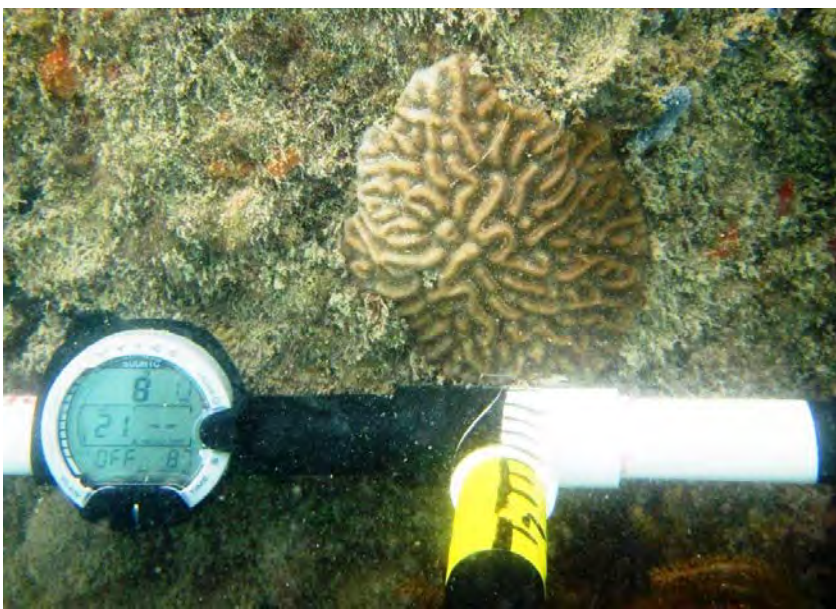
Figure 6 Coral colony species \geq 10cm (length or width) in order of abundance.

There were only two instances of partial bleaching and both were for *Siderastrea* spp. The only caveat being that there was variable color mottling on many *Oculina diffusa* colonies, however, this pattern is common with healthy *O. diffusa* colonies. No discernible diseases were noted on any species. Most partial mortality appeared to be a result of competition for space between corals and other benthic species including sponges, tunicates, hydrozoans, octocorals, and algae.

Additional scleractinian corals were noted on the benthos, at the base of the north, east and south walls, where they have colonized rubble and debris (Figure 4). Although these coral were not quantified under this contract, pre-construction surveys should include this area, as many of these corals were larger than 10cm and should be considered for transplantation.

3.4 Coral Survey Recommendations

1. All corals larger than 10cm (n=197) should be removed prior to any construction or dredging. These corals should be placed on artificial structures adjacent to the Port Miami project area. Approximately 20% of these relocated corals should be tagged and monitored through time (up to five years) to assess the efficacy of relocation.
2. All charismatic rare corals (*Montastraea cavernosa*, *Orbicella faveolata*, *Orbicella franksi*, *Diploria strigosa*, *Diploria labyrinthiformis*, *Diploria clivosa*, *Dichocoenia stokesi*, *Manicina areolata*, *Colpophyllia natans*, *Phylangia Americana*, *Mycetophyllia ferox*, *Stephanocoenia intercepta*, *Isophyllia sinuosa*) of all sizes should also be moved where practicable.
3. Small (< 10cm) encrusting colonies of *Oculina diffusa*, *Porites astreoides*, *Siderastrea radians*, and *Favia fragum* will be difficult to remove because of their growth habit without incurring significant mortality. As such, it will not be cost effective to remove these *en masse* from the walls.
4. Non-scleractinian taxa including sponges, octocorals and other benthic organisms found on the walls are not viable candidates for relocation.
5. Pre-construction surveys should include the area at the base of the bulkhead walls out to 3 meters, where additional corals for relocation and transplantation were noted, but not quantified in this study. Many of these corals were of sizes ≥ 10 cm in maximum diameter.



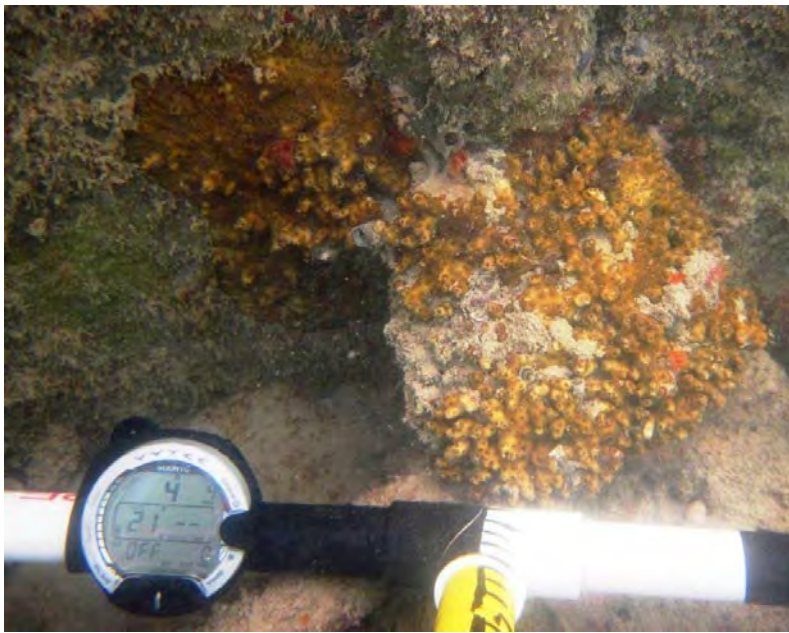
Diploria strigosa



*Diploria
labyrinthiformis*



Diploria clivosa



Oculina diffusa



Porites astreoides



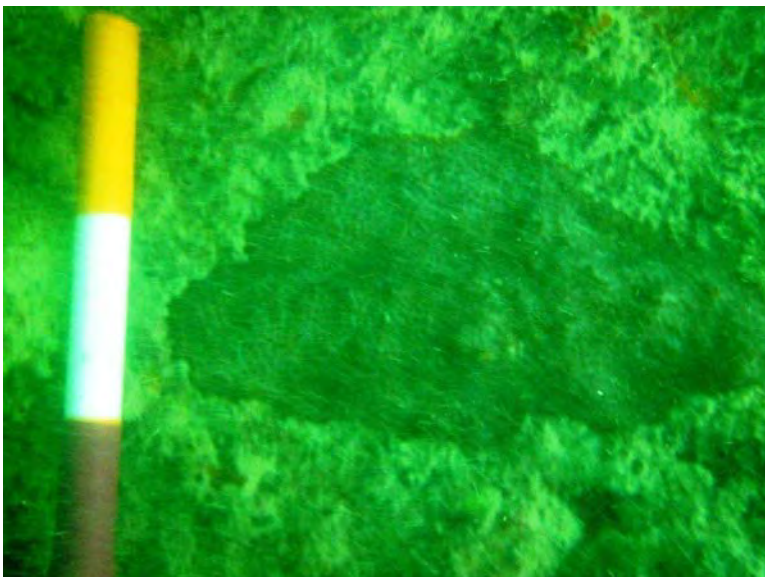
Dichocoenia stoksei



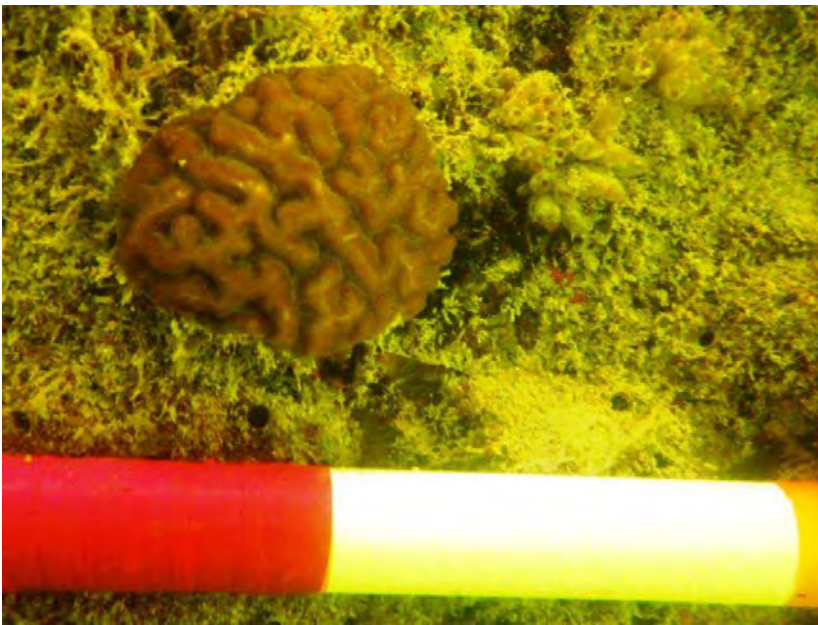
*Montastraea
cavernosa*



*Orbicella
faveolata =
Montastraea
faveolata*



*Orbicella
franksi =
Montastraea
franksi*



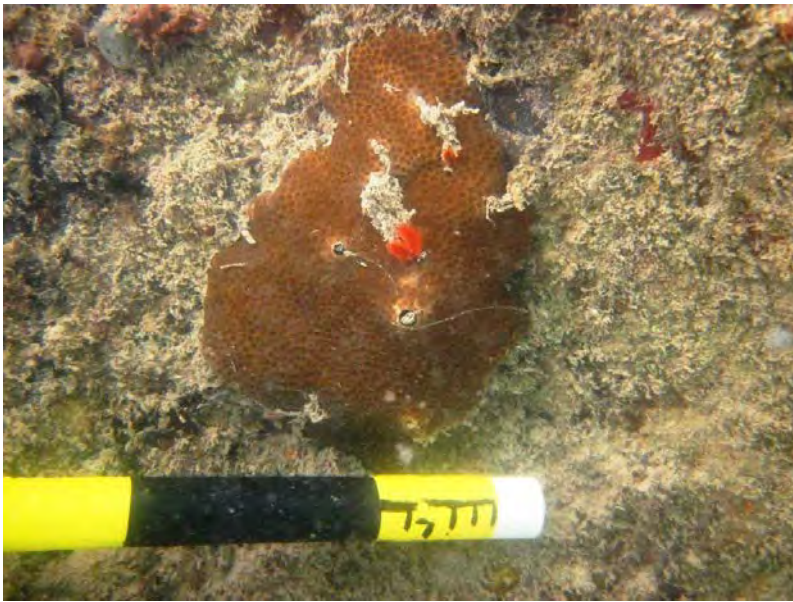
*Manicina
areolata*



*Colpophyllia
natans*



*Isophyllia
sinuosa*



*Siderastrea
siderea*



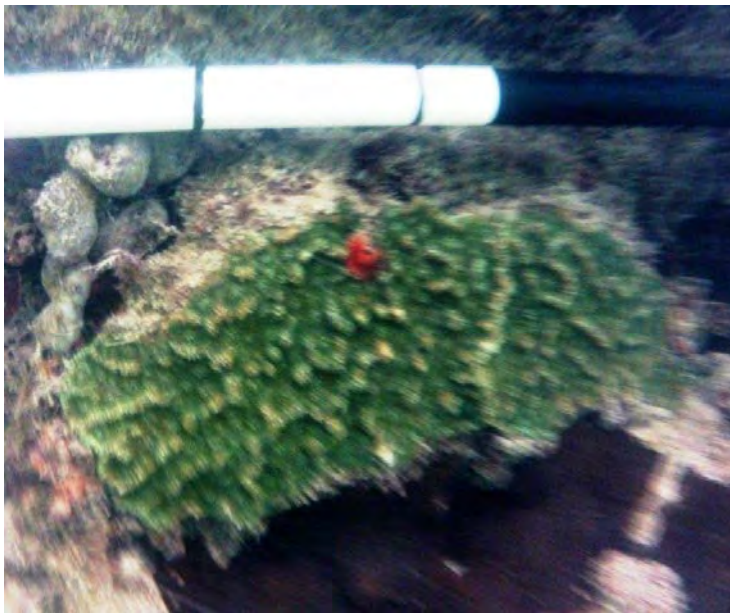
*Siderastrea
radians*



*Stephanocoenia
intercepta*



Favia fragum



*Mycetophyllia
ferox*



*Phyllangia
americana*

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APPENDIX A
Seagrass Data (DVD)

APPENDIX B
Seagrass Transect Video (DVD)

APPENDIX C
Seagrass Transect Video Cross Over Document
(see next page)

APPENDIX D
Coral Data (DVD)

APPENDIX E
Coral Still Photographs (DVD)

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APPENDIX C

clip ID	Transect	Note
7	32	board
8	32	video
9	31	board and video
10	30	board and video
11	29	board and video
12	28	board and video
13	27	board and video
14	26	board and video
15	13	board and video
16	14	board and video
17	15	board and video
18	16	board and video
19	17	board and video
20	3	board and video
21	4	board and video
22	5	board and video
23	6	board and video
24	7	board and video
25	8	board and video
26	9	board
27	9	board and video
28	23	board
29	23	board and video
30	22	board and video
31	21	board
32	21	board and video
33	20	board
34	20	video
35	19	board and video
36	18	board
37	18	video

clip ID	Transect	Note
38	46	board
39	46	video
40	47	board and video
41	48	board and video
42	49	board and video
43	50	board and video
44	51	board and video
45	52	board and video
46	38	board
47	38	video
48	37	board
49	37	video
50	36	board
51	36	video
52	35	board and video
53	12	board
54	12	video
55	11	board
56	11	video
57	2	board
58	2	video
59	33	board
60	33	video
61		lobster
62	53	board and video
63	54	board and video
64	55	board
65	55	video
66	55	video
67	55	video
68	56	board and video

clip ID	Transect	Note
69	39	board
70	39	video
71	40	board
72	40	video
73	41	board
74	41	video
75	57	board
76	57	video
77	58	board
78	58	video
79	58	video
80	59	board and vodeo
81	----	nothing in clip
82	-----	room pic
83	60	board
84	60	video
85	61	board
86	61	video
87	62	board
88	62	video
89	62	video
90	63	board
91	63	video
92	64	board
93	64	video
94	64	video
95	64	video

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APPENDIX D – Permits for Previous Dredging

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DEPARTMENT OF THE ARMY
MIAMI FIELD OFFICE, 8410 NW 53RD TERRACE MONTEREY BLDG., SUITE 225
MIAMI, FLORIDA 33166-4565

25 August 1992

REPLY TO
ATTENTION OF
Miami Regulatory
Field Office
199231007 (LP-MZ)

Commanding Office
US Coast Guard Civil Engineering Unit
909 SE First Avenue
Miami, Florida 33131

Dear Applicant:

This is in reference to your request for a permit to perform work in or affecting navigable waters of the United States. Upon recommendation of the Chief of Engineers, pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), you are authorized to dredge approximately 2000 cubic yards in Biscayne Bay at 100 MacArthur Causeway, Miami Beach in Dade County in accordance with the enclosed drawings and conditions which are incorporated in, and made a part of, the permit. We have no evidence that a State permit has been issued for the work, and no work may begin until their requirements are met.

Enclosed is a Notice of Authorization which should be displayed at the construction site. When you begin work, you must notify the District Engineer's representative, at the appropriate Area Office as shown on the enclosed map, of:

- a. The date of commencement of work;
- b. The dates of work suspensions and resumptions if work is suspended over a week; and,
- c. The date of final completion.

If the work authorized is not completed on or before 25 August 1997 this authorization, if not previously revoked or specifically extended, shall cease and be null and void.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

Charles A. Schnepel
pe Terrence C. Salt
Colonel, Corps of Engineers
Commanding



This notice of authorization must be conspicuously displayed at the site of work.

United States Army Corps of Engineers

Expires
25 August 1997

A permit to dredge approximately 2000 cu
at 100 MacArthur Causeway

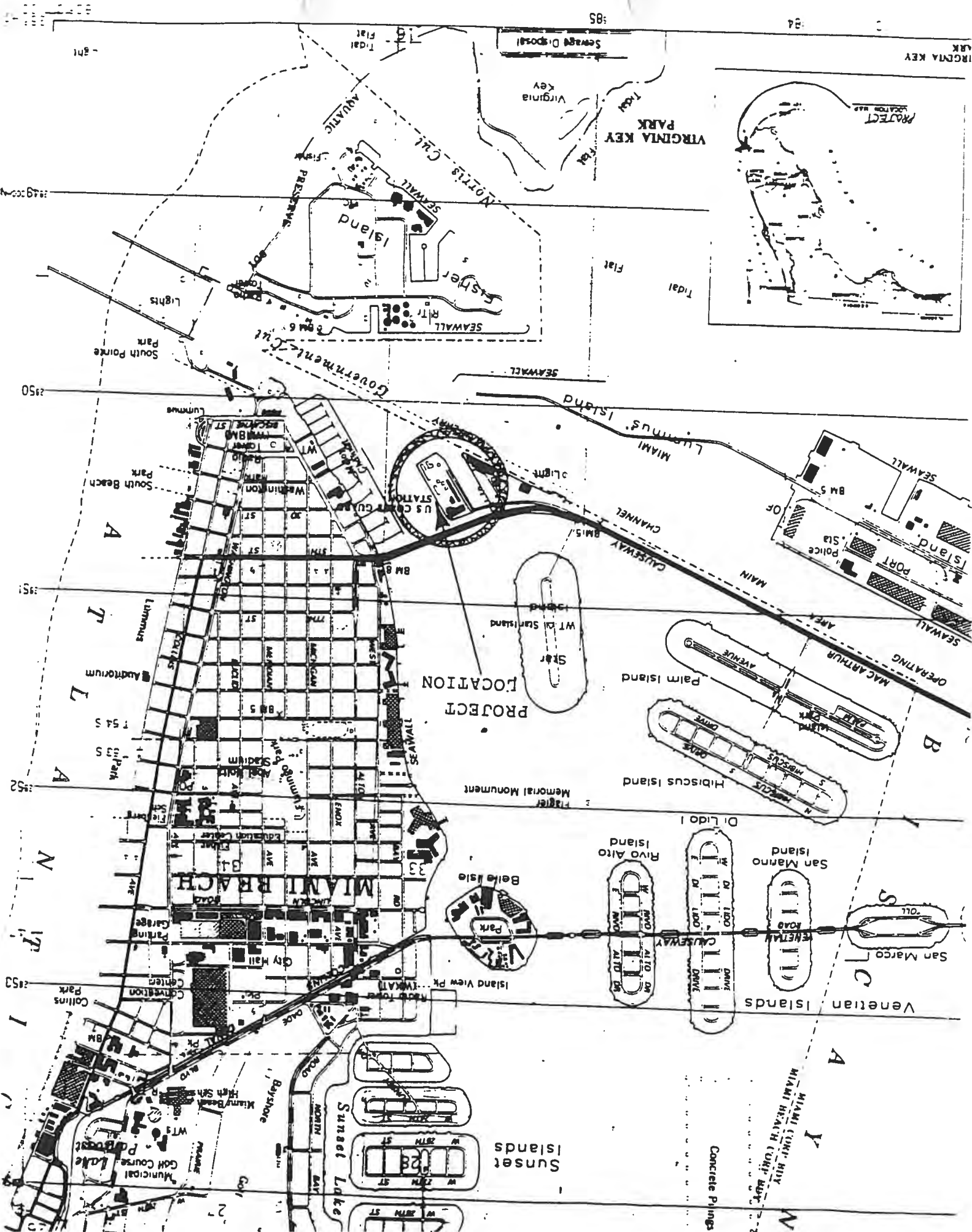
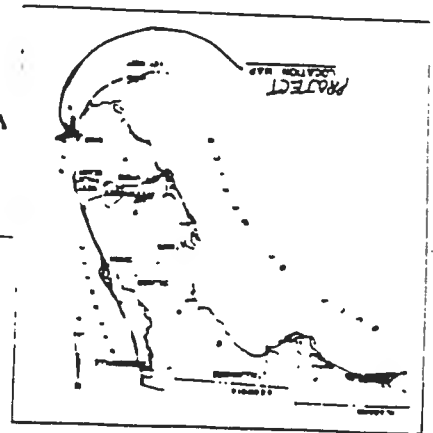
has been issued to CO USCG on 25 Aug 97

Address of Permittee 909 S.E. First Ave Miami

Permit Number

199231007

Charles A Schnepel
for Terrence C. Skott
District Commander
Colonel Corps of Engineers



Vertical text on the left side of the map, likely a scale or coordinate indicator, including numbers like 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Sunset Islands

MIAMI BEACH (UNPLANNED) MIAMI BEACH (UNPLANNED)

Concrete Piling

VENETIAN ISLANDS

VENETIAN PARK

MIAMI BEACH

PROJECT LOCATION

Hibiscus Island

Palm Island

WT Lido Island

WT Lido Island

MIAMI ISLAND

CAUSEWAY CHANNEL

Government Cut

SEAWALL

VIRGINIA KEY PARK

Virginia Key

Sewage Disposal

South Pointe Park

South Beach Park

Auditorium

Stadium

City Hall

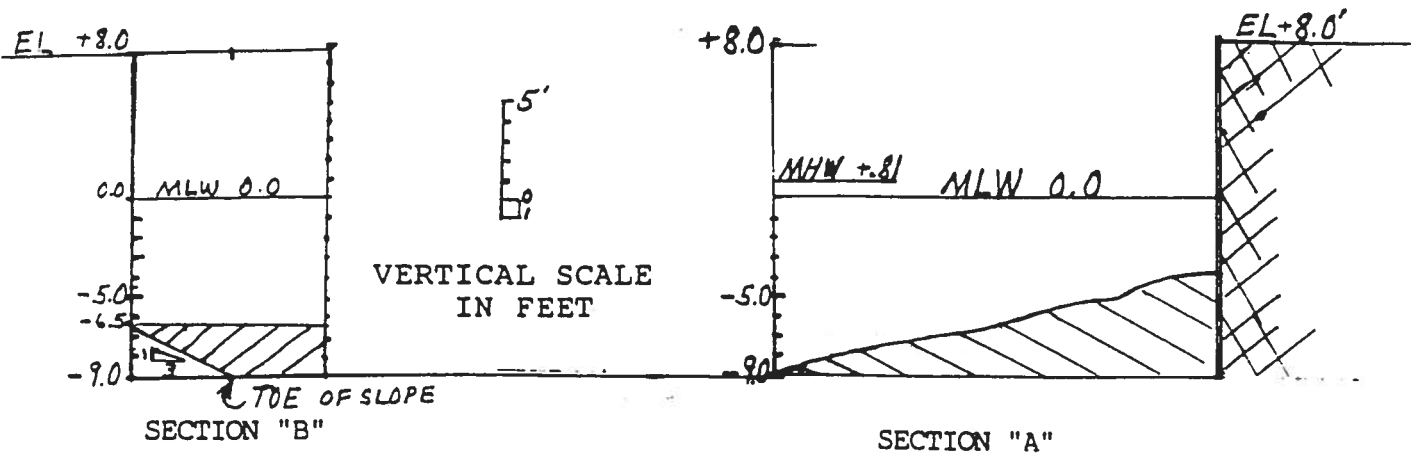
City Center

Collins Park

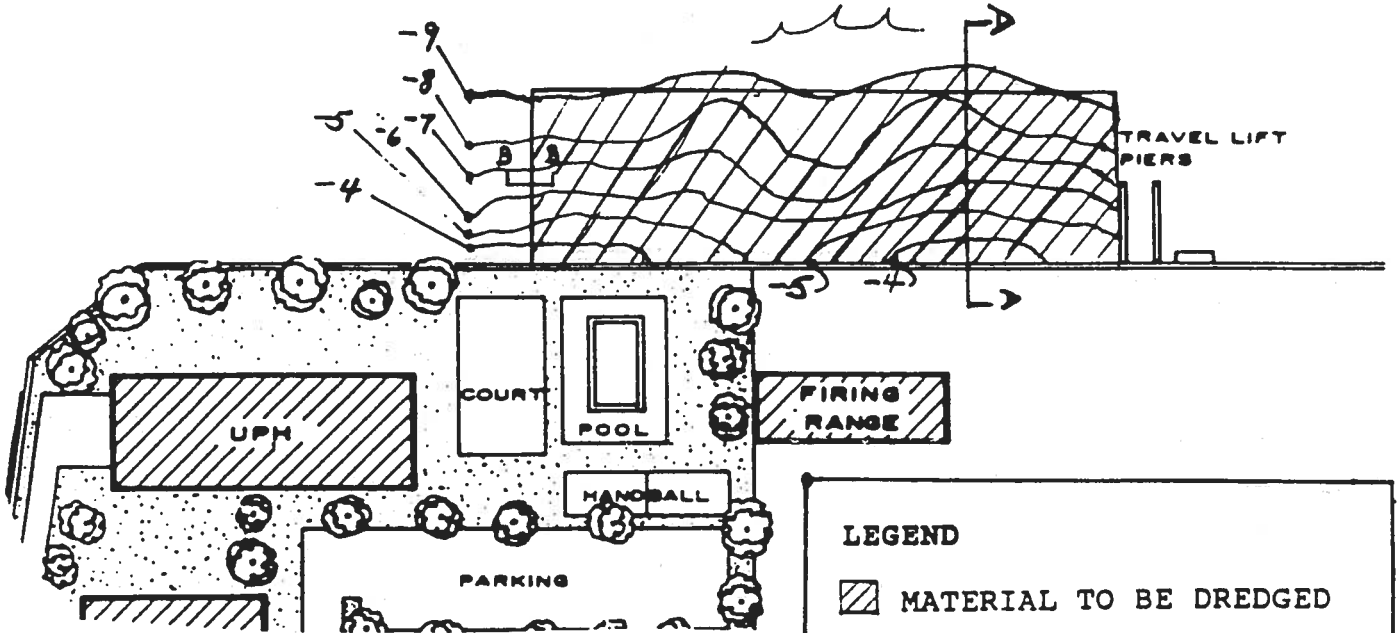
Bayshore

Municipal Lake

Miami Beach Golf Course



BISCAYNE BAY



LEGEND

MATERIAL TO BE DREDGED

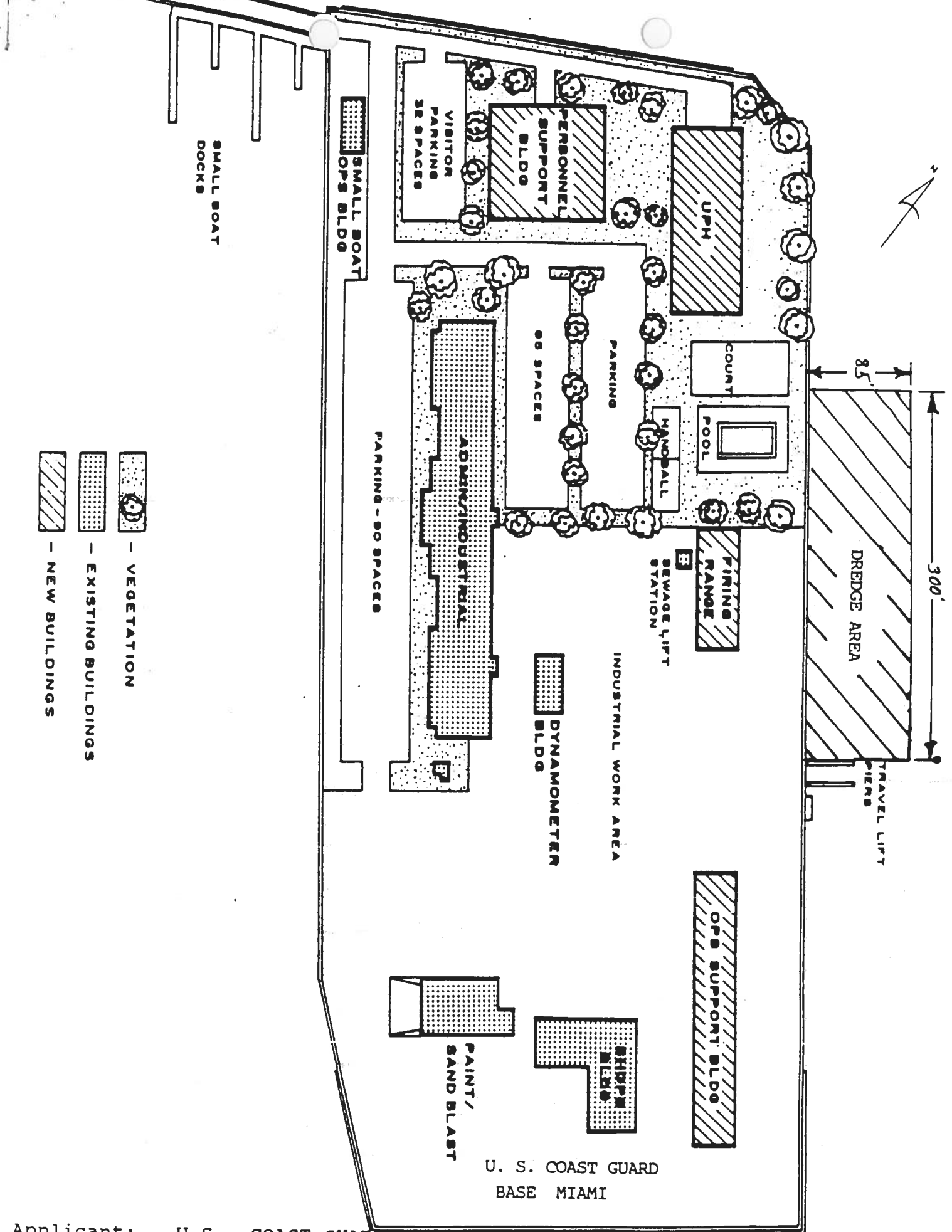
UPLAND



HORIZONTAL SCALE IN FEET

Applicant: U.S. COAST GUARD
 Water Body: BISCAYNE BAY
 County: DADE
 Datum: N.G.V.D.

Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH
 Sheet No:
 Date: 4 - 15 - 92



Applicant: U.S. COAST GUARD
 Water Body: BISCAYNE BAY
 County: DADE
 Date:

Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH



Florida Department of Environmental Regulation

Tallahassee Office Bldg. • 2001 Blair Stone Road • Tallahassee, Florida 32399-2400

17-312 50071
 Joint App. for Works in the Waters of Florida
 Effective Date: June 5, 1987
 DER Application No. _____
 Filed in the DER _____

Joint Application for Works in the Waters of Florida

Department of the Army (Corps)/Florida Department of Environmental Regulation (DER)
Department of Natural Resources (DNR)/Delegated Water Management District (Delegated WMD)
Type or Print Legibly

p Corps Application Number (official use only)	DER Application Number (official use only)	
1. Applicant's Name and Address Name <u>Commanding Officer, U.S. Coast Guard Civil Engineering Unit</u> <small>Last Name, First Name (if individual); Corporate Name; Name of Gov. Agency</small> Street <u>909 SE First Avenue</u> City <u>Miami</u> State <u>FL</u> Zip <u>33131</u> Telephone (<u>305</u>) <u>536-5661</u> (Day) () (Night)		
2. Name, Address, Zip Code, Telephone Number and Title of Applicant's Authorized Agent Name <u>A. J. Salem, Chief, Planning Division</u> <small>Last Name, First Name</small> Corporate Name: Name of Gov. Agency <u>US Army Corps of Engineers, Planning Division CESAJ-PD</u> Street <u>PO Box 4970</u> City <u>Jacksonville</u> State <u>FL</u> Zip <u>32232-0019</u> Telephone (<u>904</u>) <u>791-3691</u> (Day) () (Night)		
3. Name of Waterway at Work Site: <u>Biscayne Bay</u>		
4. Street, Road or Other Location of Work <u>U. S. COAST GUARD BASE MIAMI BEACH</u> Incorporated City or Town <u>100 MacArthur Causeway, Miami Beach, Florida 33139</u> Section <u>4</u> Township <u>54S</u> Range <u>42E</u> Section _____ Township _____ Range _____ Section _____ Township _____ Range _____ County(ies) <u>Dade</u> Coordinates in Center of Project: Latitude <u>46</u> ° <u>25</u> ' <u>15</u> " N Longitude <u>80</u> ° <u>09</u> ' <u>44</u> " W Federal Projects Only: _____ x _____ y Lot _____ Block _____ Subd _____ Plat Bk _____ Pg _____ Directions to Locate Site: <u>U. S Coast Guard Base Miami Beach facility is located WSW of Miami Beach and can be accessed from Mac Arthur Causeway. See attached map.</u> (Permission for access required.)		
5. Names, Addresses, and Zip Codes of Adjacent Property Owners Whose Property Also Adjoins the Water (Excluding Applicant). Show Numbers or Names of These Owners on Plan Views. If More Than Six (6) Owners Adjoin the Project, You May Be Required to Publish a Public Notice for the DER.		
1. <u>Albury and Co.</u> <u>PO Box 4221</u> <u>Miami, FL</u>	2. <u>City of Miami Beach</u> <u>Miami Beach City Hall</u> <u>Miami Beach, FL 33139</u>	3. <u>Florida Power and Light Co.</u> <u>Drawer D</u> <u>West Palm Beach, FL 33402</u>
4. _____	5. _____	6. _____

End 2

6. Proposed Use (Check one or more as applicable) Private Single Family Multi Family
 Public Commercial New Work Alteration of Existing Works Maintenance Other (Explain) USCG

7. Desired Permit Duration (see Fee Schedule)
 5 Yr 10 Yr Other (Specify) _____

8. General Permit or Exemption Requested
 DER General Permit FAC Rule 17-312 _____ DER Exemption FAC Rule 17-312 _____ Section 403 _____ FS

9. Total Extent of Work in Jurisdictional Open Waters or Wetlands: (Use additional sheets and provide complete breakdown of each category if more space is needed.)

a. Within Corps Jurisdiction:
 Fill: _____ Sq. Ft. _____ Acres _____ Cu. Yds.
 Excavation: 25,500 Sq. Ft. .59 Acres 2,000 Cu. Yds.

b. Within DER Jurisdiction:
 Fill: _____ Sq. Ft. _____ Acres _____ Cu. Yds.
 Excavation: 25,500 Sq. Ft. .59 Acres 2,000 Cu. Yds.
 Excavation Waterward of MHW _____ cu. yds. (Information needed for DNR)

c. DER Jurisdictional Area Severed (Area Landward of Fill Structures which will be Severed):
 _____ n/a Sq. Ft. _____ n/a Acres

d. DER Jurisdictional Area Created (New Excavation from Uplands, Exclusive of Mitigation):
 _____ n/a Sq. Ft. _____ n/a Acres

e. Docks, Piers, and Over Water Structures:
 Total Number of Slips _____ n/a _____ Total Number of Mooring Piling _____
 Length _____ Width _____ Height above MHW _____
 Length _____ Width _____ Height above MHW _____
 Number of Finger Piers _____ Length _____ Width _____ Height _____
 Number of Finger Piers _____ Length _____ Width _____ Height _____
 Total area of structure over waters & wetlands _____ sq. ft.
 Use of structure _____

Will the docking facility provide:	n/a	No	Yes	Number
Livesboard Slips		<input type="checkbox"/>	<input type="checkbox"/>	_____
Fueling Facilities		<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewage Pump-out Facilities		<input type="checkbox"/>	<input type="checkbox"/>	_____
Other Supplies or Services Required for Boating (Excluding refreshments, bait and tackle)		<input type="checkbox"/>	<input type="checkbox"/>	_____

f. Seawall length _____ ft. Seawall material _____
 Riprap revetment length _____ ft. Slope _____ H: _____ V Toe width _____ ft.
 Riprap at toe of seawall length _____ ft. Slope _____ H: _____ V Toe width _____ ft.
 Size of riprap _____
 Type of riprap or seawall material _____

g. Other (See item 10). _____

10. Description of Work (be specific; use additional sheets as necessary).

Dredge an 85' x 300' area to -8.0 mean low water (overdredge to -9.0) to provide adequate depth for a 165' construction tender. The purpose of the work is to provide adequate water depth for docking a fully equipped and loaded navigational aides vessel. The material to be dredged is sand.

11. Turbidity, Erosion, and Sedimentation Controls Proposed:

Work will be performed in a manner to preclude adverse turbidity, erosion or sedimentation conditions using a barge mounted clamshell or small hydraulic dredge. Dredge disposal material will be trucked to an approved upland site.

12. Date Activity is Proposed to Commence August 1992 ; to be Completed September 1992
 Total Time Required to Construct 2-4 weeks

13. Previous Applications for this Project have been:

	DER No.	Corps No.
A. Denied (date) _____	_____	_____
B. Issued (date) <u>COE-29 Aug 1984</u>	<u>130912866</u>	<u>198403601NP</u>
C. Other (please explain) _____	_____	_____

Differentiate between existing work and proposed work on the drawings.

14. Certification. Application is hereby made for a permit or permits to authorize the activities described herein.

A. I Certify That: (Please check appropriate space)

- I am the record owner , lessee , or the record easement holder of the property on which the proposed project is to be undertaken, as described in the attached legal document.
- I am not the record owner, lessee, or record easement holder of the property on which the proposed project is to be undertaken, as described in the attached legal document, but I will have, before undertaking the proposed work, the requisite property interest. (Please explain what the interest will be and how it will be acquired.)

Attach legal description of property or copy of deed to the property on which project is to occur (must be provided)

B. I understand I may have to provide any additional information/data that may be necessary to provide reasonable assurance or evidence that the proposed project will comply with the applicable State Water Quality Standards or other environmental standards both before construction and after the project is completed.

C. In addition, I agree to provide entry to the project site for inspectors with proper identification or documents as required by law from the environmental agencies for the purpose of inspecting the site. Further, I agree to provide entry to the project site for such inspectors to monitor permitted work, if a permit is granted.

D. This is a Joint Application and is not a Joint Permit. I hereby acknowledge the obligation and responsibility for obtaining all of the required state, federal or local permits before commencement of construction. I also understand that before commencement of this proposed project, I must be granted separate permits or authorizations from the U.S. Corps of Engineers, the U.S. Coast Guard, the Department of Environmental Regulation, the Delegated Water Management District (where applicable), and the Department of Natural Resources, as necessary.

E. 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 or am acting as the duly authorized agent of the applicant. I understand that knowingly making any false statement or representation in this application is a violation of Section 403.161, F.S. and Chapter 837, F.S.

A. J. Salem
Typed/Printed Name of Applicant or Agent
Chief, Planning Division
(Corporate Title if applicable)

[Signature]
Signature of Applicant or Agent

5/4/92
Date

AN AGENT MAY SIGN ABOVE IF APPLICANT COMPLETES THE FOLLOWING.

I hereby designate and authorize the agent listed above to act on my behalf as my agent in the processing of this permit application and to furnish on request, supplemental information in support of the application.

D. G. Bohlayer
Typed/Printed Name of Applicant
Commander, USCG
(Corporate Title if applicable)

[Signature]
Signature of Applicant

5/26/92
Date

15. For your information: Section 370.034, Florida Statutes, requires that all dredge and fill equipment owned, used, leased, rented or operated in the state shall be registered with the Department of Natural Resources. Before selecting your contractor or equipment you may wish to determine if this requirement has been met. For further information, contact the Chief of the Bureau of Saltwater Licenses and Permits, Department of Natural Resources, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399, Telephone No. (904) 487-3122. This is not a requirement for a permit from the Department of Environmental Regulation.

18 U.S.C. Section 1001 provides that, Whoever, in any manner within the jurisdiction of any department or agency of The United States knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statement or entry, shall be fined not more than \$10,000 or imprisoned not more than five years, or both.

16. Please submit this completed form, with attached drawings and the complete DER processing fee (see Fee Schedule in F.A.C. Rule 17-4.050(4)(c), copy attached) to the appropriate DER or Delegated WMD office with jurisdiction over the project site.

Prepared 2/16/42

UNIT Miami Harbor Station

PURPOSE Station

DISTRICT Jacksonville

STATE Florida

COUNTY DADE

COUNTY SEAT Miami

POST OFFICE ADDRESS

ESTABLISHING ACT

DATE April 6, 1938

CITATION 52 Stat. 21

DATE OF CONVEYANCE November 18, 1941

RECORDED November 18, 1941

FORM OF CONVEYANCE Warranty deed.

Deed book 2199, Page 414
Clerk, Circuit Court.

GRANTOR Miami Beach Bay Shore Company

ADDRESS OF GRANTOR Miami Beach, Dade County, Florida.

CONSIDERATION - Conveyance by United States of former Biscayne Bay House of Refuge property to the Paul Smith Construction Company.

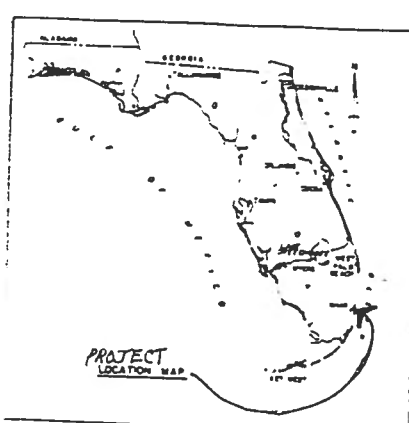
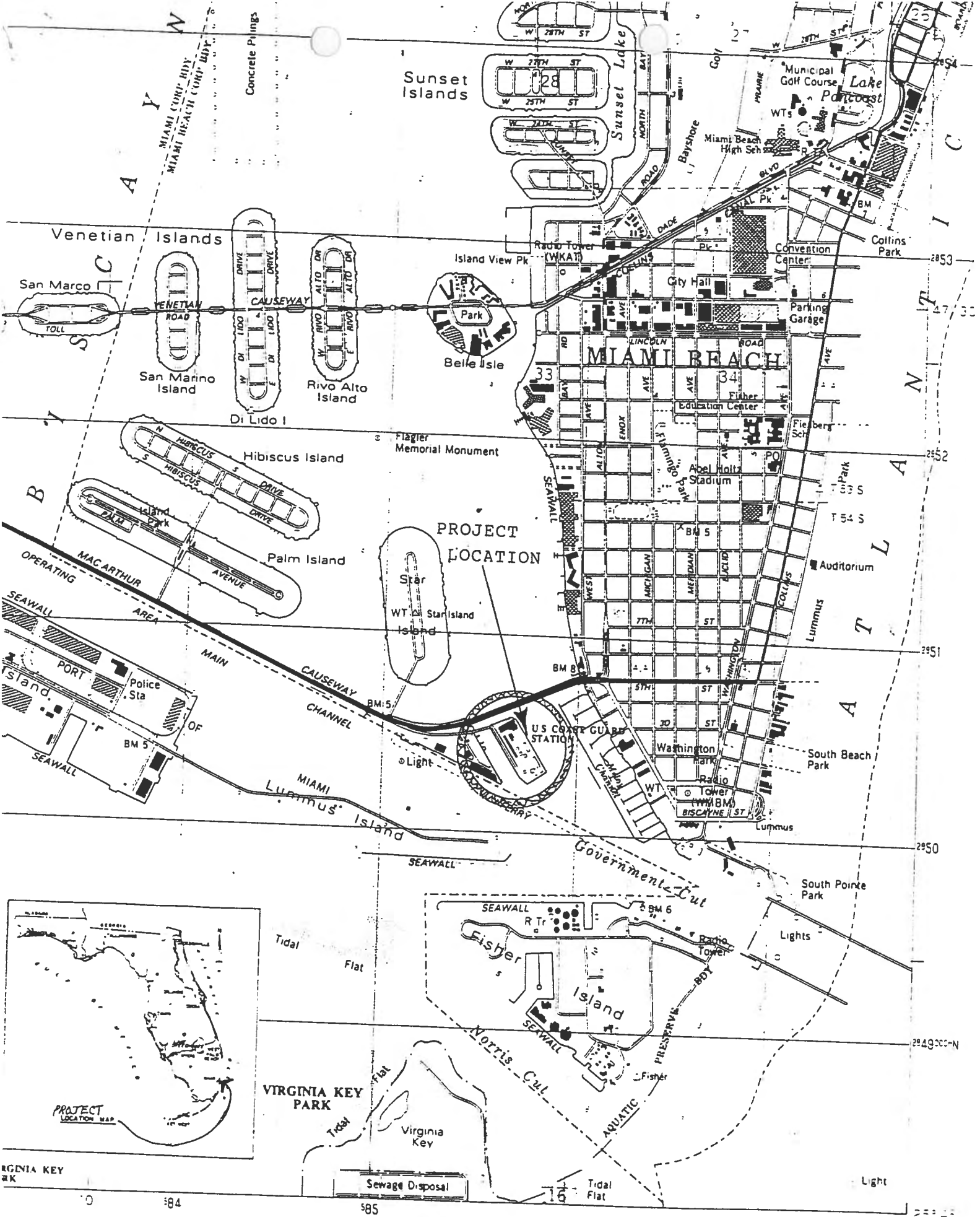
METES AND BOUNDS - Commencing at a point 1580 feet north and 2015 feet west from the southeast corner of Section 4, Township 54, South, Range 42 East, Dade County, Florida, which point is at the intersection of the center line of the original concrete viaduct with the face of the abutment of the Causeway;

Thence South $67^{\circ}05'$ West, 58.7 feet;Thence South $31^{\circ}43'$ East, 65.35 feet to the point of beginning;Thence South $31^{\circ}43'$ East, 582.6 feet;Thence North $58^{\circ}17'$ East, 300 feet;Thence South $31^{\circ}43'$ East, 600 feet;Thence South $64^{\circ}31'$ East, 738.4 feet;Thence North $31^{\circ}43'$ West, 1740.3 feet to the original concrete viaduct;

Thence South $67^{\circ}03'$ West parallel with the center line of the viaduct 650.3 feet to the face of the abutment of the causeway; thence following the abutment of the causeway in a southwesterly direction to the place of beginning, containing 17.52 acres, more or less, saving and excepting therefrom so much of the above-described tract as is now used and occupied by the actual concrete viaduct structure of the causeway connecting Miami and Miami Beach, Florida; also saving and excepting therefrom so much of the above-described property as is now used and occupied by any submarine cables; said tract of submerged land being herein called Tract A; together with a right-of-way, forever, for ingress, egress and regress to said party of the second part, for pedestrians and vehicles, over the following tract of land (which adjoins said Tract A) of said party of the first part, not herein or hereby conveyed, and hereinafter called Tract 2, to-wit: that certain tract of land situate, lying and being in the City of Miami Beach, Dade County, Florida, and described by metes and bounds as follows:




Commencing at a point 1580 feet north and 2015 feet west from the Southeast corner of Section 4, Township 54 South, Range 42 East, which point is at the intersection of the center line of the original concrete viaduct with the face of the abutment of the County Causeway;

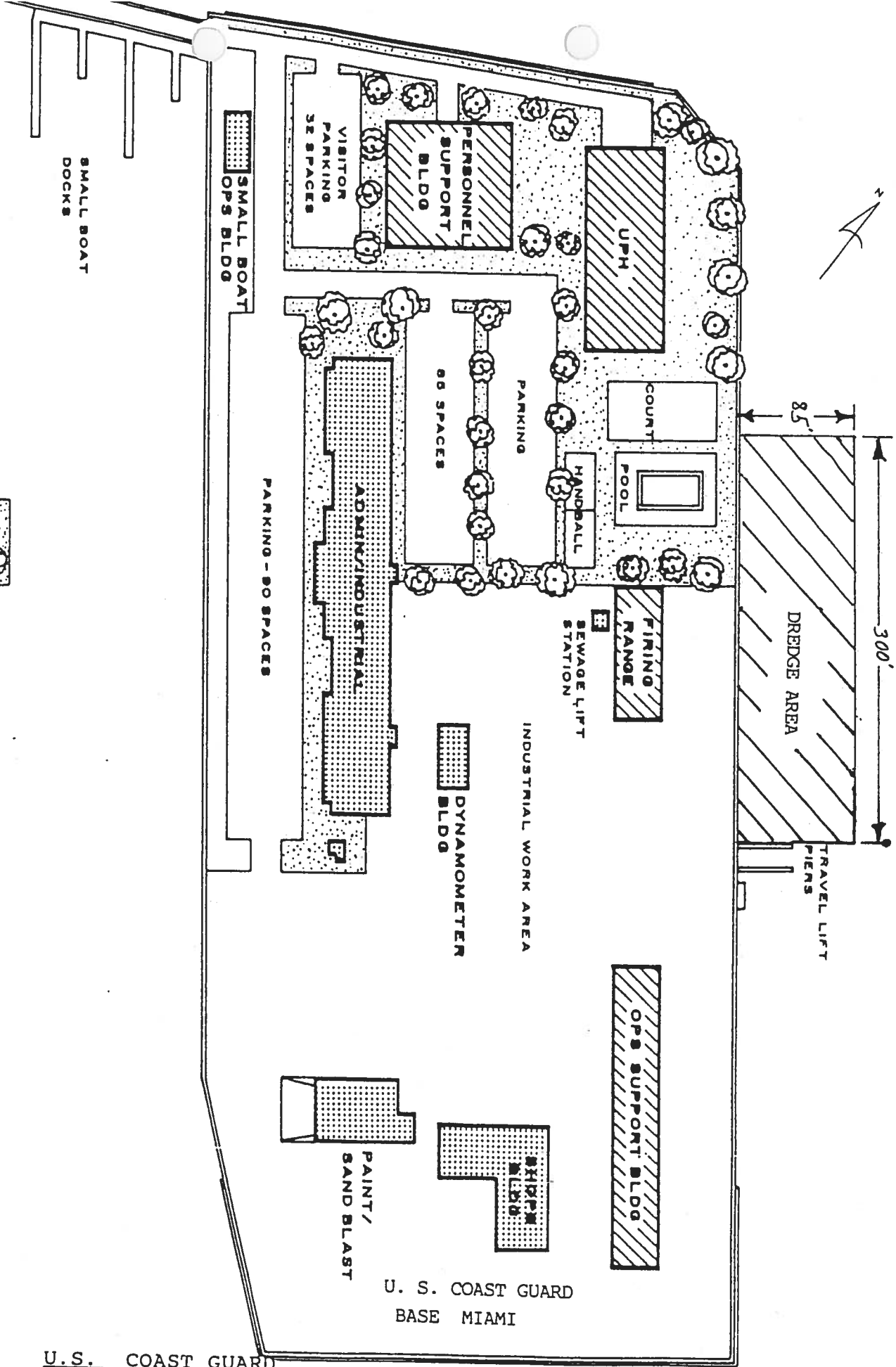
Thence South $67^{\circ}05'$ West, 58.7 feet;Thence South $31^{\circ}43'$ East, 64.75 feet to the point of beginning;Thence South $31^{\circ}43'$ East, 0.6 feet to the point of beginning of tract "A";Thence continue South $31^{\circ}43'$ East, 40.9 feet; Thence South $67^{\circ}05'$ West 50 feet;Thence North $67^{\circ}55'$ West, 58 feet; Thence North $67^{\circ}05'$ East, 84.66 feet to place of beginning.



84 85

Miami, Fl.
Quadrangle

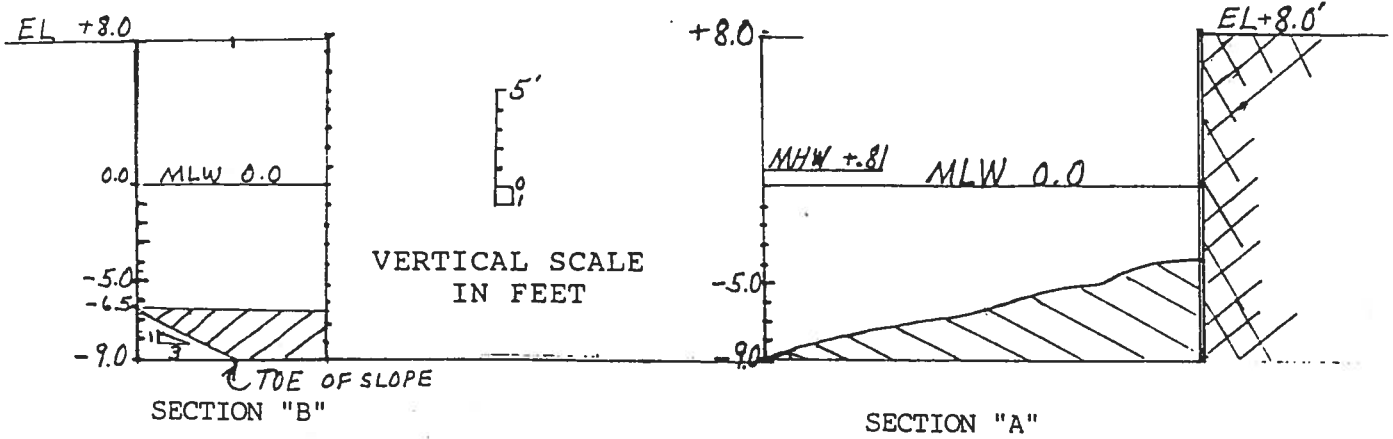
-  - VEGETATION
-  - EXISTING BUILDINGS
-  - NEW BUILDINGS



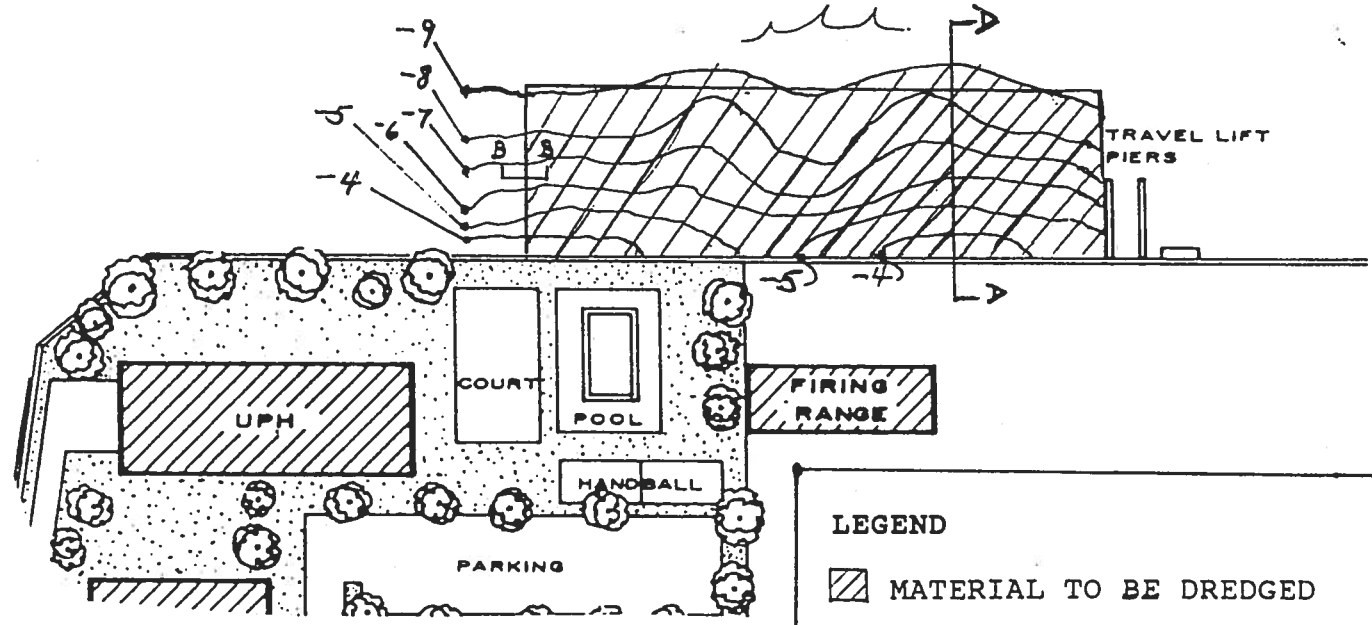
Applicant: U.S. COAST GUARD
 Water Body: BISCAYNE BAY
 County: DADE
 Datum: N.G.V.D.

Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH

Date: 4 - 15 - 92



BISCAYNE BAY



LEGEND

MATERIAL TO BE DREDGED

UPLAND

0 20 40 60 80 100 200

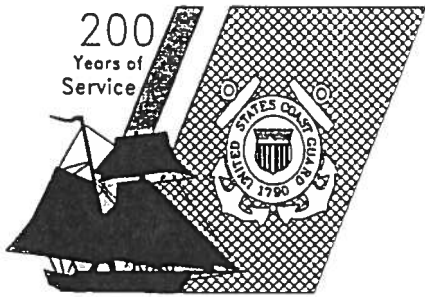
HORIZONTAL SCALE IN FEET

Applicant: U.S. COAST GUARD Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH

Water Body: BISCAYNE BAY

County: DADE Sheet No:

Datum: N.G.V.D. Date: 4 - 15 - 92



COAST GUARD

SPECIFICATIONS FOR

TASK #8212-1

SCOPE OF SERVICES

FOR

DREDGE MOORINGS

AT

U. S. COAST GUARD BASE

MIAMI BEACH, FLORIDA

PACKAGE

1322

JUNE 1991

COMMANDING OFFICER, CIVIL ENGINEERING UNIT MIAMI
BRICKELL PLAZA FEDERAL BUILDING
909 S. E. FIRST AVENUE
MIAMI, FLORIDA
33131-3050

DREDGE MOORINGS
AT
U.S. COAST GUARD BASE MIAMI BEACH

A. GENERAL

1. GENERAL DESCRIPTION: The east waterfront of Base Miami Beach consists of a steel sheet pile bulkhead with two finger piers which are ramps for the small boat travel lift, extending 50 feet from shore. Berths No. 9 and No. 10 are located on the north and south side of the travel lift, respectively. Water depth at these berths is inadequate for Coast Guard vessels stationed at the site. This project consists of a review of the survey, analysis of alternatives, design, preparation of permit application, preparation of drawings and specifications, procurement of services, contract administration and construction management for maintenance dredging of Berths No. 9 and No. 10. A hydrographic survey, now being performed by others, may identify the need for additional dredging at the WPB moorings and the small boat piers along the west waterfront.

2. LOCATION: U.S. Coast Guard Base Miami Beach is located on Causeway Island just south of the McArthur Causeway near Miami Beach, Florida.

3. PROJECT MANAGER: Mr. Ted Bridis, Civil Engineering Unit
Miami (305) 536-5750

4. SITE POINT OF CONTACT: Base Miami Beach Industrial
Engineering Officer, LCDR R.A. Petereit. (305)535-4332.

5. GENERAL SCOPE OF SERVICES: This project is a Design/Construct task type and consists of two (2) phases as follows:

PHASE I: Conduct field investigation including soil borings, and sediment chemical analysis, as necessary for design of maintenance dredging and spoil disposal. The Jacksonville branch of the Army Corp. of Engineers has already been tasked to perform the hydrographic survey and produce a report validating the need for maintenance dredging. Perform design of maintenance dredging alternative selected by the Coast Guard. Prepare permit application for Coast Guard execution. Prepare contract documents including drawings and specifications.

PHASE II: Procure dredging services, and provide construction administration and supervision for the maintenance dredging.

6. PERFORMANCE PERIOD:

a. Award a dredging contract within FY-92, target second quarter.

b. Facility occupancy 90 days after dredging contract award.

7. PAYMENT:

- a. MIPR for the estimated costs of the engineering design associated with PHASE I of the scope of services.
- b. MIPR for procurement services, construction cost and construction management.
- c. MIPR adjustments as appropriate to reflect actual costs.

B. SPECIFIC SCOPE OF SERVICES:

1. PHASE I: This phase consists of design of the Coast Guard selected alternative, developing the drawings and specifications, and preparing necessary permit applications. From field investigation determine environmentally sound and cost effective design alternatives. The Jacksonville Corp. of Engineers hydrographic survey will be made available upon delivery expected 22 July 1991. Make recommendation for the most feasible alternative. Sediment chemical analysis shall be by Toxicity Characteristic Leaching Procedure (TCLP) EPA Method No. 1311.

a. Dredging: The berths have not been dredged since 1942. The deepest draft vessels to use the mooring are the WLIC construction tenders which draw 4'. Coast Guard design guidelines recommend 8' depth of water in small boat moorings. Research extreme water conditions to determine their effect on Coast Guard vessel operations and make recommendation for the design dredge depth. Consideration shall be given to the stability of the steel sheet pile bulkhead.

c. Spoil Disposal: Consideration shall be given to alternate locations for spoil disposal.

d. Deliverables:

- (1) Estimate for Phase I services.
- (2) Design Concept Package.
- (3) Written response to the design concept review comments made by CEU Miami.

(4) Permit Applications: Submit permit applications as necessary to accomplish the project, ready for execution by Coast Guard. Because permit approval may delay execution of the project, deliver permit applications as early on as possible; i.e., after Coast Guard selection of the design alternatives but before the 100% Design Package.

(5) 100% Design Package.

(6) Solicitation Documents.

(7) Abstract of bids.

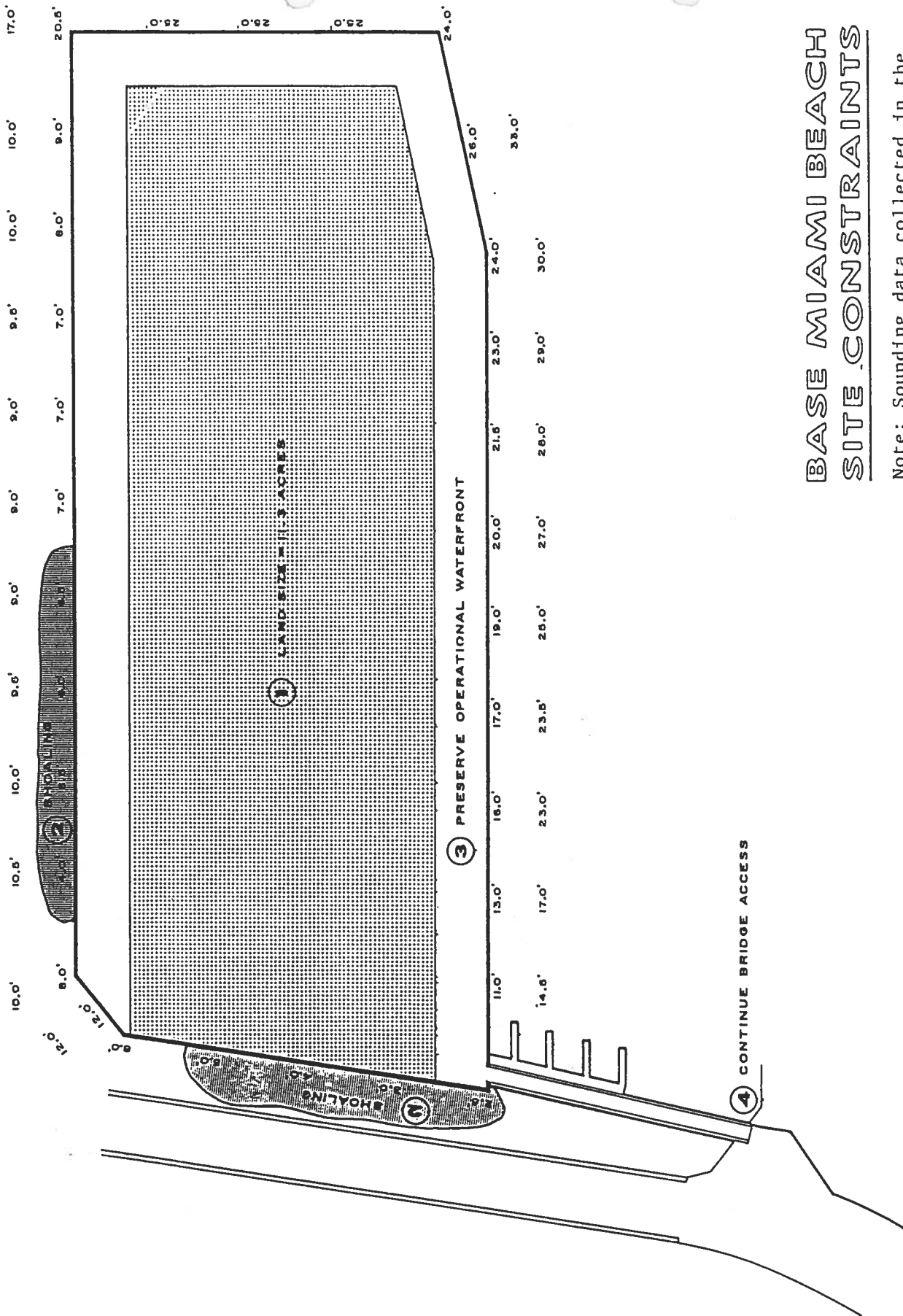
e. Enclosures:

(1) Figures No. 34, 38 and 39 of USCG Base Miami Beach Master Plan.

2. PHASE II: Procure dredging services, and provide contract administration and on site inspection as necessary to ensure contract compliance during construction.

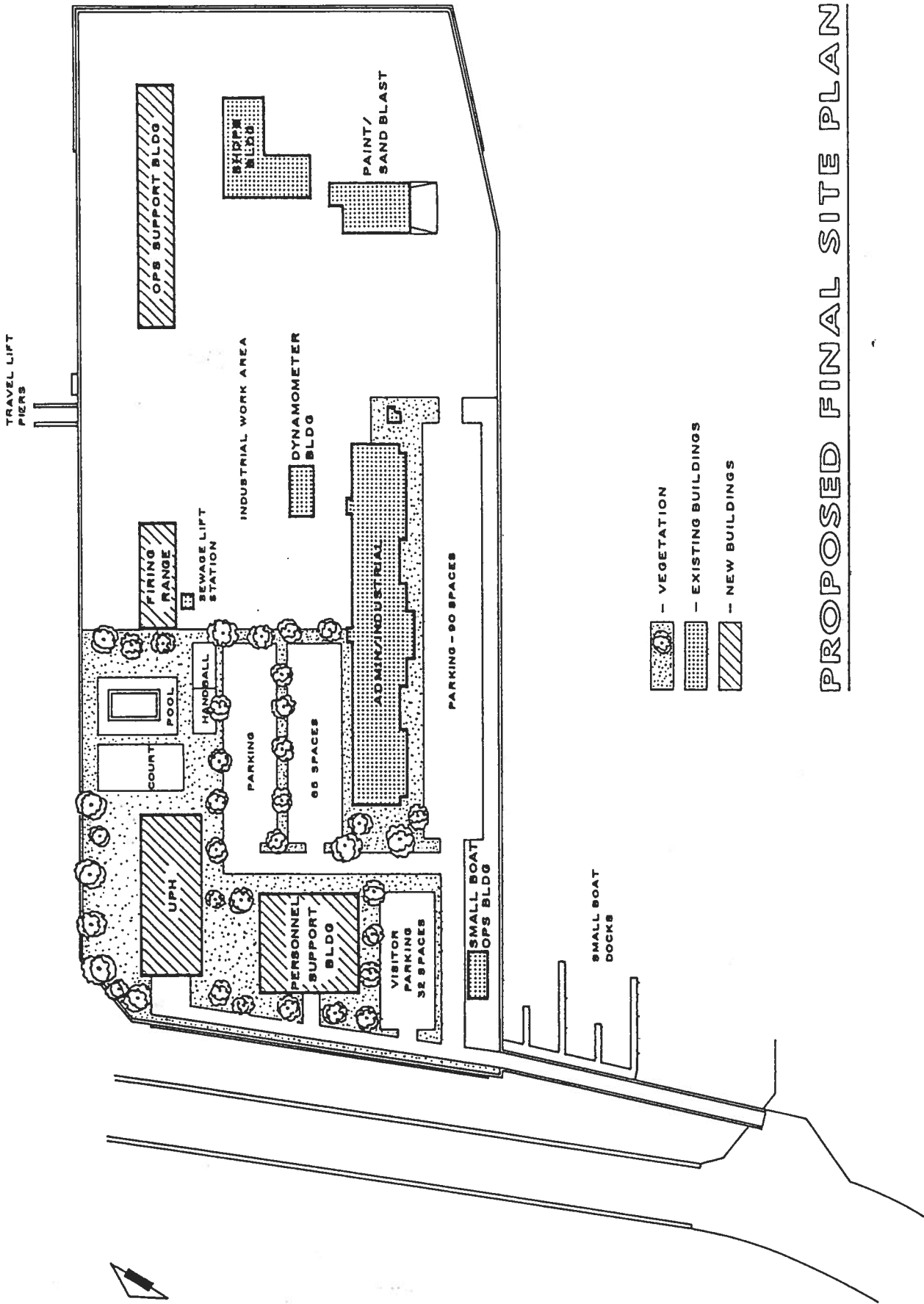
<u>TABLE OF DELIVERABLE</u>	<u># OF COPIES</u>	<u>SCHEDULE</u>
PHASE I		
1. Estimate for Phase I Services	3	21 days after Task receipt
3. Concept Design Package	3	14 days after site investigation.
4. Concept Review Response	3	5 days after return of Concept Design Package
5. Permit Applications	3	Prior to 100% Design
6. 100% Design Package	3	45 days after receipt of concept design review
7. Solicitation Documents	3	30 days after receipt of 100% design review
8. Abstract of Bids	3	Upon receiving
PHASE II		
1. As-Built Drawings	1 Print & Floppy	30 days after final acceptance

END OF SCOPE OF SERVICES



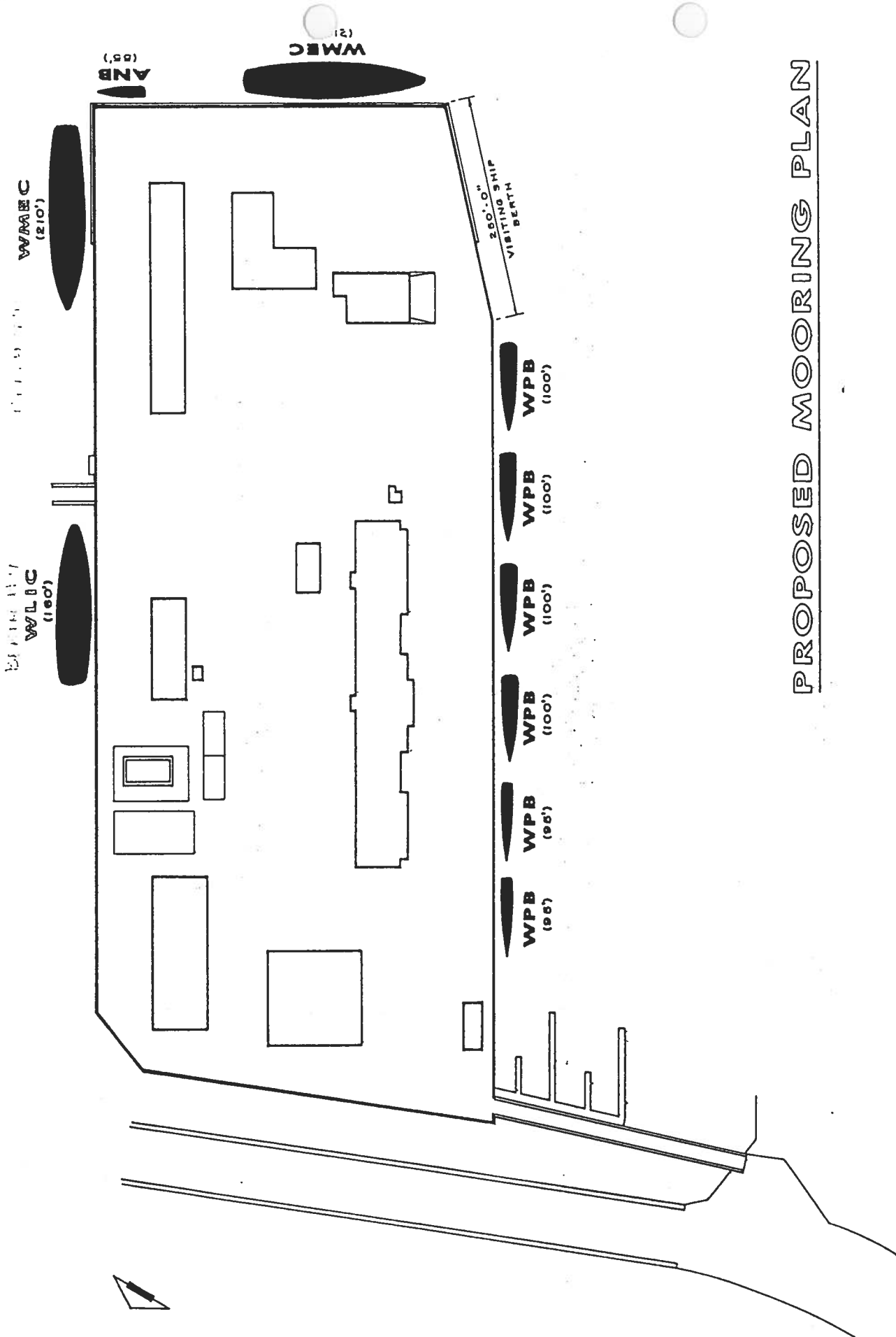
**BASE MIAMI BEACH
SITE CONSTRAINTS**

FIGURE N° 34



PROPOSED FINAL SITE PLAN

FIGURE NO 38



PROPOSED MOORING PLAN

FIGURE N° 39

MILITARY INTERDEPARTMENTAL PURCHASE REQUEST **CZ306**

PAGE 1 OF 1 PAGES

2. FSC
3. CONTROL SYMBOL NO.
4. DATE PREPARED 09/27/91
5. MIPR NUMBER 28-91-8213WCM 31
6. AMEND NO.

7. TO: U.S. Army Corps of Engineers
Savannah District
P O Box 889 Savannah, GA 31402 Attn: F. de la Sierra

8. FROM: (Agency, name, telephone number of originator)
Commanding Officer
U.S. Coast Guard Civil Engineering Unit
909 SE First Avenue, Room 651
Miami, FL 33130-3050 PNUM 8212

9. ITEMS [] ARE [] ARE NOT INCLUDED IN THE INTERSERVICE SUPPLY SUPPORT PROGRAM AND REQUIRED INTERSERVICE SCREENING [] HAS [] HAS NOT BEEN ACCOMPLISHED.

ITEM NO.	DESCRIPTION <small>(Federal stock number, nomenclature, specification and/or drawing No., etc.)</small>	QTY	UNIT	ESTIMATED UNIT PRICE	ESTIMATED TOTAL PRICE
1	<p>This MIPR is to provide funds for the design of Dredging at Base Miami Beach, Florida.</p> <p>This order is placed as a project order in lieu of an economy act order and I, D.G. Bohlayer, certify that this represents a Bonafide need of the current fiscal year.</p> <p>Submit all billing on Form SF-1080 to Block No. 13. Cite MIPR No. on all billings and related correspondence.</p> <p>Please acknowledge acceptance to Block No. 8. Accepted By: <u>[Signature]</u> Title: <u>EWENDOLYN F. RUGGS</u> Date: <u>9/27/91</u> Budget Officer</p> <p>DW TAD TA [Signature] XO [Signature] SysMgt 0927</p>	1	Job	\$36,500.00	\$36,500.00

10. SEE ATTACHED PAGES FOR DELIVERY SCHEDULES, PRESERVATION AND PACKAGING INSTRUCTIONS, SHIPPING INSTRUCTIONS AND INSTRUCTIONS FOR DISTRIBUTION OF CONTRACTS AND RELATED DOCUMENTS.

11. GRAND TOTAL \$36,500.00

12. TRANSPORTATION ALLOTMENT (Used if FOB Contractor's plant)

13. MAIL INVOICES TO (Payment will be made by)
Commanding Officer (3028), USCG Finance Ctr,
1430A Kristina Way, Chesapeake, VA 23326-0328

PAY OFFICE DODAAD

14. FUNDS FOR PROCUREMENT ARE PROPERLY CHARGEABLE TO THE ALLOTMENTS SET FORTH BELOW, THE AVAILABLE BALANCES OF WHICH ARE SUFFICIENT TO COVER THE ESTIMATED TOTAL PRICE.

ACRN	APPROPRIATION	LIMIT/ SUB-CAD	SUPPLEMENTAL ACCOUNTING CLASSIFICATION	ACCTG STA DODAAD	AMOUNT
			2/3/101/132/43/0/WC/ 31160/2565		\$36,500.00

15. AUTHORIZING OFFICER (Type name and title) D. G. BOHLAYER, CDR, USCG

16. SIGNATURE [Signature]

17. DATE 9/27/91



Florida Department of Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416
407 433-2650

Virginia B. Wetherell
Secretary

JUL 22 1993

NOTICE OF PERMIT ISSUANCE

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

In the Matter of an Application
for Permit by:

U.S. Army Corps of Engineers
c/o Glenn Schuster
P.O. Box 4970
Jacksonville, Florida 32232

Dear Sir:

Enclosed is Permit Number 132191106 to conduct dredge and fill activities in waters of the State issued pursuant to Chapter(s) 403 and 373, Florida Statutes.

A person whose substantial interests are affected by this permit may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 14 days of receipt of this Permit. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

U.S. Army Corps of Engineers
c/o Glenn Schuster
Permit Number 132191106


If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this permit. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rule 17-103.070, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order (Permit) is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department.

If there are any questions regarding this permit please contact Thomas Farrell of this office at 407/433-2650.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Mary E. S. Williams
Director of District Management
P.O. Box 15425
West Palm Beach, Florida 33416
Telephone (407) 433-2650

MESW:tf:rh

U.S. Army Corps of Engineers
c/o Glenn Schuster
Permit Number 132191106

CERTIFICATE OF SERVICE

This is to certify that this NOTICE OF PERMIT and all copies were mailed before the close of business on JUL 22 1993 to the listed persons.

Clerk Stamp

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statutes, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

R. Hibern
(Clerk)

JUL 22 1993
(Date)

Copies furnished to:

West Palm Beach DEP Files
Metro-Dade DERM



Florida Department of Environmental Protection

Lawton Chiles
Governor

Southeast District
P.O. Box 15425
West Palm Beach, Florida 33416

Virginia B. Wetherell
Secretary

PERMITTEE:

U.S. Army Corps of Engineers
c/o Glenn Schuster
P.O. Box 4970
Jacksonville, Florida 32232

I.D. NUMBER: 5013F05690

PERMIT CERTIFICATION NUMBER: 132191106

DATE OF ISSUE: JUL 22 1993

EXPIRATION DATE: JUL 22 1998

COUNTY: Dade

LATITUDE/LONGITUDE: 25°46'00"N/80°09'44"W

SECTION/TOWNSHIP/RANGE: 04/53S/42E

PROJECT: Dredge 25,500 c.y. at the U.S.
Coast Guard Base, Miami Beach

This permit is issued under the provisions of Chapter 403 and 373, Florida Statutes, Public Law 92-500 and Title 17, Florida Administrative Code Rules. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with Department and made a part hereof and specifically described as follows:

TO create adequate berthing depth for a Coast Guard buoy tender by dredging to (-)9 ft NGVD an 85-ft-wide by 300-ft-long area along the northern bulkhead of the U.S. Coast Guard Base, Miami Beach. The project involves the dredging and disposal of 25,500 cubic yards of material from Biscayne Bay Aquatic Preserve, an Outstanding Florida Water.

IN ACCORDANCE WITH: The DEP Application Form 17-312.900(1) received on September 14, 1992, additional information received on October 23, 1992, January 19, 1993, April 19, 1993 and May 17, 1993, and the three attached stamped drawings.

LOCATED AT: U.S. Coast Guard Base Miami Beach, 100 MacArthur Causeway, Miami Beach, Dade County.

SUBJECT TO: General Conditions 1-15 and Specific Conditions 1-8.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

- (a) Have access to and copy any records that must be kept under conditions of the permit;
- (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- (c) Sample or monitor any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. A description of and cause of noncompliance; and

b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 17-302.500, shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

11. This permit is transferable only upon Department approval in accordance with Rule 17-4.120 and 17-730.300 F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500).

14. The permittee shall comply with the following:

a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

1. the date, exact place, and time of sampling or measurements;
2. the person responsible for performing the sampling or measurements;
3. the dates analyses were performed;
4. the person responsible for performing the analyses;
5. the analytical techniques or methods used; and
6. the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

PERMITTEE:
U.S. Army Corps of Engineers
c/o Glenn Schuster

I.D. NUMBER: 5013F05690
PERMIT CERTIFICATION NUMBER: 132191106
DATE OF ISSUE: JUL 22 1993
EXPIRATION DATE: JUL 22 1998

SPECIFIC CONDITIONS:

1. The permittee is hereby advised that Florida law states:
"No person shall commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use." Pursuant to Florida Administrative Code Rule 16Q-14, if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.
2. If historical or archaeological artifacts, such as Indian canoes, are discovered at any time within the project site the permittee shall immediately notify the Southeast District Office and the Bureau of Historic Preservation, Division of Historical Resources, R.A. Gray Building, 500 S. Bronough, Tallahassee, Florida 32399-0250.
3. All other necessary state, federal, or local permits must be applied for and received prior to the start of work.
4. Written notification shall be provided to the Department of Environmental Protection Southeast Florida District Office in West Palm Beach (P.O. Box 15425, West Palm Beach, FL 33416) and Metropolitan-Dade County Environmental Resources Management (33 SW 2nd Avenue, Miami, FL 33130), a minimum of 48 hours prior to commencement of construction and a maximum of 48 hours after completion of construction.

5. Spoil Disposal

The dredged spoil shall be disposed of in one of the following manners:

- a. The dredged spoil (sediments and water) shall be placed in a self-contained vessel in a manner that prevents the return of water to Biscayne Bay. The spoil shall be transported to the Environmental Protection Agency's Offshore Dredged Material Disposal Site (ODMDS) located within the following coordinates (expressed as degrees/minutes/seconds), 3.6 miles offshore Miami Beach--

	<u>North Latitude</u>	<u>West Longitude</u>
NW Corner :	25/45/30	80/03/54
NE " :	25/45/30	80/02/50
SW " :	25/44/30	80/03/54
SE " :	25/44/30	80/02/50
Midpoint :	25/45/00	80/03/22

The spoil shall not be discharged from the transporting vessel until it has reached the midpoint of the ODMDS.

PERMITTEE:
U.S. Army Corps of Engineers
c/o Glenn Schuster

I.D. NUMBER: 5013F05690
PERMIT CERTIFICATION NUMBER: 132191106
DATE OF ISSUE: JUL 22 1993
EXPIRATION DATE: JUL 22 1998

SPECIFIC CONDITIONS:

5b. The spoil shall be deposited in a self-contained vessel and transported to a Department-approved site which shall receive the material in accordance with best management practices for beach renourishment. The permittee shall inform the Department's Southeast District Water Management Section of its intent to deposit the material at a recipient site and shall describe the location of the site and the method of disposal. The permittee shall not dispose of the material until it has received written approval from the Department.

6. Turbidity Monitoring

A mixing zone is hereby established which shall be limited to a 150-meter radius of the dredge site.

The permittee shall monitor water turbidity levels at least every four hours during dredging or upon the occurrence of other circumstances that might affect water turbidity. Samples shall be taken from mid-depth at the following locations: (a) 150 meters downcurrent from the dredge, within the densest portion of any visible plume, and (b) 300 meters upcurrent of the dredge, not within a visible plume (background sample).

Turbidity monitoring shall be in accordance with the appropriate sampling techniques described in the latest edition of Standard Methods published by the American Public Health Association, the American Waterworks association, and the Water Pollution Control Federation. Turbidity shall be measured in Nephelometric Turbidity Units (NTUs) using a standard Nephelometer.

If at any time turbidity monitoring reveals that turbidity values for samples taken from outside the mixing zone are above background values, the permittee shall immediately cease dredging. Dredging shall not resume until turbidity outside the mixing zone has returned to within background levels. Within 24 hours after ceasing dredging due to elevated turbidity values, the permittee shall notify the the Department's Water Management Section Permitting Supervisor (407-433-2650).

A turbidity monitoring report shall be submitted to the Department's Southeast District Office within one week of analysis. The report shall contain the following information: (1) permittee name and permit number; (2) dates of sampling and analysis; (3) a statement describing the methods used in collection, handling, storage and analysis of the samples; (4) a map indicating the sampling location; and (5) a statement by the individual responsible for sampling program documenting the authenticity, precision, limits of detection, and accuracy of the data.

The monitoring report shall contain the following information for each sample taken:

- 1) time of day samples taken
- 2) depth of water body
- 3) depth from which sample was taken
- 4) antecedent weather conditions
- 5) tidal stage and direction of flow
- 6) wind direction and velocity

PERMITTEE:
U.S. Army Corps of Engineers
c/o Glenn Schuster

I.D. NUMBER: 5013F05690
PERMIT CERTIFICATION NUMBER: 132191106
DATE OF ISSUE: JUL 22 1993
EXPIRATION DATE: JUL 22 1998

SPECIFIC CONDITIONS:

7. Manatee Protection

The permittee/grantee/lessee shall ensure that the following conditions are met:

- a. The contractor shall instruct all personnel associated with the project of the potential presence of manatees and of the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatees, and shall implement appropriate precautions to ensure protection of manatees.
- b. All construction personnel shall be advised that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, the Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act. The permittee and/or contractor may be held responsible for any manatee harmed, harassed, or killed as a result of construction activities.
- c. Before beginning construction, the prime contractor involved in the construction activities shall construct and display at least two temporary signs (placards) concerning manatees. A temporary sign (at least 8 ½" X 11") reading "Manatee Habitat/Idle Speed in Construction Area" will be placed in a prominent location visible to employees operating any vessels being used during construction. If vessels are not used for construction, a temporary sign (at least 2' x 2') reading "Warning: Manatee Habitat" will be posted in a location prominently visible to land-based, water-related construction crews.

A second temporary sign (at least 8 ½" X 11") reading "Warning, Manatee Habitat: Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment." The sign shall be prominently located adjacent to the displayed issued construction permit. Temporary notices shall be removed by the permittee upon completion of construction. Any collision with and/or injury to a manatee shall be reported to the Florida Marine Patrol at telephone number 1-800-DIAL-FMP.
- d. Siltation barriers shall be properly secured so that manatees cannot become entangled, and shall be monitored at least daily to avoid manatee entrapment. Barriers must not block manatee entry to or exit from essential habitat.
- e. All vessels associated with the project shall operate at no wake/idle speed at all times while in the construction area and while in waters where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels shall follow routes of deep water whenever possible.
- f. If manatees are seen within 100 yards of the active daily construction/dredging operation all appropriate precautions shall be implemented to ensure protection of the manatee. All operating or moving equipment shall be immediately shut down upon coming within 50 feet of a manatee.

PERMITTEE:
U.S. Army Corps of Engineers
c/o Glenn Schuster

I.D. NUMBER: 5013F05690
PERMIT CERTIFICATION NUMBER: 132191106
DATE OF ISSUE: JUL 22 1993
EXPIRATION DATE:

JUL 22 1998

SPECIFIC CONDITIONS:

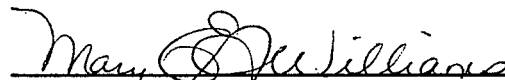
g. Any collision with and/or injury to a manatee shall be reported immediately to the Florida Marine Patrol (1-800-DIAL FMP) and to the Florida Department of Environmental Protection, Office of Protection Species Management (904) 922-4330,

h. The contractor shall maintain a log detailing sightings, collisions, or injuries to manatees should they occur during the contact period. Following project completion, a report summarizing incidents and sightings shall be submitted to the Florida Department of Environmental Protection, Marine Research Institute, Office of Protected Species Management, Mail Station 245, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399 and to the U.S. Fish and Wildlife Service Office, 3100 University Boulevard, Jacksonville, Florida 32216. This report must be submitted annually or following the completion of the project if the contract period is less than a year.

8. The permittee shall be aware of and operate under the attached General Conditions #1 through #15. General Conditions are binding upon the permittee and enforceable pursuant to Chapters 403 and 373 of the Florida Statutes.

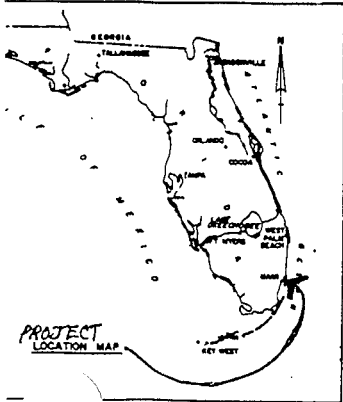
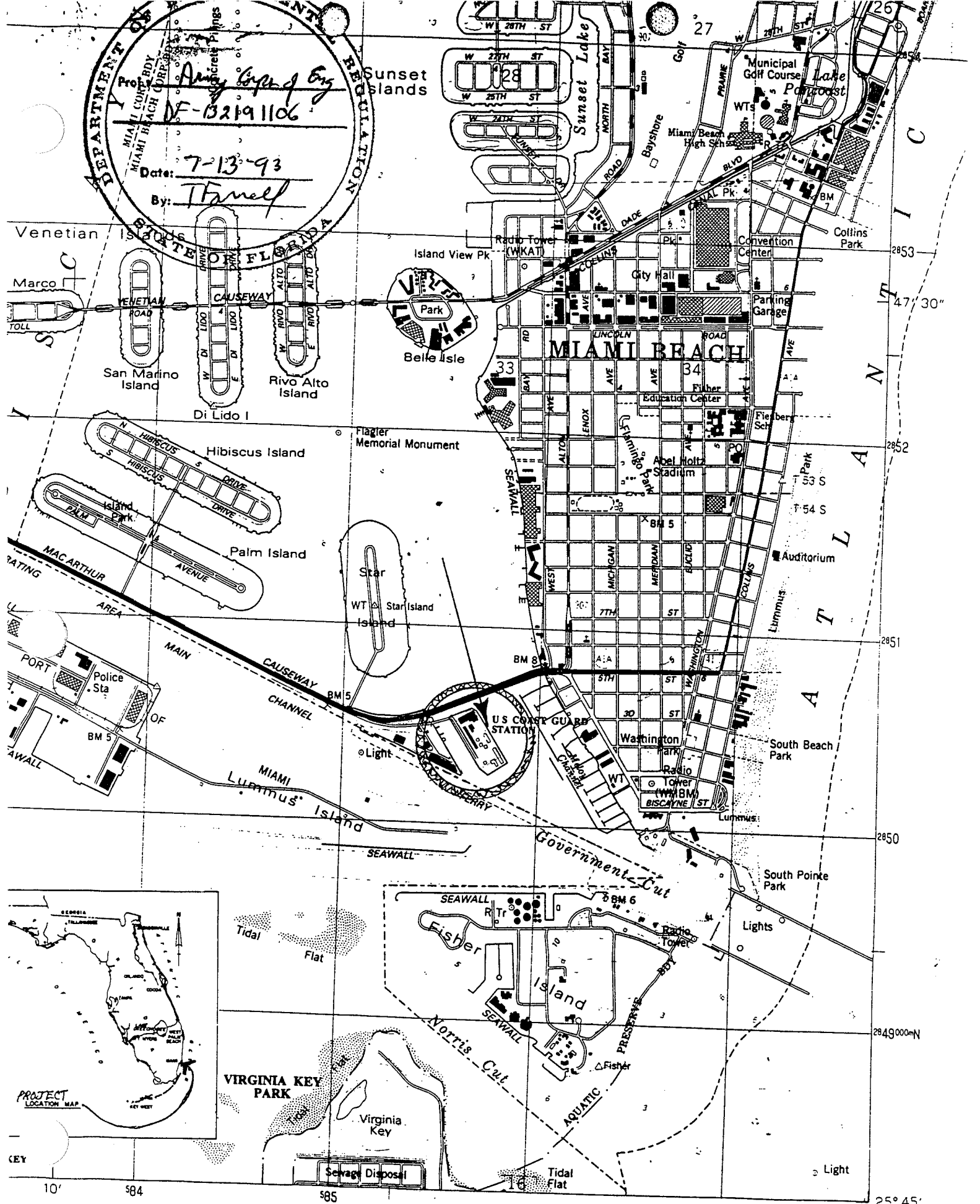
Issued this 21ST day of July, 1993

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION



Mary E. S. Williams
Director of District Management

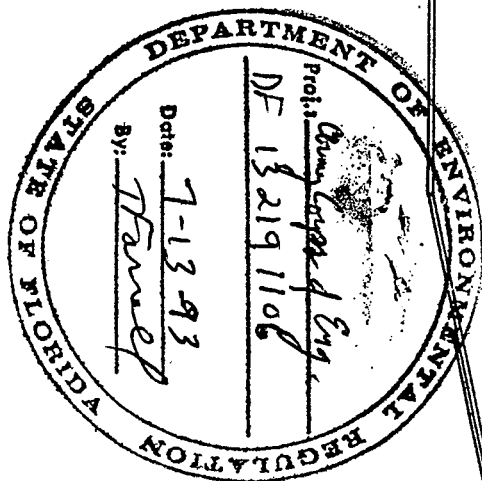
DEPARTMENT OF ENVIRONMENTAL REGULATION
 PROPERTY OF
 Miami Beach City
 DE-132191106
 Date: 7-13-93
 By: J. Farrell



Miami, Fl.
 Quadrangle

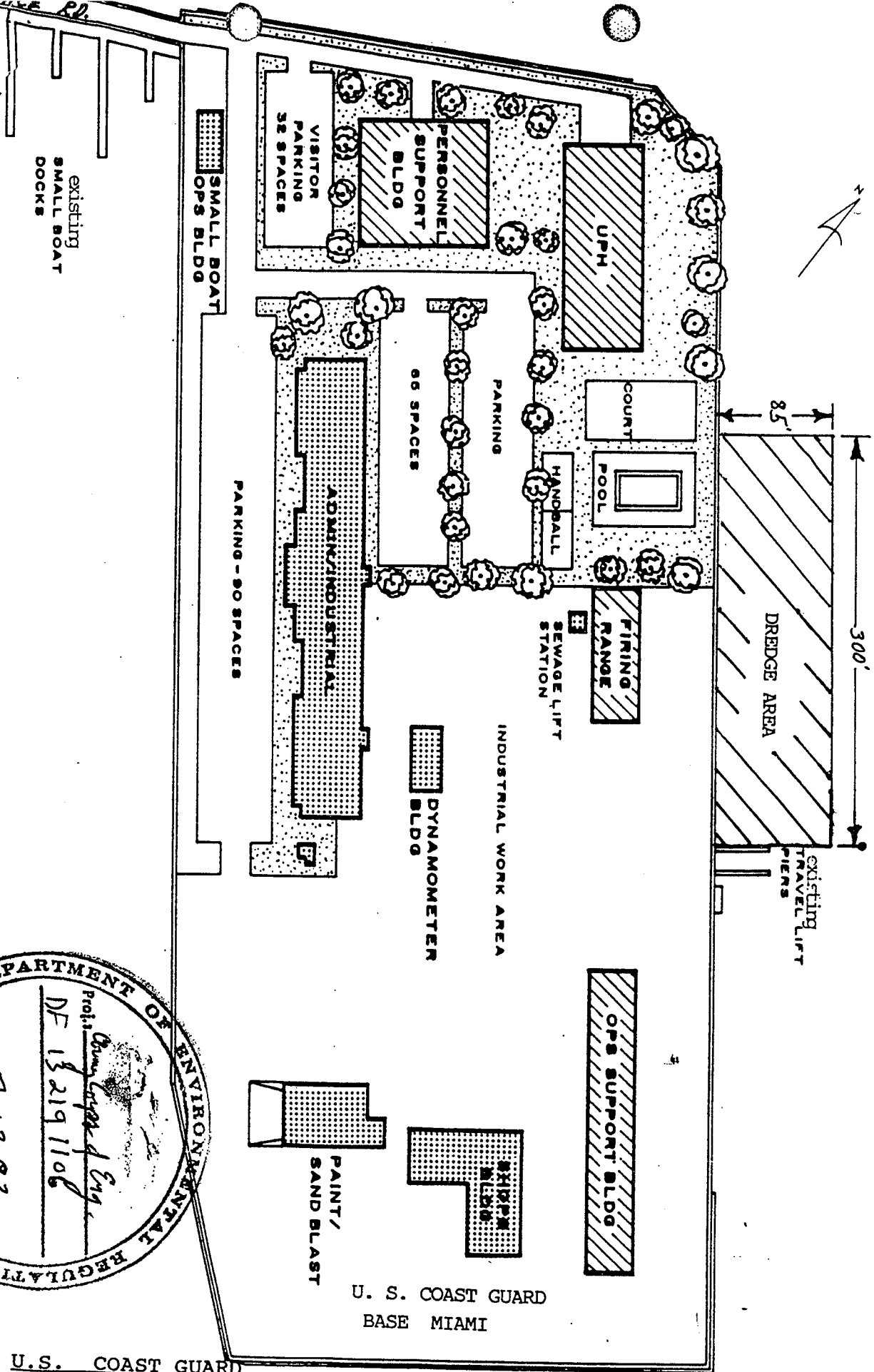
25° 45'
 80° 07' 30"

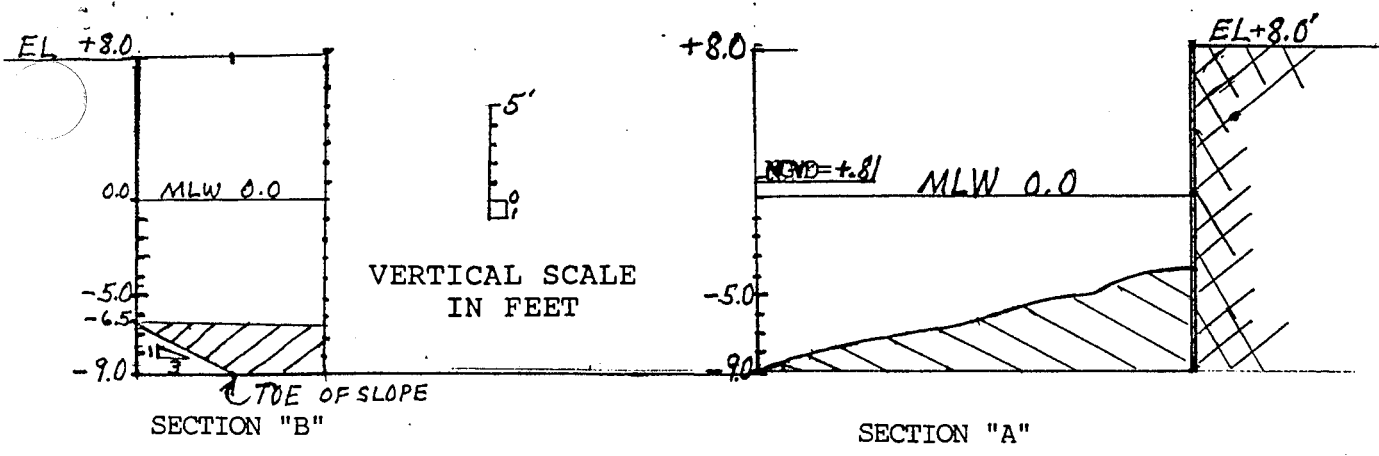
-  - NEW BUILDINGS (existing)
-  - EXISTING BUILDINGS
-  - VEGETATION



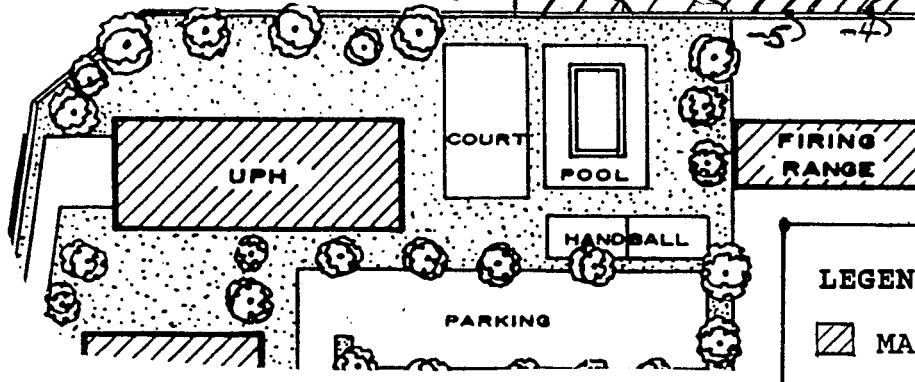
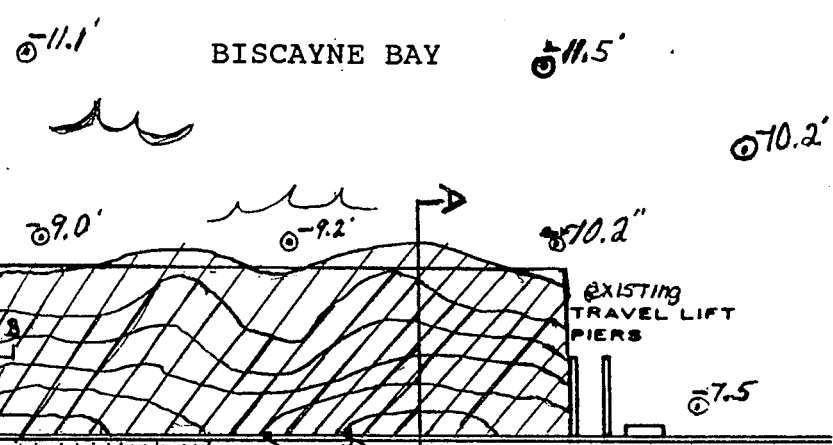
Applicant: U.S. COAST GUARD
 Governing Body: BISCAYNE BAY
 Authority: DADE
 Datum: N.G.V.D. = +0.81' above MLW

Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH
 Date: 4 - 15 - 92





DEPARTMENT OF ENVIRONMENTAL REGULATION
 STATE OF FLORIDA
 Project: *Army Corps of Eng.*
 DF-132191106
 Date: 7-13-93
 By: *H. H. Havel*



LEGEND

- MATERIAL TO BE DREDGED
- UPLAND

0 20 40 60 80 100 200
HORIZONTAL SCALE IN FEET

Applicant: U.S. COAST GUARD Purpose: DREDGING TO MAINTAIN ADEQUATE WATER DEPTH
 Water Body: BISCAYNE BAY
 County: DADE Sheet No:
 Datum: N.G.V.D. = +0.81' above MLW Date: 4 - 15 - 92