

18679-4

①

ERP-5041

11 - Drawings

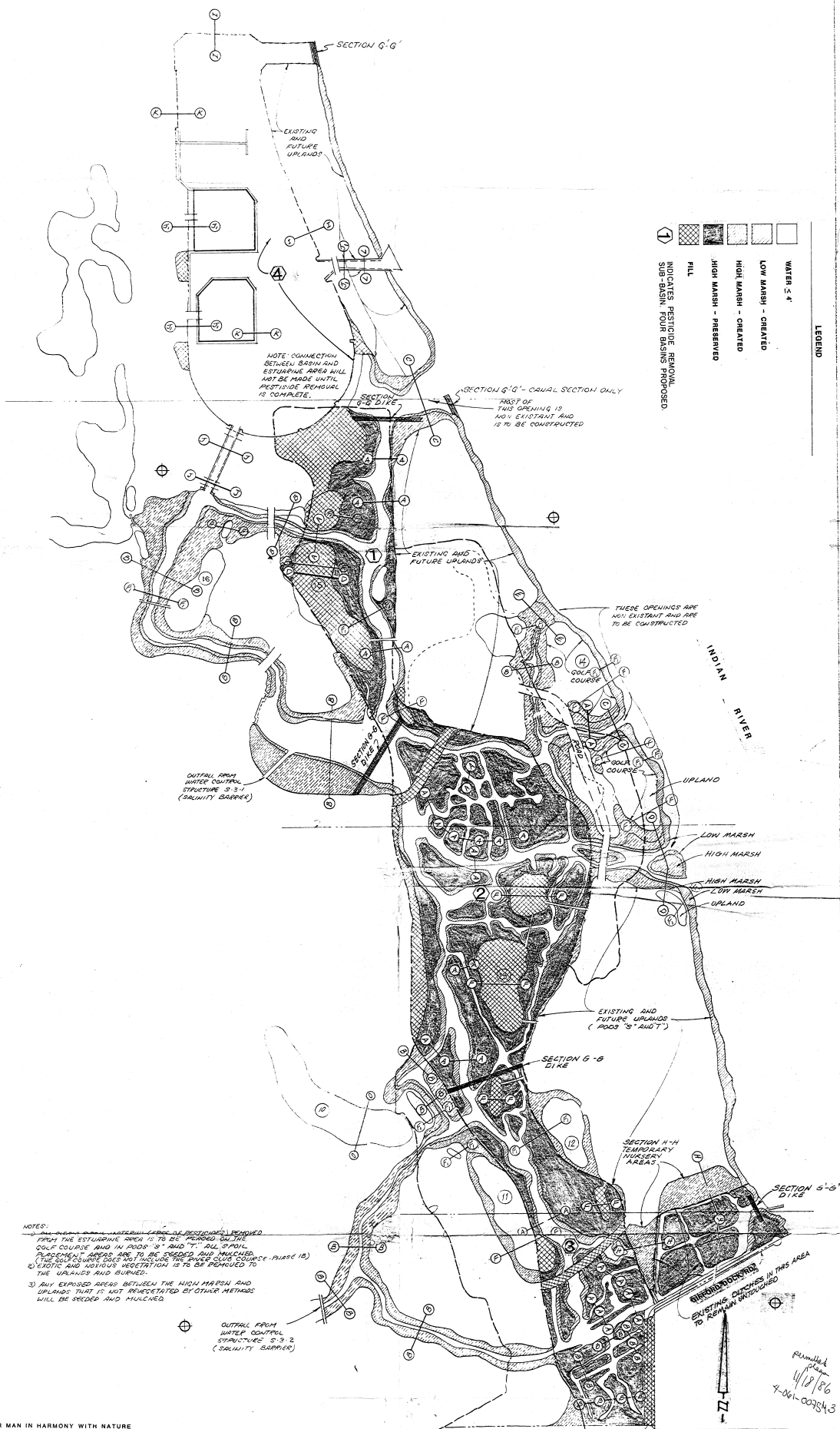


18679-4

Oversized Drawings

1723

2



- LEGEND
- WATER 5'4"
 - LOW MARSH - CREATED
 - HIGH MARSH - CREATED
 - HIGH MARSH - PRESERVED
 - FILL
 - INDICATES PESTICIDE REMOVAL SUB-BASIN FOUR BASINS PROPOSED

NOTES:

- 1) ALL SPILL PLACEMENT AREAS ARE TO BE SEEDED AND MULCHED. (THE GOLF COURSE DOES NOT INCLUDE THE RIVER GOLF COURSE - PARCELS 1B)
- 2) EXISTING AND UPLAND VEGETATION IS TO BE REMOVED TO THE UPLANDS AND BURNED.
- 3) ANY EXPOSED AREAS BETWEEN THE HIGH MARSH AND UPLANDS THAT IS NOT REMEDIATED BY OTHER METHODS WILL BE SEEDED AND MULCHED.

DESIGN FOR MAN IN HARMONY WITH NATURE

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MARINE BIOLOGIST
3881 S. NOVA ROAD
PORT ORANGE, FLA.
32018
PHONE (904) 787-6232

GRAND HARBOR ESTUARINE AREA PLAN
INDIAN RIVER COUNTY, FLORIDA



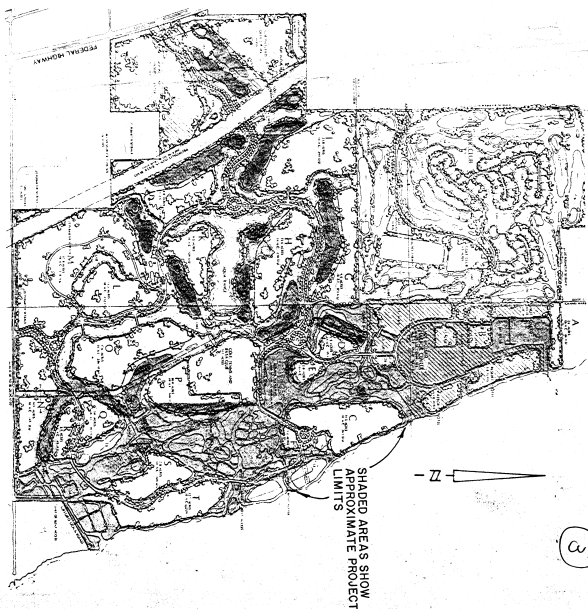
SCALE: 0 200 400 FEET

2 OF 5

18679-4

Revised Plan
4/18/86
4-061-00784.3

VERBENA



PROJECT SITE

$$T = 800$$

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	ESTUARINE AREA PLAN
3	DISPOSAL AREA PLAN
4	CROSS SECTIONS
5	CROSS SECTIONS



VICINITY MAP
NO SCALE



LOCATION MAP
1" = 2 MILES

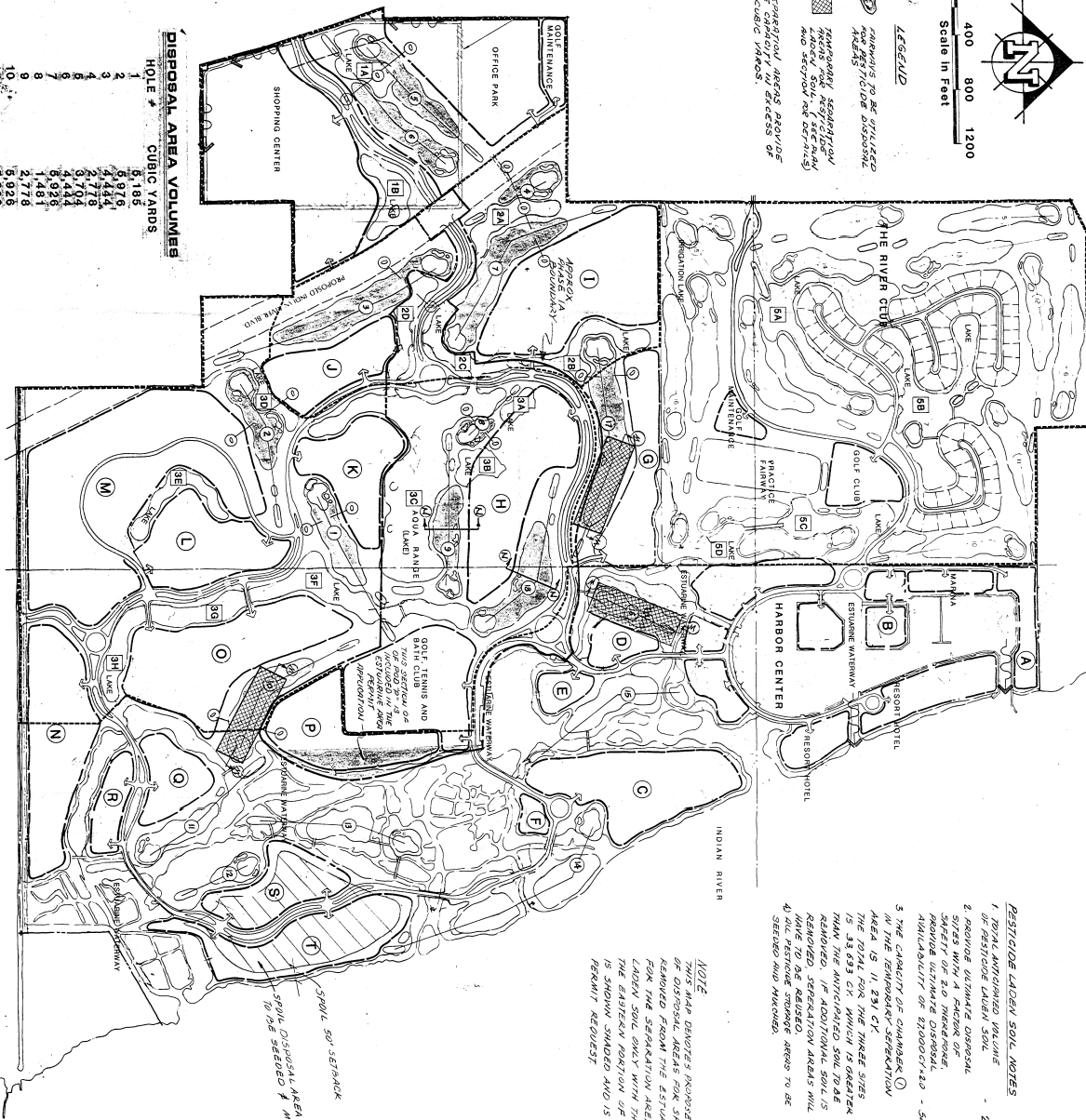
[illegible]



0 400 800 1200
Scale in Feet

LEGEND

- ROADWAYS TO BE UTILIZED FOR TRAFFIC DURING REMEDIATION
- HAZARDOUS WASTE LADEN SOIL (SEE MAP AND SECTION M-N)
- NOTE: SEPARATION AREAS PROVIDE STORAGE CAPACITY IN EXCESS OF 50,000 CUBIC YARDS.



DISPOSAL AREA VOLUMES

HOLE #	CUBIC YARDS
1	6,185
2	8,926
3	4,444
4	4,444
5	2,778
6	3,704
7	4,444
8	6,926
9	1,481
10	2,778
11	6,926
12	6,926
13	6,926
14	6,926
15	6,926
16	6,926
17	6,926
18	6,926

Total : 1,470,000 S.F. ± - 64,444 C.Y.
Anticipated required volume - 27,000 C.Y.

PESTICIDE LADEN SOIL NOTES

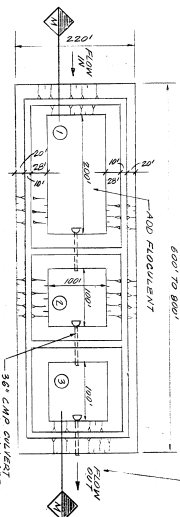
1. TO REMOVED LADEN SOIL - 27,000 CY
2. PROVIDE ULTIMATE DISPOSAL SITES WITH A MINIMUM OF SAFETY OF 20 THRESHOLDS. PROVIDE ULTIMATE DISPOSAL AVAILABILITY OF 27,000 CY - 50,000 CY
3. THE CAPACITY OF CHAMBER 1 IN THE TEMPORARY SEPARATION AREA IS 11,291 CY. THE 3,583 CY OF THE THREE SITES IS 3,583 CY. THE TOTALS GREATER THAN THE ANTICIPATED SOIL TO BE REMOVED. IF ADDITIONAL SOIL IS REMOVED, SEPARATION AREAS WILL HAVE TO BE REUSED.
4. SEEDING AND MULCHING.

NOTE

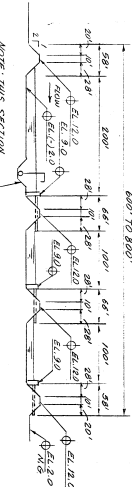
THIS MAP INDICATES PROPOSED LOCATIONS OF DISPOSAL AREAS FOR SPOIL MATERIAL REMOVED FROM THE ESTUARY AREA AND FOR THE SEPARATION AREA FOR PESTICIDE LADEN SOIL ONLY WITH THE EXCEPTION OF THE EASTERN PORTION OF ROAD 'P' WHICH IS SHOWN SHADDED AND IS A PART OF THIS FUTURE REQUEST.

$V_1 = 30,344 \text{ FT}^3 = 11,291 \text{ CY} \times 3.14 \times 35,000 \text{ CY}$
 $V_2 = 10,348 \text{ FT}^3 = 6,580 \text{ CY} \times 3.14 \times 16,785 \text{ CY}$
 $V_3 = 10,348 \text{ FT}^3 = 6,580 \text{ CY} \times 3.14 \times 16,785 \text{ CY}$

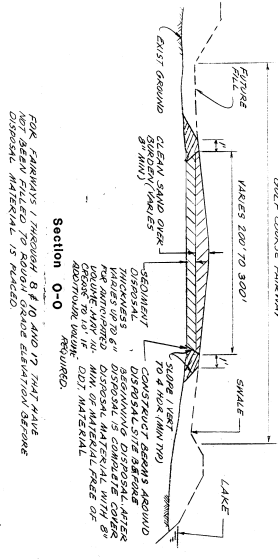
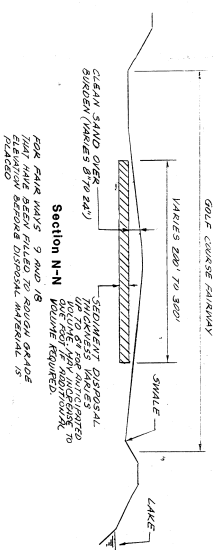
NOTE: ULTIMATE DISPOSAGE TO ESTUARY SYSTEM UNDER CONSIDERATION



Plan



Temporary Separation Area for Pesticide Laden Soil



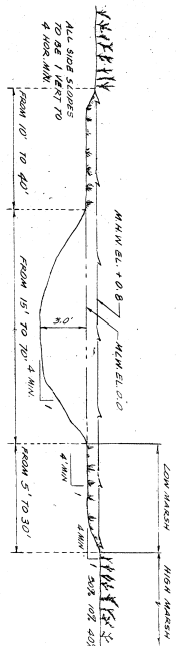
BEINORF & ASSOCIATES
Kinley-Horn



SPOIL LOCATION MAP

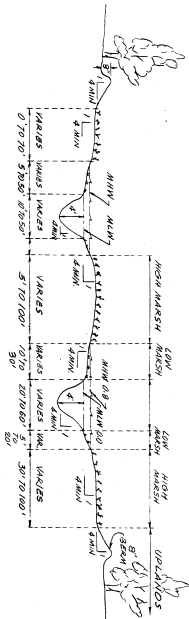
NO.	DATE	BY	DESIGNED BY	CHECKED BY	DATE	SCALE	SHEET
1	03/31/86	4/2/86	4/2/86	4/2/86	4/2/86	1" = 400'	3 OF 5
DRAWN BY: 4/2/86							8528.10
CHECKED BY: 4/2/86							8528.10
DATE: 03/31/86							8528.10
SCALE: 1" = 400'							8528.10
SHEET: 3 OF 5							8528.10

LOW MARSH - SPARTINA ACROBOLLOIDA
HIGH MARSH - SODIUM MARITIMA
OR SODIUM MARITIMA
OR DISTICHIS SPICATA



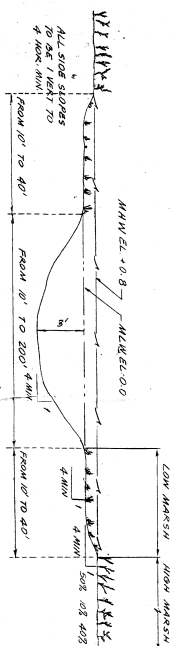
TYPICAL CROSS SECTION FOR LOW MARSH AND HIGH MARSH CREATION - NOT TO SCALE

Section A-A
N.T.S.



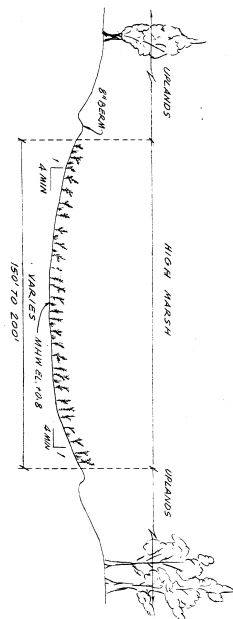
NOTE: ALL SIDE SLOPES TO BE 1 HORIZONTAL TO 4 VERTICAL

Section D-D
N.T.S.

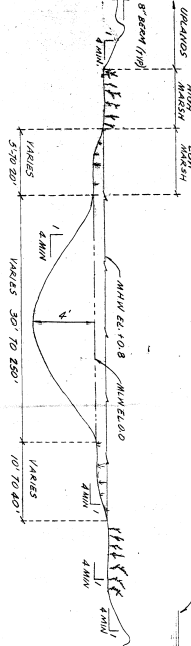


TYPICAL CROSS SECTION FOR LOW MARSH AND HIGH MARSH CREATION - NOT TO SCALE

Section B-B
N.T.S.

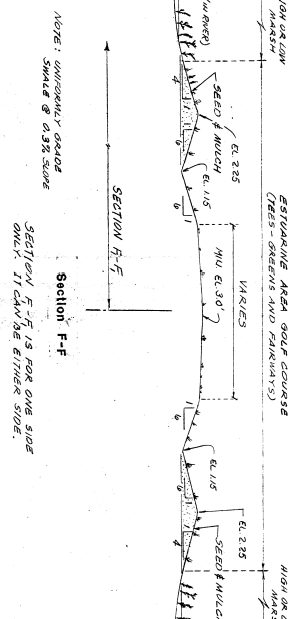


Section E-E
N.T.S.



NOTE: ALL SIDE SLOPES TO BE 1 HORIZONTAL TO 4 VERTICAL

Section C-C
N.T.S.

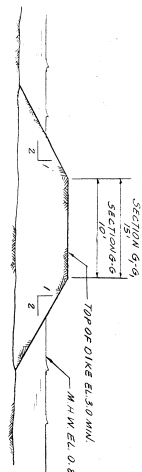


NOTE: UNIFORMLY GRADED SLOPES TO BE 1 HORIZONTAL TO 4 VERTICAL

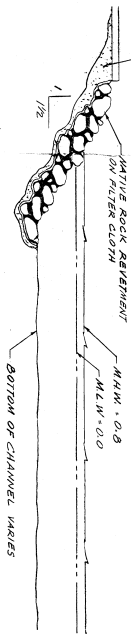
Section F-F
N.T.S.

Section G-G & G'-G'
N.T.S.

NOTE: TEMPORARY Dikes TO BE CONSTRUCTED TO PROTECT EXISTING INFRASTRUCTURE. ONLY THOSE DIKS REQUIRED TO PROTECT THE AREA BEING WORKED WILL BE LEFT. OTHER DIKS WILL BE DEMOLISHED AS REQUIRED.



Temporary Plant Nursery
Section H-H
N.T.S.



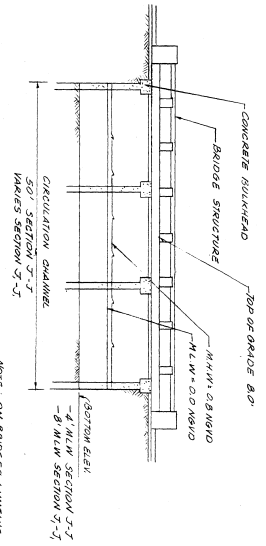
Section I-I
N.T.S.

ESTUARINE SYSTEM

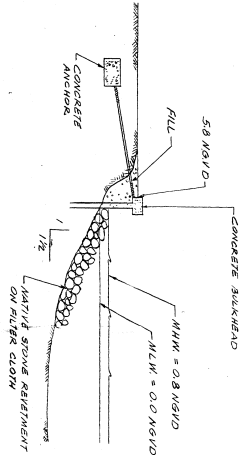
GRAND HARBOR VERO BEACH

BEINDORF & ASSOCIATES
Kimley-Horn

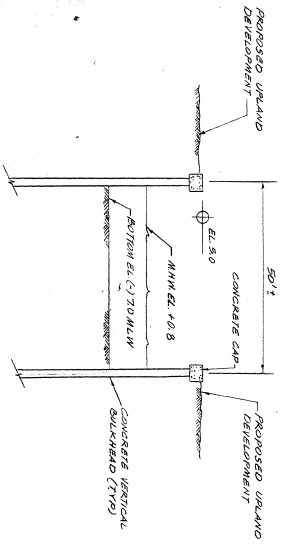
DATE: 11/14/88
SCALE: N.T.S.
SHEET NO. 4 OF 5



Section J-J & J'-J'



Section K-K



Section L-L
Flushing Channel

ESTUARINE SYSTEM

GRAND HARBOR

VERO BEACH

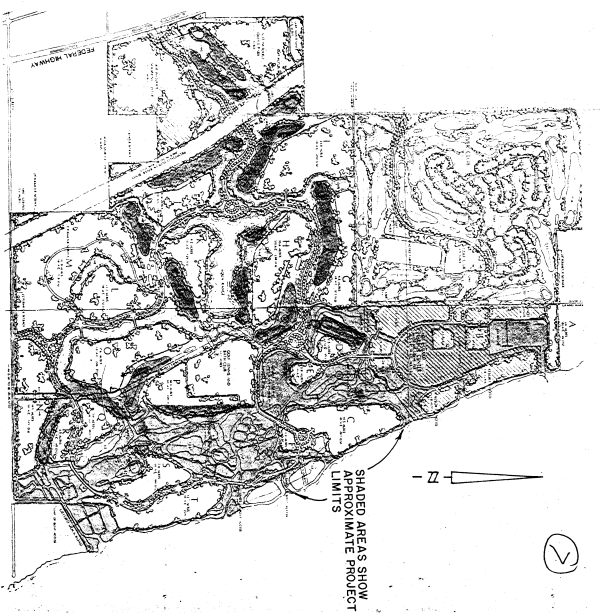
BEINDORF & ASSOCIATES
Kimley-Horn

PROJECT
NO. 10-51-06
DATE 10/25/06
BY 10/25/06

HEET NO.
5
5

APPLICATION FOR CONSTRUCTION OF ESTUARINE SYSTEM

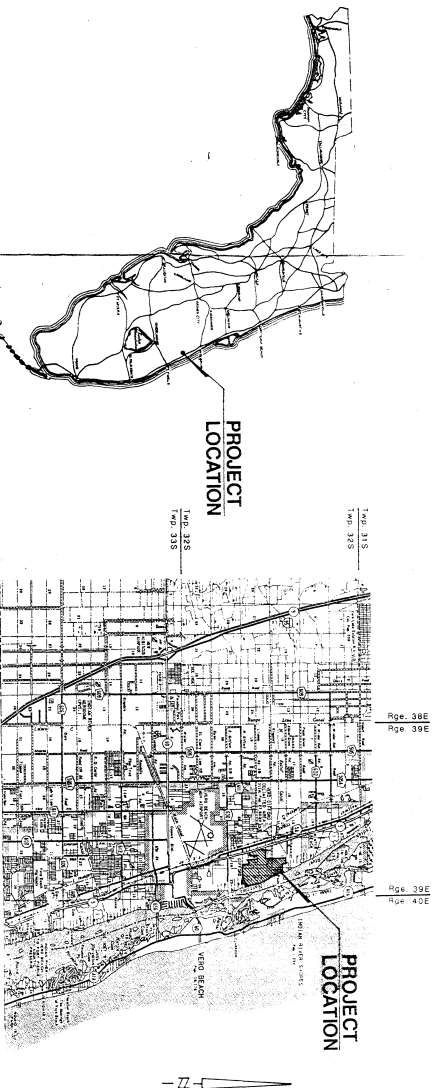
GRAND VERO BEACH HARBOR



PROJECT SITE
1" = 800'

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	ESTUARINE AREA PLAN
3	DISPOSAL AREA PLAN
4	CROSS SECTIONS
5	CROSS SECTIONS

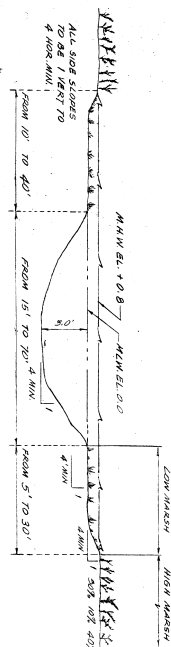


LOCATION MAP
1" = 2 MILES

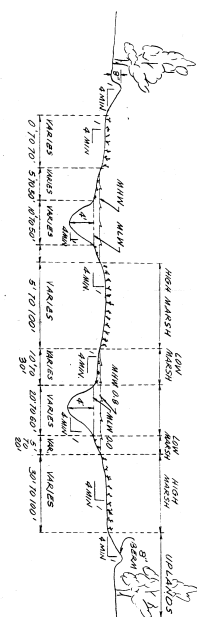
VICINITY MAP
NO SCALE

DESIGNED BY <i>BEINMONT & ASSOCIATES</i>	DATE NOV 05 1988	SHEET NO. 1
DRAWN BY <i>Kimley-Horn</i>	CHECKED BY	SHEET 1
NOTE BOOK NO.	NOTED	5
GRAND VERO BEACH HARBOR 18679-4		

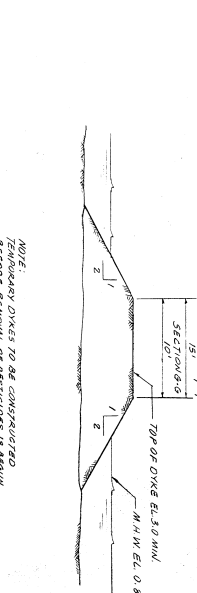
LOW MARSH - SPARTINA ALTERNIFLORA
HIGH MARSH - SODIUM MARITIMA
40% SALICORNIA VEGETATION
80% DISTICHLIS SPICATA



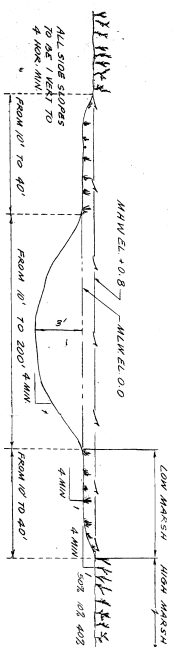
Section A-A
N.T.S.



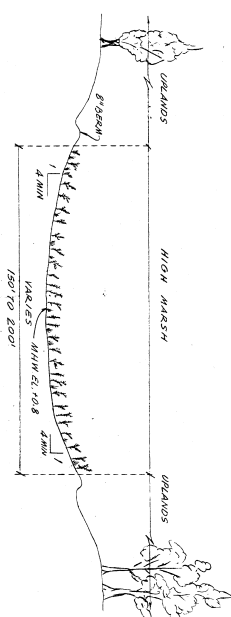
Section D-Q
N.T.S.



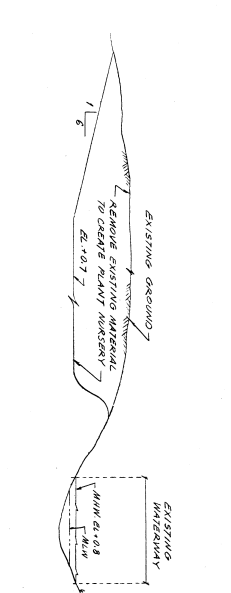
Section G-Q & Q-Q
N.T.S.



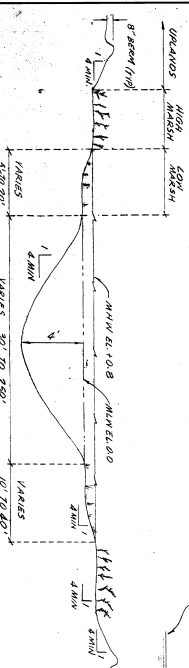
Section B-B
N.T.S.



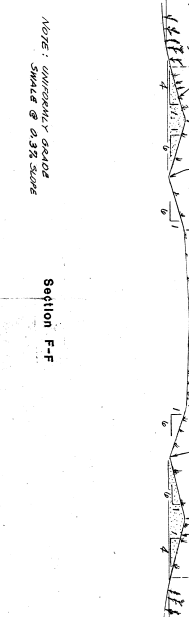
Section E-E
N.T.S.



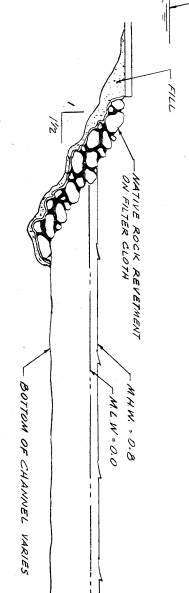
Section H-H
N.T.S.



Section C-C
N.T.S.



Section F-F
N.T.S.



Section I-I
N.T.S.

ESTUARINE SYSTEM

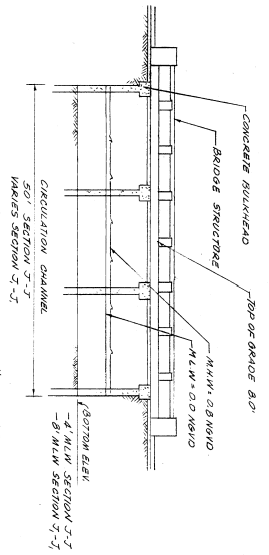
GRAND HARBOR

VERO BEACH

BENDORF & ASSOCIATES
Kinley-Horn

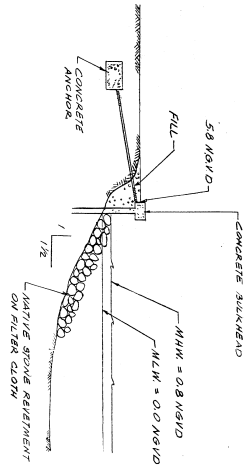
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BY: J. L. K.
CHECKED BY: J. L. K.
DATE: 1/17/85

4 of 6

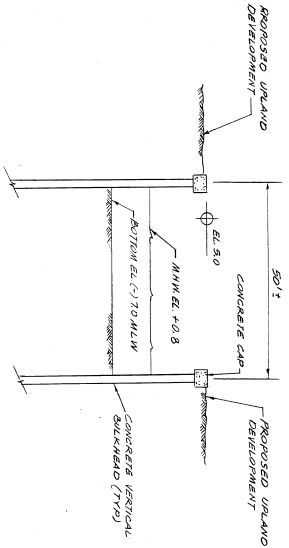


NOTE: ON BRIDGES LIMITING
BOAT ACCESS ONLY
DECATATIVE HENONBALL
WILL BE USED

Section J-I & J'-J'



Section K-K



Section L-L,
Flushing Channel

ESTUARINE SYSTEM

GRAND HARBOR

VERO BEACH

BEINDORF & ASSOCIATES
Kimley-Horn

DATE: 11/7/93
DRAWN BY: JTS
CHECKED BY: JTS
DATE: 12/31/96
FILE: 0628110

SHEET NO.
5
6