



*Celery Fields Regional Stormwater
Facility Management Plan*

Celery Fields

Prepared for:
Sarasota County Public Works

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Kimley-Horn
and Associates, Inc.

**CELERY FIELDS REGIONAL STORMWATER FACILITY
MANAGEMENT PLAN**

Prepared for:

**SARASOTA COUNTY PUBLIC WORKS
1001 Sarasota Center Boulevard
Sarasota, Florida 34240**

Prepared by:

**KIMLEY-HORN AND ASSOCIATES, INC.
8586 Potter Park Drive, Suite 100
Sarasota, Florida 34238**

July, 2003

Project No.: 048048006

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INTRODUCTION

The Celery Fields Regional Stormwater Facility (CFRSF) is a multi-purpose, regional stormwater flood control facility located in the Phillippi Creek Watershed in Sarasota County. This Management Plan is intended to provide operation and management guidelines to the county to use the facility for its various purposes and to effectively balance those uses consistent with established use priorities.

The Management Plan is organized into four Sub-Plans. The first Sub-Plan is The Flood Management Plan, corresponding to the primary flood control function of the CFRSF. The other three Sub-Plans apply to each of the three cells of the facility and provide guidelines relative to the remaining cell functions other than flood control. This plan organization will enable the user to quickly refer to the applicable aspects of plan when making a decision.

FLOOD MANAGEMENT PLAN

Management Priorities

The overall CFRSF use priorities have been established as follows:

Priority 1 – Flood Control

Priority 2 – Mitigation for Permit Requirements

Priority 3 – Habitat Enhancement

Priority 4 – Recreational Uses

Priority 5 – Water Quality Improvement

Priority 6 – Reuse Opportunities

This Flood Management Plan portion of the overall CFRSF Management Plan provides operation and maintenance guidelines for the primarily flood control purpose of the facility.

Permit Requirements

A control water level (CWL) of 14.5 NGVD has been set for the CFRSF in the Southwest Florida Water Management District (SWFWMD) permit No. 44013672.007 dated July 24, 2002 (Appendix A).

Operation Plan

The structures that control flow into and out of the CFRSF are located as shown in Exhibit I. Control structure details are provided in the following table:

TABLE 1

Structures Controlling the Celery Fields Regional Stormwater Facility

Structure Number	Location	Weirs / Gates (As-Built Width and Elevation)	Normal Operation (O)pen or (C)losed	Storm Operation
S-6	Diversion Weir in Main C	Weir 63' @ el. 21.0' 3' x 3' gate @ 14.5'	N/A O	N/A C
S-10	Central Cell Drawdown Structure	Gate 4.5' x 2' @ el. 12.5' w/ plate restricting opening to 2.5' x 2' @ el. 14.45' Weir 20' @ el. 19.83' Outfall gate on pipe	O N/A O	C N/A C
S-13	Con-Span Connecting Middle and Lower Cells	Aluminum Stop Logs	O	O
S-14	Outfall for Southern Cell	2 Gates 3' x 6' @ el. 15.45' 2 Gates 2' x 5' @ el. 14.47' & 2' x 6' @ el. 16.40' Weir 2' x 13' @ el. 21.0' Weir 2' x 13' @ el. 21.0'	O O N/A N/A	C C N/A N/A
Main C Weir	Gated Weir in Main C South of Porter Road	3 Gates 7.5' wide el. 9.2'	O	Gates set as Weir at 15.08'

During normal operation in the absence of a storm event or during a small storm, the outfall gates at structures S-6, S-10, and S-14 are usually opened to allow flow out of the facility at the CWL of 14.5 in preparation of a potential storm event. During the dry season or when a major storm event is unlikely, these gates may be set to control the water level at a higher elevation for some of the lower priority facility uses such as reuse storage.

Generally, two types of storm events can be expected. During an event associated with a hurricane, operations personnel will not be able to monitor flood levels throughout the storm and therefore predetermined gates settings are established in this plan. During major rainfall events not associated with a hurricane, operations personnel should modify these guidelines based on close monitoring of flood levels downstream, adjacent to, and in the CFRSF to maximize the flood storage benefits of the CFRSF.

During a major storm event, all the control structures should be left open until the flood elevation upstream of the easterly Bahia Vista Street at McIntosh Road crossing reaches elevation 10.0 or operations personnel are directed to report to shelter. At that time, the outfall gates at structures S-6, S-

10, and S-14 should be closed and the Main "C" Weir should be set to operate as a weir at elevation 15.08 (gates set on the bottom of the structure). The delay in shutting the control structures is intended to reserve CFRSF capacity until critical flood stages and to allow water to back up Main "C" into the CFRSF.

During nighttime emergency operations, the high mast lighting along Palmer Boulevard should be turned on to aid as a safety feature.

After a major storm event, the outfall structure gates should be opened after water levels downstream have receded to below flood stages. The degree to which gates are opened should be monitored so that water levels downstream stay below flood level.

Following a major storm event and on a weekly basis otherwise, the following items should be inspected and maintained as necessary:

1. Condition of vegetation and soil surfaces on the berm and in an area for 50 feet downstream from the outside toe.
2. Condition of the drainage ditches in the area of the base of the berm.
3. Liquid surface elevation and amount of freeboard.
4. Condition of water control structures, including conduits existing in the berm.

To elaborate on the above, the following conditions should be viewed on the weekly inspection:

Embankments

- Surface cracking
- Lateral movement
- Sloughing of slopes
- Seepage
- Piping or boils
- Movement or settlement of the crest
- Movement of structural items on the embankment
- Erosion
- Movement or cracking at the toes of the embankment
- Animal burrows

Outlet Works and Conduits

- General condition
- Spalling
- Seepage or Efflorescence
- Visible reinforcing
- Debris
- Condition of joints
- Sluice and weir gates are operable
- Cracks
- Rusting or staining of concrete

If any of the above conditions are noted in the inspections, the reason for the condition should be determined and repairs begun immediately. After repair, the area should be checked on a daily basis and during conditions that may have caused the occurrence, until such time as it is felt that the condition will not recur.

The vegetation downstream of the embankment can be a good indication of the possible occurrence of seepage through the embankment. If there is an area of lush vegetation with areas of normal vegetation around it, this could be an indication of seepage. The vegetation condition can also appear to change as the water level in the facility is raised or lowered. The seepage should be inspected by a geotechnical engineer to determine if corrective measures are required to prevent a boil from occurring. A boil is a seepage spot where the velocity of the seepage flow has increased to the point where actual soil particles are being removed.

The structures and the debris racks should be checked weekly and during and after major storm events. Debris should be removed as this can impede the operation of the facility and cause higher water levels upstream.

In addition to the above items, the diversion channels, Main C, and the rerouted portions of Main C should be monitored for vegetation growth and debris blockage. Vegetation growth should be limited so as not to impede the flow in the channel. The channels should be monitored on a monthly basis for vegetation growth and checked for debris blockage on a monthly basis and during and after a storm event.

Constraints

Management of the flood control aspects of the CFRSF must be in compliance with the applicable permits and should recognize the other uses of the CFRSF. Constraints on flood control management include:

- Opening the outfall gates to lower the control water level below 14.5 for long periods of time.
- Completely closing the Main C weir gates during major storm events without monitoring upstream water levels in the industrial area south of Palmer Boulevard. Some of these industrial facilities store materials that, if flooding occurs, could cause a major pollution problem.

Opportunities

Based on modeling studies, there are opportunities to increase the flood control aspects of the CFRSF and to effectively manage those functions. These include:

- Diversion of additional flood water from Main A during critical flood stage times. There is unused storage capacity in the CFRSF at critical times when flooding can be occurring downstream. Diverting flood water from Main A can be accomplished by monitoring water levels and adjusting the Main C weir and CFRSF outfall gates to allow water to back up into the CFRSF. Modifications to the drainage system and construction of relatively minor diversion facilities can enhance this diversion.
- Addition of the Walker parcel to the CFRSF. This would provide addition storage capacity. To be effective at reducing downstream flood levels, this needs to be combined with the diversion of flood water from Main A.
- Use of the CFRSF as a regional floodplain compensation and attenuation facility. Opportunities exist for nearby private or public development to increase storage in the CFRSF by additional excavation to the CWL of 14.5 NGVD. In exchange for development providing the additional excavation, the CFRSF could serve as the development's floodplain compensation and attenuation facility. This will require further study.
- Use of the CFRSF as a collection, treatment, and temporary storage system for possible reuse water augmentation. If water levels in the CFRSF are managed at the CWL of 14.5 or, during the dry season when major storms are not expected, at levels somewhat higher than the CWL, then the CFRSF might be used as a reuse augmentation facility. This requires further study.

NORTHERN CELL MANAGEMENT PLAN

Management Priorities

The management priorities identified for the northern cell in priority order are:

1. Flood Control
2. Recreational Use
3. Water Quality
4. Reuse Opportunity

Permit Requirements

Other than the overall facility permit requirements for the CWL of 14.5 NGVD, there are no specific permit requirements associated with the northern cell. The cell does not contain any wetland mitigation features.

Constraints

Management activities within the northern cell must not compromise the flood control aspects of the CFRSF. Additionally, the northern cell serves as a sedimentation area. The size and depth of the open water in the northern cell should be maintained to provide this water quality feature. A stormwater treatment facility also exists in the north-central area of the cell. This treatment facility serves the area between the CFRSF and Fruitville Road. This facility is permitted under the Florida Department of Environmental Protection Permit No. 58-0152847-001. Management constraints in the northern cell include:

- Reduction of the size or depth of the open water areas.
- Modification of the stormwater treatment area in the north central portion of this cell.

Opportunities

Opportunity exists within the northern cell that may not be available in the central or southern cells because of the open water characteristics of the northern cell and due to the absence of any wetland mitigation areas. Opportunities include:

- Enhanced recreational uses. Recreational opportunities and uses should be consistent with the approved recreational use concept plan (Exhibit 2).
- Additional flood storage by excavation of areas that are above the CWL of 14.5. The two lake configuration should remain for water quality and recreational purposes.

CENTRAL CELL MANAGEMENT PLAN

Management Priorities

The management priorities identified for the Central Cell in order or ranking include:

1. Flood Control
2. Southwest Florida Water Management District wetland mitigation
3. Habitat Enhancement
4. Recreational Use
5. Water Quality
6. Re-use

Southwest Florida Water Management District Wetland Mitigation

Development of the Celery Fields Regional Stormwater Facility required impacts to Southwest Florida Water Management District (SWFWMD) jurisdictional wetlands in order to construct the facility. Wetland mitigation to offset the permanent impacts associated with the construction of the facility included the creation of 15.49 acres of herbaceous wetlands. Wetland mitigation locations are depicted on the aerial photograph (Exhibit 1) provided with the management plan. These wetland mitigation areas were graded and planted with a variety of native herbaceous plant species with the specific intent to provide fish and wildlife habitat. These wetland mitigation areas are required to be maintained in their intended condition as defined by the wetland mitigation success criteria detailed below and contained in Environmental Resource Permit No. 44013672.007 included in this management plan.

1. Mitigation success criteria as defined in Specific Condition No. 6:

Mitigation is expected to offset adverse impacts to wetlands and other surface waters caused by regulated activities and to achieve viable, sustainable ecological and hydrological wetland functions. Wetlands constructed for mitigation purposes will be considered successful and will be released from monitoring and reporting requirements when the following criteria are met continuously for a period of at least one year without intervention in the form of irrigation or the addition or removal of vegetation:

- a. The mitigation area can be reasonably expected to develop and be maintained as a Palustrine Emergent Persistent Wetland, as determined by the USFWS Classification of Wetlands and Deepwater Habitats of the United States.
- b. Topography, water depth and water level fluctuation in the mitigation area are characteristic of the wetland /surface water type specified in criterion "a".

- c. The dominant and subdominant species of desirable wetland plants comprising each vegetation zone and stratum of the mitigation area shall be as follows:

ZONE	STRATUM	PERCENT COVER	DOMINANT SPECIES	SUBDOMINANT SPECIES
N/A	Herbaceous	60%	<i>Rumex</i> spp.	<i>Bacopa</i> spp.

- d. Species composition of recruiting wetland vegetation are indicative of the wetland type specified in criterion "a".
- e. The wetland mitigation area can be determined to be a wetland or other surface water according to Chapter 62-340, F.A.C.

2. Maintenance criteria as defined in Specific Condition No. 7.

The Permittee shall operate and maintain the wetland mitigation area(s) such that they remain in their current or intended condition for the life of the surface water management facility. The Permittee must perform corrective actions for any portions of the wetland mitigation area(s) where conditions no longer meet the criteria set forth in the Wetland Mitigation Success Criteria Condition(s).

Constraints

Management activities within the central cell must not compromise the long term success of the 12 wetland mitigation areas identified on Exhibit 1. These constraints include:

- Mowing within the established limits of the wetland mitigation areas. It is recommended that permanent markers be placed in the field to identify the limits in the field to prevent intrusions into the mitigation areas.
- Establishment of nuisance and/or exotic vegetation to a level which exceeds the permit conditions referenced above.
- Frequent lowering or raising of water to such elevations and/or durations which would adversely affect the viability of the created wetlands. Relatively infrequent and short duration flooding of wetlands to manage water levels for flood control purposes is not anticipated to adversely affect the viability of the created wetlands.
- Intensive or noisy recreational use which may disturb the utilization of the mitigation areas by wildlife.

Opportunities

Numerous opportunities exist within the Central Cell which would not compromise the wetland mitigation or could enhance the existing habitat values and mitigation areas. Opportunities include:

- Planting of native trees, shrubs and herbaceous plants throughout the remaining portions of the Central Cell to further enhance fish and wildlife habitat functions and values.
- Removal and control of all nuisance and/or exotic vegetation within the wetland mitigation areas so as to exceed the permit conditions of ERP No. 44013672.007.
- Supplemental planting of native herbaceous species within the wetland mitigation areas.
- Planting of upland areas with trees and shrubs. Native vegetation is preferred but is not required.
- Construction and installation of nest boxes, nesting platforms, etc. to provide nesting habitat for birds, bats and small mammal species.
- Incorporation of passive recreational use activities consistent with the Recreational Use Concept Plan such as hiking trails, interpretive signage, benches, kiosks, small shelters to protect hikers from sun and/or rain, bicycle and horseback riding trails, observatories, fishing/observation piers and creation of other native upland and wetland habitats not currently found on site.
- Development and implementation of an educational program for the site which could include field trips, research projects and studies.
- Development of community volunteer programs and/or projects which would not be in conflict with ERP No. 44013672.007.

SOUTHERN CELL MANAGEMENT PLAN

Management Priorities

The management priorities identified for the Southern Cell include in order of ranking:

1. Flood Control
2. U. S. Army Corps of Engineers wetland mitigation
3. Habitat enhancement
4. Recreational Use
5. Water Quality
6. Re-use

Permit Requirements

Virtually the entire Southern Cell has been designed to provide the required wetland mitigation for the U.S. Army Corps of Engineers (COE) to offset the permanent wetland impacts which resulted from the development of the Celery Fields Regional Stormwater Facility. This mitigation area totals 203.57 acres consisting of 87.7 acres of open water, 96.82 acres of herbaceous wetlands, 5.32 acres of forested wetlands, 12.64 acres of upland buffers and preservation of 1.09 acres of existing native upland tree islands. Specific permit related requirements include:

1. Wetland mitigation success criteria for the U. S. Army Corps of Engineers is detailed below:

The compensation areas will be considered successful when the herbaceous areas (Zones A, B, C and D) can be classified as Palustrine-Emergent Wetland and Zone E can be classified as Palustrine Scrub-Shrub Wetland according to *Classification of Wetlands and Deepwater Habitats of the United States*. Dominant and sub-dominant species of desirable wetland plants (listed as facultative, facultative wet or obligate by the COE) shall equal or exceed 70% coverage in Zones A, B and C, and 50% coverage in Zone D. Coverage within Zone E shall equal or exceed 30% canopy in the shrub/scrub strata and 30% coverage in the herbaceous strata. Coverage by nuisance and/or exotic species shall not exceed 25% coverage and uplands vegetation shall not exceed 10% coverage.
2. Monitoring of the wetland mitigation areas shall be conducted quarterly the first year and semi-annually thereafter until the success criteria identified above have been achieved. Monitoring shall be initiated upon completion of the construction and planting of the mitigation area.

3. Maintenance shall continue to be conducted by Sarasota County staff members to eliminate and/or control undesirable plant species which may become established within the mitigation area below the approved coverage limits as detailed in the mitigation success criteria.

Constraints

Management activities within the Southern Cell must not compromise the long term success of the COE wetland mitigation. These constraints include:

- Mowing and/or excessive use of herbicides (other than treating target nuisance/exotic species) should not be conducted in the limits of the mitigation area. It is recommended that permanent markers be placed in the field to identify the limits in the field to prevent intrusions into the mitigation areas.
- Establishment of nuisance and/or exotic species into the limits of the created wetlands and upland buffer as depicted on the wetland mitigation plans included in Exhibit 3.
- Frequent lowering or raising of water to such elevations and/or durations which would adversely affect the viability of the created mitigation. Relatively infrequent and short duration flooding of wetlands to manage water levels for flood control purposes is not anticipated to adversely affect the viability of the created mitigation.
- Intensive or noisy recreational activities which may disturb the utilization of the mitigation area by wildlife, particularly wading birds.

Opportunities

Numerous opportunities exist within the Southern Cell which would not compromise the wetland mitigation or could enhance the existing habitat values and mitigation areas. Opportunities include:

- Planting of native trees, shrubs and herbaceous plants throughout the remaining portions of the Southern Cell. Additional plantings could be incorporated in the mitigation zones to further enhance establishment of desirable vegetation and diversity.
- Removal and control of all nuisance and/or exotic vegetation within the wetland mitigation areas so as to exceed the permit conditions of COE No. 199404745 (IP-RGW) Modification #4.
- Planting of upland areas with additional native trees and shrubs from the baseline established in the wetland mitigation plan and the recreational use concept plan.
- Construction and installation of nest boxes, nesting platforms, etc. to provide additional nesting habitat for birds, bats and small mammal species.

- Incorporation of passive recreational use activities such as trails, interpretive signage, boardwalks, benches, kiosks, and small shelters to protect hikers from sun and/or rain.
- Development and implementation of an educational program which could include field trips, research projects and studies.
- Development of community volunteer programs and/or projects not in conflict with the conditions of the COE permit.

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EXHIBIT 1

**CELERY FIELDS REGIONAL
STORMWATER FACILITY**

EXHIBIT 2

**RECREATIONAL USE
CONCEPT PLAN**

EXHIBIT 3

**US ARMY CORPS OF ENGINEERS'
MITIGATION PLAN**

APPENDIX A

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT PERMIT



An Equal
Opportunity
Employer

Southwest Florida Water Management District

Tampa Service Office
7601 Highway 301 North
Tampa, Florida 33637-6759
(813) 985-7481 or
1-800-836-0797 (FL only)
SUNCOM 578-2070

Bartow Service Office
170 Century Boulevard
Bartow, Florida 33830-7700
(863) 534-1448 or
1-800-492-7862 (FL only)
SUNCOM 572-6200

2379 Broad Street, Brooksville, Florida 34604-6899

(352) 796-7211 or 1-800-423-1476 (FL only)

SUNCOM 628-4150 TDD only 1-800-231-6103 (FL only)

On the Internet at: WaterMatters.org

Sarasota Service Office
6750 Fruitville Road
Sarasota, Florida 34240-9711
(941) 377-3722 or
1-800-320-3503 (FL only)
SUNCOM 531-6900

Lecanto Service Office
3600 West Sovereign Path
Suite 226
Lecanto, Florida 34461-8070
(352) 527-8131
SUNCOM 667-3271

July 24, 2002

Ronnie E. Duncan
Chair, Pinellas

Thomas G. Dabney, II
Vice Chair, Sarasota

Heidi B. McCree
Secretary, Hillsborough

Watson L. Haynes, II
Treasurer, Pinellas

Edward W. Chance
Manatee

Monroe "Al" Coogler
Citrus

Maggie N. Dominguez
Hillsborough

Pamela L. Fentress
Highland

Ronald C. Johnson
Polk

Janet D. Kovach
Hillsborough

John K. Renke, III
Pasco

E. D. "Sonny" Vergara
Executive Director

Gene A. Heath
Assistant Executive Director

William S. Bilenky
General Counsel

Board of County Commissioners, Sarasota County
c/o Director, Sarasota County Public Works - Transportation
1001 Sarasota Center Boulevard
Sarasota, FL 34240

Subject: Notice of Final Agency Action for Approval
ERP Standard General Construction
Permit No: 44013672.007
Project Name: Sarasota County Celery Fields
County: Sarasota
Sec/Twp/Rge: 19,30/36S/19E

Dear Commissioners:

This letter constitutes notice of Final Agency Action for approval of the permit application referenced above. Final approval is contingent upon no objection to the District's action being received by the District within the time frames described below.

You or any person whose substantial interests are affected by the District's action regarding a permit may request an administrative hearing in accordance with Sections 120.569 and 120.57, F.S., and Chapter 28-106, Florida Administrative Code (F.A.C.), of the Uniform Rules of Procedure. *A request for hearing must: (1) explain how the substantial interests of each person requesting the hearing will be affected by the District's action, or proposed action, (2) state all material facts disputed by the person requesting the hearing or state that there are no disputed facts, and (3) otherwise comply with Chapter 28-106, F.A.C.* Copies of Sections 28-106.201 and 28-106.301, F.A.C. are enclosed for your reference. A request for hearing must be filed with (received by) the Agency Clerk of the District at the District's Brooksville address within 21 days of receipt of this notice. Receipt is deemed to be the fifth day after the date on which this notice is deposited in the United States mail. Failure to file a request for hearing within this time period shall constitute a waiver of any right you or such person may have to request a hearing under Sections 120.569 and 120.57, F.S. Mediation pursuant to Section 120.573, F.S., to settle an administrative dispute regarding the District's action in this matter is not available prior to the filing of a request for hearing.

Enclosed is a "Noticing Packet" that provides information regarding the District Rule 40D-1.1010, F.A.C., which addresses the notification of persons whose substantial interests may be affected by the District's action in this matter. The packet contains guidelines on how to provide notice of the District's action, and a notice that you may use.

The enclosed approved construction plans are part of the permit, and construction must be in accordance with these plans.

Board of County Commissioners, Sarasota County

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July 24, 2002

If you have questions concerning the permit, please contact Daryl R. Flatt, P.E., at the Sarasota Service Office, extension 6508. For assistance with environmental concerns, please contact Hugh D. Dinkler, P.W.S., extension 6516.

Sincerely,



James P. Guida, P.G., Director
Sarasota Regulation Department

JPG:DRF:HDD:bxm

Enclosures: Approved Permit w/Conditions Attached
 Approved Construction Drawings
 Statement of Completion
 Notice of Authorization to Commence Construction
 Noticing Packet (42.00-039)
 Sections 28-106.201 and 28-106.301, F.A.C.

cc/enc: File of Record 44013672.007
 J. P. Marchand, P.E., Kimley-Horn and Associates, Inc.
 Frank Domingo, P.E., General Manager, Sarasota County Public Works - Planning
 Mr. Dave Wachtell

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE
STANDARD GENERAL CONSTRUCTION MODIFICATION
PERMIT NO. 44013672.007

EXPIRATION DATE: July 24, 2007

PERMIT ISSUE DATE: July 24, 2002

This permit is issued under the provisions of Chapter 373, Florida Statutes (F.S.), and the Rules contained in Chapters 40D-4 and 40, Florida Administrative Code (F.A.C.). The permit authorizes the Permittee to proceed with the construction of a surface water management system in accordance with the information outlined herein and shown by the application, approved drawing(s), plans, specifications, and other documents, attached hereto and kept on file at the Southwest Florida Water Management District (District). All construction, operation and maintenance of the surface water management system authorized by this permit shall occur in compliance with Florida Statutes and Administrative Code and the conditions of this permit.

PROJECT NAME: Sarasota County Celery Fields

GRANTED TO: Board of County Commissioners, Sarasota County
Post Office Box 8
Sarasota, FL 34230

ABSTRACT: This permit authorizes modifications to the Celery Fields Regional Stormwater Facility (CFRSF) in Sarasota County. These modifications include revisions to the environmental conditions in Environmental Resource Permit (ERP) No. 43013672.004, and the lowering of the control elevation in the stormwater facility from 16.50 NGVD to 14.50 NGVD. The CFRSF allowed 16.62 acres of permanent impacts to wetlands disturbed by historical agricultural activities. Compensation for these permanent impacts included 16.67 acres of marsh and littoral zone wetland creation areas, to be located in the sedimentation cells and the southwest corner of the Central Pond. The wetland mitigation success criteria established in the original permit for the 16.67 acres of marsh and littoral zone wetland creation areas limited coverage of nuisance species and upland species to facilitate the creation of a 100.00 acre mitigation cell. This mitigation cell was proposed for future roadway wetland impacts, but was abandoned by Sarasota County after closer review of costs versus water resource benefits.

Based on recommendations by District staff, Sarasota County evaluated the wetland functions provided by the existing marsh and littoral areas that have developed in the CFRSF through natural recruitment and augmentation by the Sarasota County Natural Resource staff. Twelve wetland areas were identified, evaluated, and their limits mapped on rectified aerial photographs. The evaluation included sampling of the existing wetlands for coverage of nuisance, exotic, desirable, and upland species, as well as wildlife utilization through several days of sampling and documentation from various local environmental groups. Based on the quality of the 15.49 acres of existing wetlands and the extensive use of these wetlands by wildlife, District staff determined that the wetland functions lost by the 16.62 acres of permanent wetland impacts have been offset with the existing 15.49 acres of wetland habitat. To document this change, the conditions of ERP No. 43013672.004 have been modified. Specifically, Condition Nos. 16, 17, 18, and 20 have been eliminated, and Condition No. 19 has been revised to reflect the existing wetland compensation conditions. The only construction authorized in this permit is the lowering of the weir elevations on Structures S-10 and S-14.

OP. & MAINT. ENTITY: Sarasota County Public Works

PROPERTY LOCATION: Sarasota County

SEC/TWP/RGE: 19,30/36S/19E

**TOTAL ACRES OWNED
OR UNDER CONTROL:** 532.00

PROJECT SIZE: 0.10 Acre

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LAND USE: Government

DATE APPLICATION FILED: April 12, 2002

AMENDED DATE: N/A

I. Water Quantity/Quality

Please refer to Abstract.

Mixing Zone required: YES () NO (X)

Variance required: YES () NO (X)

II. 100-Year Floodplain

N/A

III. Environmental Considerations

Please refer to Abstract.

Watershed name(s): Southern Coastal

A regulatory conservation easement is not required.

SPECIFIC CONDITIONS

1. If the ownership of the project area covered by the subject permit is divided, with someone other than the Permittee becoming the owner of part of the project area, this permit shall terminate, pursuant to Section 40D-1.6105, F.A.C. In such situations, each land owner shall obtain a permit (which may be a modification of this permit) for the land owned by that person. This condition shall not apply to the division and sale of lots or units in residential subdivisions or condominiums.
2. Unless specified otherwise herein, two copies of all information and reports required by this permit shall be submitted to:

Sarasota Regulation Department
Southwest Florida Water Management District
6750 Fruitville Road
Sarasota, FL 34240-9711

The permit number, title of report or information and event (for recurring report or information submittal) shall be identified on all information and reports submitted.
3. The Permittee shall retain the design engineer, or other professional engineer registered in Florida, to conduct on-site observations of construction and assist with the as-built certification requirements of this project. The Permittee shall inform the District in writing of the name, address and phone number of the professional engineer so employed. This information shall be submitted prior to construction.

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4. Within 30 days after completion of construction of the permitted activity, the Permittee shall submit to the Sarasota Service Office a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C., and signed, dated, and sealed as-built drawings. The as-built drawings shall identify any deviations from the approved construction drawings.
5. The District reserves the right, upon prior notice to the Permittee, to conduct on-site research to assess the pollutant removal efficiency of the surface water management system. The Permittee may be required to cooperate in this regard by allowing on-site access by District representatives, by allowing the installation and operation of testing and monitoring equipment, and by allowing other assistance measures as needed on site.

6. WETLAND MITIGATION SUCCESS CRITERIA MITIGATION AREA

Mitigation is expected to offset adverse impacts to wetlands and other surface waters caused by regulated activities and to achieve viable, sustainable ecological and hydrological wetland functions. Wetlands constructed for mitigation purposes will be considered successful and will be released from monitoring and reporting requirements when the following criteria are met continuously for a period of at least one year without intervention in the form of irrigation or the addition or removal of vegetation.

- a. The mitigation area can be reasonably expected to develop and be maintained as a Palustrine Emergent Persistent Wetland, as determined by the USFWS Classification of Wetlands and Deepwater Habitats of the United States.
- b. Topography, water depth and water level fluctuation in the mitigation area are characteristic of the wetland/surface water type specified in criterion "a."
- c. The dominant and subdominant species of desirable wetland plants comprising each vegetation zone and stratum of the mitigation area shall be as follows:

ZONE	STRATUM	PERCENT COVER	DOMINANT SPECIES	SUBDOMINANT SPECIES
N/A	Herbaceous	60	<i>Rumex</i> spp.	<i>Bacopa</i> spp.

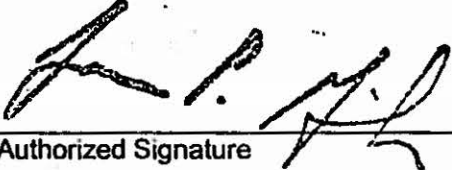
- d. Species composition of recruiting wetland vegetation are indicative of the wetland type specified in criterion "a."
 - e. The wetland mitigation area can be determined to be a wetland or other surface water according to Chapter 62-340, F.A.C.
7. The Permittee shall operate and maintain the wetland mitigation area(s) such that they remain in their current or intended condition for the life of the surface water management facility. The Permittee must perform corrective actions for any portions of the wetland mitigation area(s) where conditions no longer meet the criteria set forth in the Wetland Mitigation Success Criteria Condition(s).
 8. Wetlands A, B, C, D, E, F, G, H, I, J, K, and L boundaries shown on the approved construction drawings shall be binding upon the Permittee and the District.

Permit No. 44013672.007
Project Name: Sarasota County Celery Fields
Page 4

9. This modification, Construction Permit No. 44013672.007, amends the previously issued Construction Permit No. 44013672.004, and eliminates Condition Nos. 16, 17, 18, and 20, and revises Condition No. 19. All other original permit conditions remain in effect.
10. Construction modifications to the control structure approved in this permit shall commence within 30 days of permit issuance and be completed within 120 days of permit issuance.
11. Any flood storage created by lowering the control elevation of the Celery Fields Stormwater Facility authorized in this permit shall not be used to offset future public or private development projects within the Phillippi Creek Watershed.
12. This permit does not constitute certification of compliance with state water quality standards pursuant to Section 401, Public Law 92-500, 33 USC Section 1341.
13. Refer to GENERAL CONDITION No. 15 herein.

GENERAL CONDITIONS

1. The general conditions attached hereto as Exhibit "A" are hereby incorporated into this permit by reference and the Permittee shall comply with them.



Authorized Signature

EXHIBIT "A"

1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the District as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.
5. District staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the District as a permit prior to the dewatering event as a permit modification. A water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.
6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.
7. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operating schedules satisfactory to the District.
8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading, mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

9. The following shall be properly abandoned and/or removed in accordance with the applicable regulations:
 - a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.
 - b. Any existing septic tanks on site shall be abandoned at the beginning of construction.
 - c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.
10. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property.
11. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District a written notification of commencement indicating the actual start date and the expected completion date.
12. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.
13. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required Statement of Completion and Request for Transfer to Operation Entity form identified in Chapter 40D-1, F.A.C. Additionally, if deviation from the approved drawings are discovered during the certification process the certification must be accompanied by a copy of the approved permit drawings with deviations noted.
14. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the District, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
15. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the District determines the system to be in compliance with the permitted plans, and the entity approved by the District accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the District until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the District, if different from the permittee. Until a transfer is approved by the District, the permittee shall be liable for compliance with the terms of the permit.
16. Should any other regulatory agency require changes to the permitted system, the District shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
17. This permit does not eliminate the necessity to obtain any required federal, state, local and special District authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.

18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
19. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
20. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
21. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rule 40D-4.351, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
22. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with District rules, regulations and conditions of the permits.
23. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the District and the Florida Department of State, Division of Historical Resources.
24. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

APPENDIX B

**US ARMY CORPS OF ENGINEERS'
PERMIT**

RECEIVED MAY 13 2003

PMH



DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
TAMPA REGULATORY OFFICE
P.O. BOX 19247
TAMPA, FLORIDA 33688-9247

May 9, 2003

Regulatory Division
South Permits Branch
West Permits Section
Tampa Field Office
199404745 (IP-RGW)
MODIFICATION #4

Sarasota County
Sarasota Public Works
C/o Biological Research Associates
Attn: Ms. Patricia M. Hobson
22 Sarasota Center Boulevard
Sarasota, FL 34240

Dear Ms. Hobson:

Reference is made to your request dated November 15, 2002, in behalf of Sarasota County, regarding a modification to the Department of the Army permit number 199404745 (IP-RGW) that originally authorized the placement of fill material into 174 acres of jurisdictional wetlands for the construction of phase I of a regional storm water facility. On 23 May 1997, the Corps issued phase II that authorized the placement of fill material into 151.14 acres of jurisdictional wetlands bringing the total impacts for both phases to 415.94 acres of impacts. On 31 July, 1997, the Corps issued a modification that authorized an additional 8.8 acres of impacts. The project is located in Sections 19, 20, 29, 30, Township 36 South, Range 19 East, Sarasota County.

You are now seeking authorization to:

- 1) Modify the previously approved permit to eliminate regional wetlands mitigation for future undetermined County projects as previously proposed for the Celery Fields Regional Storm water Facility;
- 2) Redesign/relocate the previously approved wetlands mitigation to offset the permanent wetland impacts associated with the development of the facility;
- 3) Revise the wetland mitigation success criteria; and

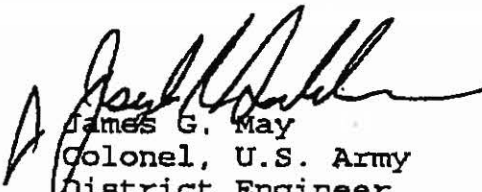
-2-

4) Incorporate educational signage and passive recreational use through the creation of elevated wooden boardwalks and terminal gazebos and incorporation of a hiking trail around the perimeter of the mitigation area.

A functional assessment that was provided determined that an excess of functional units or credits would be created with the mitigation. The Corps reviewed the assessment and determined that the mitigation will compensate for only the permitted wetland impacts and would not create an excess of functional units or credits.

The impact of your proposal on navigation and the environment have been reviewed and found to be insignificant. The permit is hereby modified in accordance with the enclosed 10 pages of drawings, dated May 9, 2003. You should attach this letter to the permit. All other conditions of the permit remain in full force and effect.

BY AUTHORITY OF THE SECRETARY OF THE ARMY:

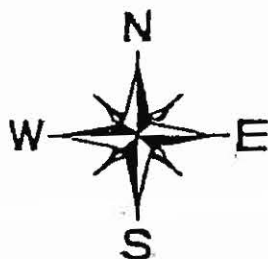

James G. May
Colonel, U.S. Army
District Engineer

cc: (w/o attachments)

Sarasota County
Sarasota Public Works
Storm Water Management
1001 Sarasota Center Blvd.
Sarasota, FL 34240

cc: (w/attachments)
CESAJ-RD-E

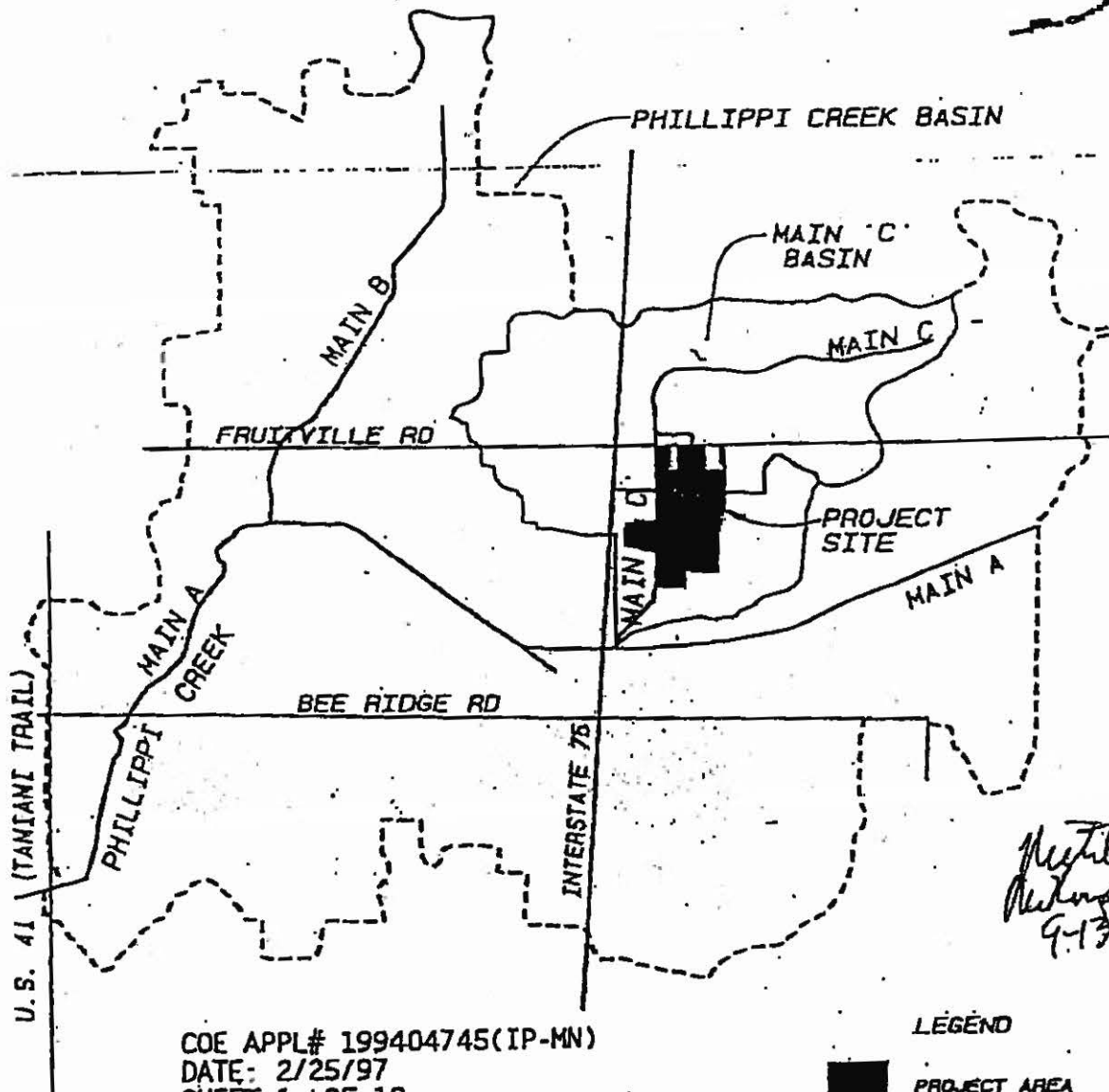
Permit # 199404745 (IP-RGW)
Modification#4
Applicant: Sarasota County
CESAJ-RD-SW-T
Date: 9 May 2003 1 of 10



NOT TO SCALE

SARASOTA COUNTY

SARASOTA COUNTY
CELERY FIELDS REGIONAL STORMWATER FACILITY
LOCATION MAP



COE APPL# 199404745(IP-MN)
DATE: 2/25/97
SHEET 1 OF 12

LEGEND



PROJECT AREA

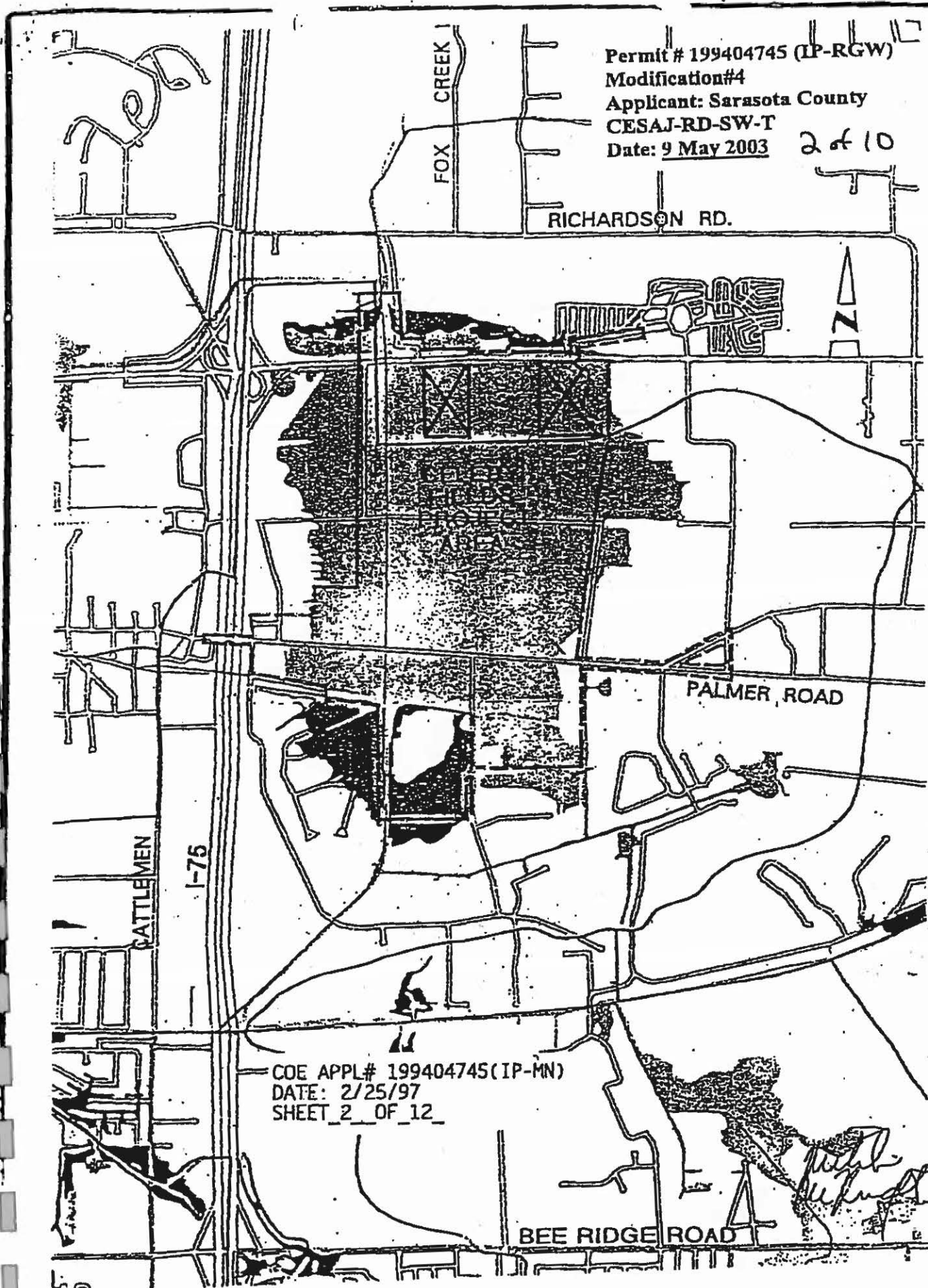
PHILLIPPI CREEK
BASIN BOUNDARY

LOCATION MAP

Boyle Engineering Corporation

PROJECT NO.
SA-520-000-42

EXHIBIT



Permit # 199404745 (IP-RGW)
Modification#4
Applicant: Sarasota County
CESAJ-RD-SW-T
Date: 9 May 2003 2 of 10

COE APPL# 199404745(IP-MN)
DATE: 2/25/97
SHEET 2 OF 12

SARASOTA COUNTY
CELERY FIELDS REGIONAL STORMWATER FACILITY
FLOOD PLAIN MAP

Boyle Engineering Corporation

PROJECT NO.
SA-820-800-48

15000

Permit # 199404745 (IP-RGW)
Modification#4
Applicant: Sarasota County
CESAJ-RD-SW-T
Date: 9 May 2003 3 of 1

3 of 10

Old Permit



SARASOTA COUNTY
CELERY FIELDS REGIONAL STORMWATER FACILITY
POST-PROJECT DRAINAGE PATTERN

Boyle Engineering Corporation

PROJECT NO.
NA-320-100-42

COE APPL# 199404745(IP-MN)
DATE: 2/25/97
SHEET 7 OF 12

Heath
H. J. J. J.

LEGEND




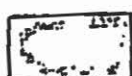
BY PASS FLOW.

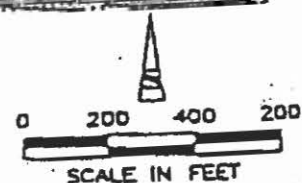
CFRBF FLOW

old permit

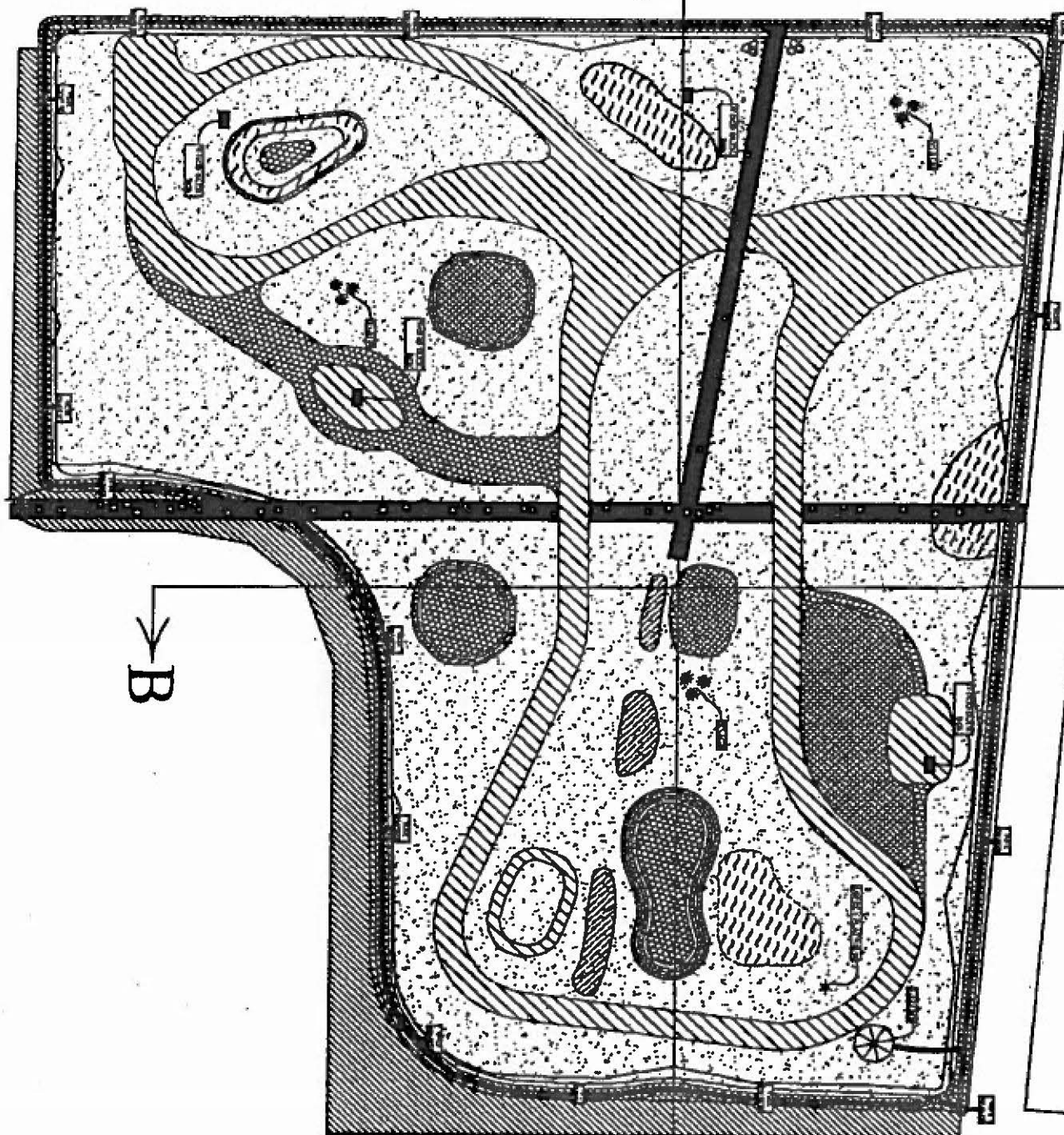
Permit # 199404745 (IP-RGW)
Modification#4
Applicant: Sarasota County
CESAJ-RD-SW-T
Date: 9 May 2003 *4 of 10*

*WEST**EAST**old mitigation plan***LEGEND**

- | | |
|---|--|
|  FORESTED & SHRUB (14.69 ACRES) |  INTERIOR BERM (6.98 ACRES) |
|  MARSH (68.81 ACRES) |  OPEN WATER (87.76 ACRES)/ LITTORAL ZONE (1.00 ACRES) |



MITIGATION AREA FOR
CFRSF WETLAND IMPACTS



Permit # 199404745 (IP-RGW)

Modification#4

Applicant: Sarasota County

CESAJ-RD-SW-T

Date: 9 May 2003

S of 10

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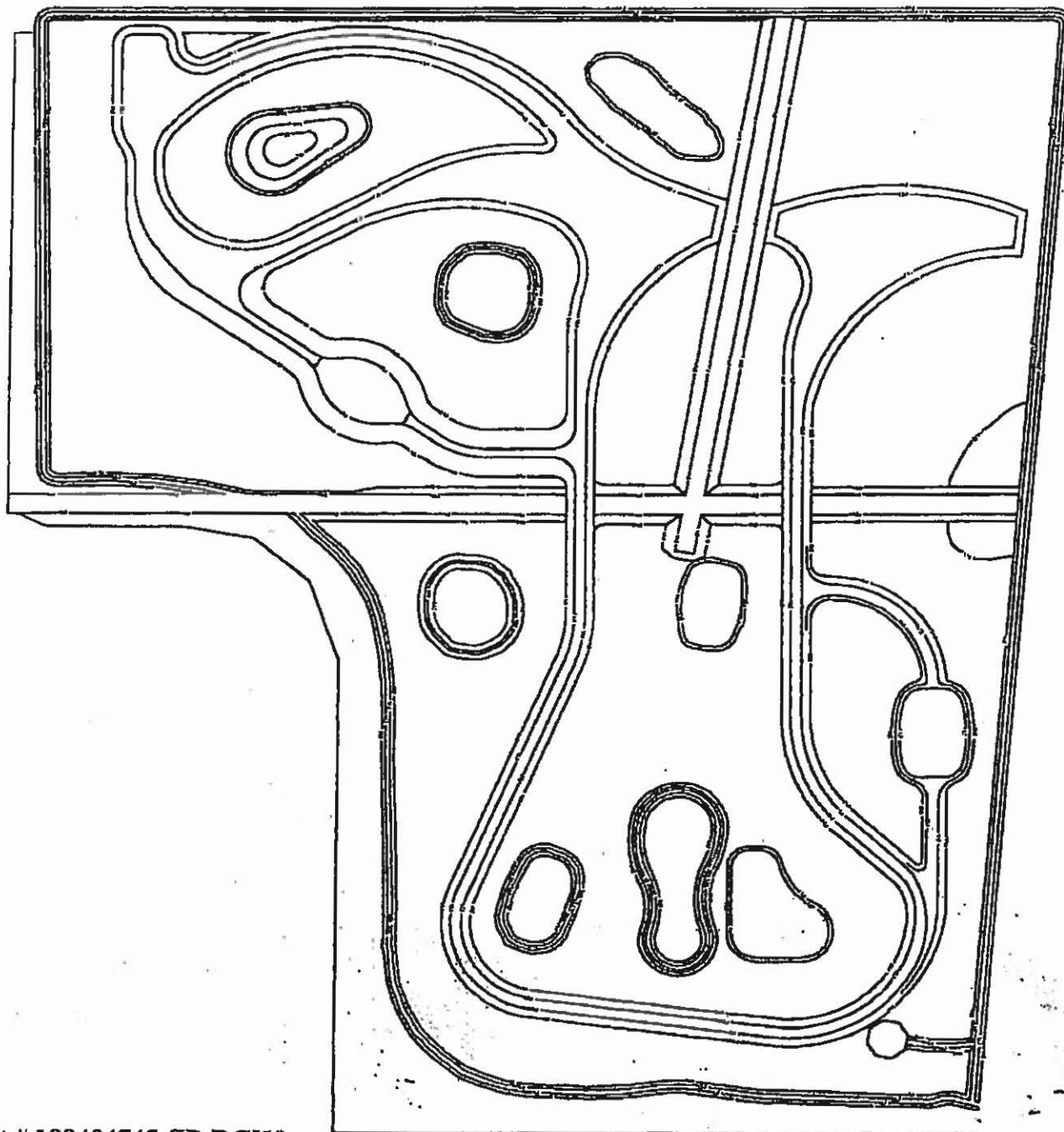
BIOLOGICAL RESEARCH ASSOCIATES
Environmental Consultants22 SARASOTA CENTER BOULEVARD
SARASOTA, FLORIDA 34240
(941) 378-0660 FAX (941) 378-0787

www.biologicalresearch.com

CELERY FIELDS
PROPOSED MITIGATION AREA

PROJECT MTA:	PMH
DRAWN BY:	JMB
CHECKED BY:	
DATE:	11/15/02

SHEET 1



Permit # 199404745 (IP-RGW)

Modification#4

Applicant: Sarasota County

CESAJ-RD-SW-T

Date: 9 May 2003

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0437-051-working

OLOGICAL RESEARCH ASSOCIATES
Environmental Consultants22 SARASOTA CENTER BOULEVARD
SARASOTA, FLORIDA 34240
(941) 378-0660 FAX (941) 378-0787CELERY FIELDS
PROPOSED GRADING PLAN

PROJECT NO. PMH

DESIGNED BY JMB

CHECKED BY:

Permit # 199404745 (IP-RGW)

Modification#4

Applicant: Sarasota County

CESAJ-RD-SW-T

Date: 9 May 2003

8 of 10

IV. Wetland Mitigation

The COE approved permits (COE File No. 199404745 (IP-MN)) authorized the permanent impact to a total of 415.94 acres of highly altered, disturbed, farmed wetlands in order to construct the Celery Fields Regional Stormwater Attenuation Facility. Mitigation requirements within these permits included the creation of 87.7 acres of open water habitat, creation of 68.81 acres of herbaceous wetlands and the creation of 14.69 acres of forested wetlands.

Review of the historical archives which included historic soil surveys, surveys conducted by the State of Florida and by private archaeologists indicated this marsh historically existed as a herbaceous sawgrass marsh and prior to that time may have contained a significant amount of open water as documented by the numerous Indian canoes found within the limits of the Celery Fields. The *Soil Survey of Sarasota County, 1991*, indicates the area may have also contained Carolina willow, sand cordgrass, maidencane St. Johnswort, wax myrtle, pickerelweed, cutgrass, primrose willow, and sawgrass as components of the sawgrass marsh. In no references found or reviewed was it evident that this system ever existed as a forested wetland. Subsequent to this research, the previously approved mitigation design was revised to reflect the historic marsh condition to the extent possible, taking into consideration the numerous alterations which have occurred within the last approximate 100 years. For this reason, the proposed mitigation plan has been designed to provide significant marsh habitat with some deeper water and open water components while preserving some islands of existing native upland trees which currently exist on site.

Sarasota County proposes to modify the existing authorized wetland mitigation plan as follows:

- 1) maintain the existing 87.7 acres of open water habitat as previously approved;
- 2) increase created wetland on habitat by additional 18.64 acres;
- 3) relocate all of the vegetated mitigation area to the lower cell of the Celery Fields project, located immediately south of Palmer Boulevard and west of Raymond Road;
- 4) increase herbaceous wetland creation from the previously approved 68.81 acres to the currently proposed 96.82 acres;
- 5) decrease the previously approved 14.69 acres of forested mitigation to 5.32 acres;
- 6) incorporation of 12.64 acres of native upland buffer habitat;
- 7) incorporation of interpretive/educational signage;
- 8) preservation of 1.09 acres of existing native upland tree islands;

(Permit # 199404745 (IP-RGW)

Modification#4

Applicant: Sarasota County

CESAJ-RD-SW-T

Date: 9 May 2003 9010

- 9) installation of snags to provide habitat for cavity nesters.

The proposed wetland mitigation plan was developed specifically to enhance the existing habitat and wildlife utilization currently documented in the central cell (located immediately north of the proposed mitigation site) while providing for the creation of additional wetland habitats. It is anticipated that the development of this mitigation plan in the southern cell will not only provide a significant habitat in itself but will also significantly enhance the existing habitats and wildlife utilization in the remainder of the Celery Fields project. Throughout the development of the plan, the design concept and details were discussed both on site with representatives of the Audubon Society, Sarasota County staff as well as during a public meeting held on 10 September 2002.

Six (6) distinct vegetative zones are proposed within the wetland mitigation plan (Exhibits 9, 10, 11, 12, & 13). These zones were designed to replicate to the extent possible the functional habitat which existed prior to the site being converted to celery farm production approximately 80+ years ago and provides diversity in species composition at varying grades. These zones include four (4) herbaceous zones totaling 96.82 acres, 102.14 acres of vegetated wetland (and increase of 18.64 acres from the existing permit) one (1) forested zone totaling 5.32 acres, 21.25 acres of open water habitat and 12.64 acres of upland buffer. The mitigation area has been designed to provide wetland habitat of similar functions and values as the historic wetland which existed prior to conversion of the site to row crop farms. In addition to the incorporation of the four (4) Carolina ash heads to provide nesting and roosting habitat, snags have been incorporated in three locations and wood duck boxes are proposed in four locations as well as one osprey platform to provide additional nesting habitat and encourage the utilization of the site by these species as well as other cavity nesting species. An additional area of pickerelweed marsh has been designed to be surrounded by a mote of open water (located in the southeast portion of the mitigation area) to encourage the nesting of sandhill cranes. This mote was incorporated to provide a physical barrier from potential nest predators such as opossums and raccoons.

Zone A

This zone is proposed at elevation 14.5' to 14.0', and includes sawgrass (*Cladium jamaicense*), sand cordgrass, maidencane (*Panicum hemitomon*), and tickseed (*Coreopsis leavenworthii*). The zone totals 1.18 acres and is located along the perimeter of the upland buffer as well as the berms surrounding two separate habitat areas, designed to provide a permanent pool of water during lower water elevations to concentrate prey.

Zone B

This zone is proposed at elevation 14.0' and comprises the majority of the mitigation area (84.96 acres) and consists of pickerelweed (*Pontederia cordata*), lance-leaved arrowhead (*Sagittaria lancifolia*), sawgrass and knotted spike-rush (*Eleocharis interstincta*).

Zone C

Zone C, proposed at elevation 13.5', totals 5.77 acres and is comprised of alligator flag (*Thalia geniculata*) and soft-stem bulrush (*Scirpis validus*).

Zone D

This zone is proposed at elevation 13.0' and totals 4.91 acres. Proposed vegetation consists of fragrant water lily (*Nymphaea odorata*).

Zone E

Zone E is proposed at elevation 14.25' and totals 5.32 acres. This zone is proposed as a forested head to provide structure and diversity within the herbaceous marsh and consists of Carolina ash (*Fraxinus caroliniana*), buttonbush (*Cephalanthus occidentalis*) and maidencane.

Zone F

An upland buffer zone consisting of 12.64 acres is proposed surrounding the mitigation perimeter to provide additional habitat, visual screening, sound buffering, additional edge and nesting and denning habitat for the various birds, mammals, reptiles and amphibians expected to utilize the site. This zone, identified as Zone F on the mitigation plan includes species including slash pine (*Pinus elliotii*), live oak (*Quercus virginiana*), pignut hickory (*Carya glabra*), wax myrtle, saw palmetto (*Serenoa repens*), tarflower (*Befaria racemosa*), sand cordgrass (*Spartina bakeri*) and the seeding of miscellaneous native wildflowers.

VI. Wetland Mitigation Success Criteria, Monitoring and Maintenance

Sarasota County proposes the following revised success criteria for the proposed wetland mitigation area. The compensation areas will be considered successful when the herbaceous areas (Zones A, B, C and D) can be classified as Palustrine-Emergent Wetland and Zone E can be classified as Palustrine Scrub-Shrub Wetland according to *Classification of Wetlands and Deepwater Habitats of the United States*. Dominant and sub-dominant species of desirable wetland plants (listed as facultative, facultative wet or obligate by the COE) shall equal or exceed 70% coverage in Zones A, B and C, and 50% coverage in Zone D. Coverage within Zone E shall equal or exceed 30% canopy in the shrub/scrub strata and 30% coverage in the herbaceous strata. Coverage by nuisance and/or exotic species shall not exceed 25% coverage and uplands vegetation shall not exceed 10% coverage.

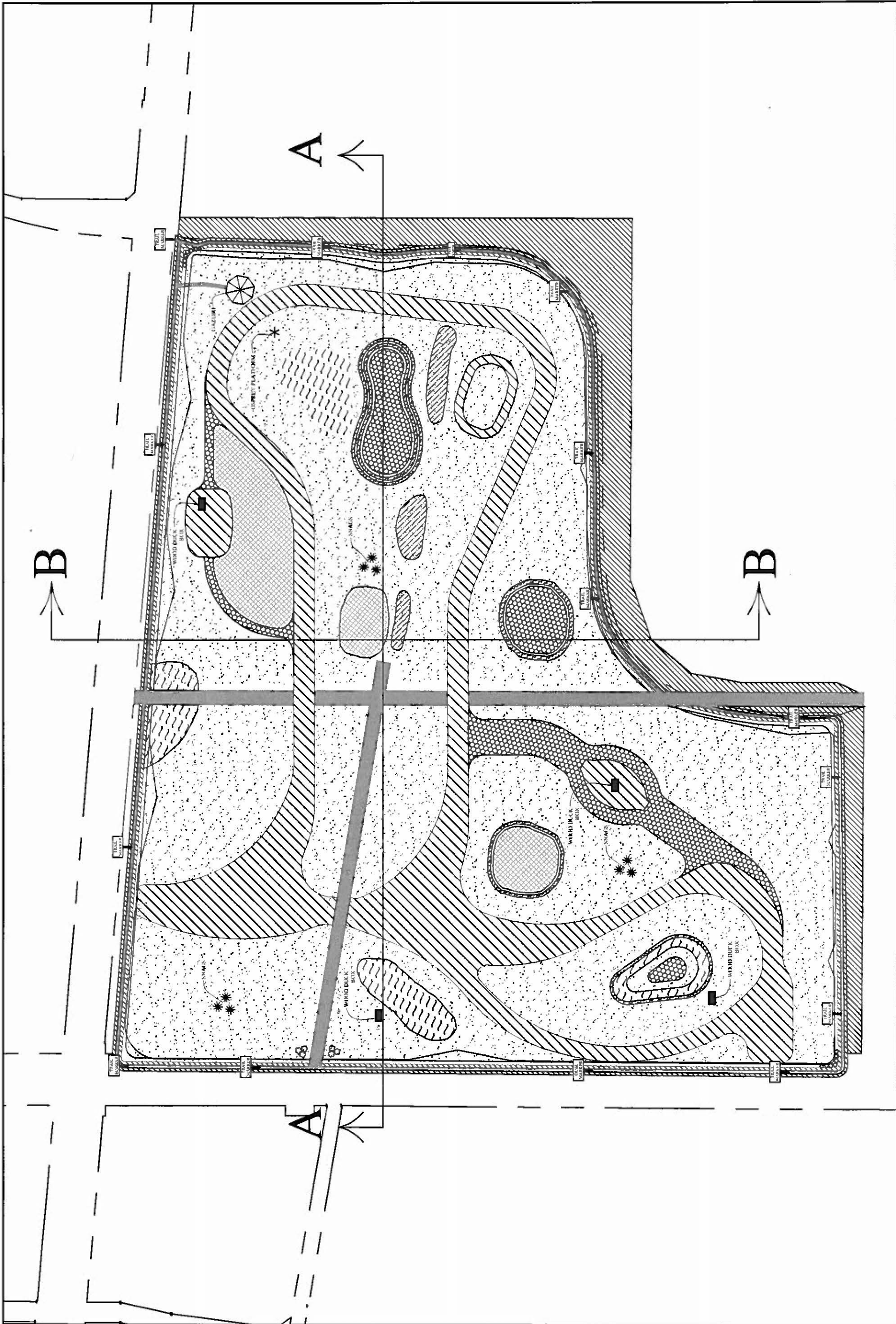
Permit # 199404745 (IP-RGW)
Modification#4
Applicant: Sarasota County
CESAJ-RD-SW-T
Date: 9 May 2003
40810



**CELERY FIELDS REGIONAL
STORMWATER FACILITY**



**Kimley-Horn
and Associates, Inc.**
EXHIBIT 1



300 0 150 300 1 inch = 300 ft.

EXHIBIT 3

	Preparation Date:	11/15/02	Revision Date:	07/29/03
	Project Manager:	PMH	CAD Operator:	JMB
	Project #:	0437-051-W09		

CELERY FIELDS **COE MITIGATION AREA PLANTING PLAN**

Biological Research Associates

22 SARASOTA CENTER BOULEVARD
 SARASOTA, FLORIDA 34240
 (941) 378-0660 FAX (941) 378-0787
 www.biologicsresearch.com

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