

**SOUTH FLORIDA WATER
MANAGEMENT DISTRICT**

BEG. PERMIT NUMBER:

Do-00003M

APPLICATION NUMBER:

080410-9



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

District Permit 56-00003-M
Application 080410-9

July 11, 2008

St. Lucie County Public Works
2300 Virginia Avenue
Fort Pierce, FL 34982

Dear Sir or Madam:

Subject: Notice of Extension of District Permit
Platt's Creek Extension, St. Lucie County
Section 33, Township 35 South, Range 40 East

This letter is to confirm that at its July 10, 2008 meeting the Governing Board approved a five (5) year mitigation bank construction and operation extension to the above permit to July 10, 2013.

If you have any questions, please feel free to call this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Maria Clemente".

Maria Clemente, P.E., Director
Regulatory Information Management Division
Environmental Resource Regulation Department

MC/ja

c: St. Lucie County Engineer
Hazen and Sawyer, P.C.

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

St. Lucie County Public Works
2300 Virginia Avenue
Fort Pierce, FL 34982

2. Article Number
(Transfer from service label)

7003 2260 0007 1914 0950

PS Form 3811, February 2004

Domestic Return Receipt

102595-02-M-1540

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X *P. Burke*

☐ Agent

☐ Addressee

B. Received by (Printed Name)

Pennie Burke

C. Date of Delivery

7/2/08

D. Is delivery address different from item 1? ☐ Yes

If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail

☐ Express Mail

☐ Registered

☒ Return Receipt for Merchandise

☐ Insured Mail

☐ C.O.D.

4. Restricted Delivery? (Extra Fee)

☐ Yes



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

July 1, 2008

St. Lucie County Public Works
2300 Virginia Avenue
Fort Pierce, FL 34982

Subject: Application No. 080410-9, **Platt's Creek Extension**
St. Lucie County, S33/T35S/R40E

Enclosed is a copy of the South Florida Water Management District's staff report covering the permit application referenced therein. It is requested that you read this staff report thoroughly and understand its contents. The recommendations as stated in the staff report will be presented to our Governing Board for consideration on **Thursday, July 10, 2008**.

Should you wish to object to the staff recommendation or file a petition, please provide written objections, petitions and/or waivers (refer to the attached "Notice of Rights") to:

Elizabeth Veguilla, Deputy Clerk
South Florida Water Management District
Post Office Box 24680
West Palm Beach, Florida 33416-4680

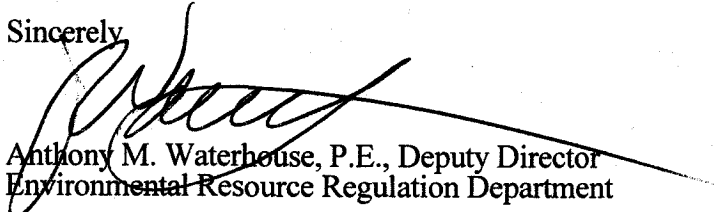
The "Notice of Rights" addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. You are advised, however, to be prepared to defend your position regarding the permit application when it is considered by the Governing Board for final agency action, even if you agree with the staff recommendation, as the Governing Board may take final agency action which differs materially from the proposed agency action.

Please contact the District if you have any questions concerning this matter.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the addressee this 1st day of July, 2008 in accordance with Section 120.60 (3), Florida Statutes.

Sincerely,


Anthony M. Waterhouse, P.E., Deputy Director
Environmental Resource Regulation Department

AMW/ja

CERTIFIED #7003 2260 0007 1914 0950
RETURN RECEIPT REQUESTED

NOTICE OF RIGHTS

As required by Sections 120.569(1), and 120.60(3), Fla. Stat., following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a District decision which does or may determine their substantial interests shall file a petition for hearing with the District Clerk within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: 1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or 2) within 14 days of service of an Administrative Order pursuant to Subsection 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of either written notice through mail, or electronic mail, or posting that the District has or intends to take final agency action, or publication of notice that the District has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

Filing Instructions

The Petition must be filed with the Office of the District Clerk of the SFWMD. Filings with the District Clerk may be made by mail, hand-delivery or facsimile. **Filings by e-mail will not be accepted.** Any person wishing to receive a clerked copy with the date and time stamped must provide an additional copy. A petition for administrative hearing is deemed filed upon receipt during normal business hours by the District Clerk at SFWMD headquarters in West Palm Beach, Florida. Any document received by the office of the SFWMD Clerk after 5:00 p.m. shall be filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the SFWMD Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.
- Filings by hand-delivery must be delivered to the Office of the SFWMD Clerk. **Delivery of a petition to the SFWMD's security desk does not constitute filing. To ensure proper filing, it will be necessary to request the SFWMD's security officer to contact the Clerk's office.** An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by facsimile must be transmitted to the SFWMD Clerk's Office at (561) 682-6010. Pursuant to Subsections 28-106.104(7), (8) and (9), Fla. Admin. Code, a party who files a document by facsimile represents that the original physically signed document will be retained by that party for the duration of that proceeding and of any subsequent appeal or subsequent proceeding in that cause. Any party who elects to file any document by facsimile shall be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed with the clerk as a result. The filing date for a document filed by facsimile shall be the date the SFWMD Clerk receives the complete document.

Initiation of an Administrative Hearing

Pursuant to Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 and 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, District file number or any other SFWMD identification number, if known.
2. The name, address and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

If the District's Governing Board takes action with substantially different impacts on water resources from the notice of intended agency decision, the persons who may be substantially affected shall have an additional point of entry pursuant to Rule 28-106.111, Fla. Admin. Code, unless otherwise provided by law.

Mediation

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401-.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Sections 120.60(3) and 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

Last Date For Agency Action: July 10, 2008

INDIVIDUAL ENVIRONMENTAL RESOURCE PERMIT STAFF REPORT

Project Name: Platt'S Creek Extension

Permit No.: 56-00003-M

Application No.: 080410-9

Application Type: Environmental Resource (Permit Extension)

Location: St Lucie County, S33/T35S/R40E

Permittee: St Lucie County Public Works

Project Area: 85 acres

Receiving Body: North Fork of the St. Lucie River

Class: CLASS III



PROJECT PURPOSE:

The purpose of this request is to obtain a five (5) year construction and operation extension pursuant to Rule 40E-4.321 (3) F.A.C., for the Environmental Resource Permit (mitigation bank construction and operation permit) issued for this project.

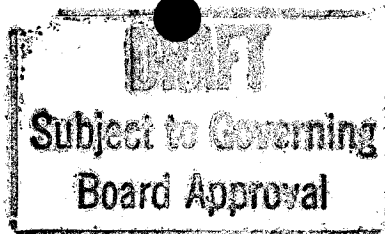
The permit to be extended was issued on April 10, 2003 with an expiration date of April 10, 2008. The permittee has submitted documentation that lack of funding of the mitigation bank has prevented construction of the mitigation bank. An updated Construction and Mitigation Monitoring Work Schedule (Revised Exhibit No. 7, page 2 of 2) is attached. Activities associated with the implementation of the mitigation, monitoring and maintenance plans shall be completed in accordance with the revised Construction and Mitigation Monitoring Work Schedule. The extended permit will expire on July 10, 2013.

PROJECT EVALUATION:

PROJECT BACKGROUND:

On April 10, 2003, a new individual mitigation bank construction and operation permit was issued for a 19.6 acre stormwater treatment facility and the 82.40 acre Platt's Creek Mitigation Bank. The proposed mitigation bank is located at the northwest intersection of Sunrise Blvd. and Midway Road in St Lucie County. The western boundary of the mitigation bank is the North Fork of the St. Lucie River. The stormwater treatment facility is located east of the mitigation bank parcel. The stormwater treatment facility has been constructed and is operational. No mitigation bank construction activities have been commenced on the mitigation bank parcel. On April 10, 2008 the permittee submitted an application for a constructed wetland area consistent with the mitigation bank plans and details and to modify the outfall from the stormwater treatment facility. In a letter dated June 5, 2008, the permittee requested that the mitigation bank permit be extended five years. The modification of the outfall from the stormwater treatment facility is not included in this extension and will be reviewed under a separate application.

The proposed mitigation includes a total of 82.40 acres of wetland restoration. The specific habitat types to be restored are: 10.33 Acres of Hydric Hammock (FLUCCS 624), 39.24 Acres of Freshwater Marsh (FLUCCS 641), 13.51 Acres of Hydric Flatwoods (FLUCCS 625) and 19.32 Acres of Flood Plain Forest (FLUCCS 615).



STAFF RECOMMENDATION:

The Staff recommends that the following be issued :

Authorization for a five year extension of the mitigation bank construction and operation approval of this permit. The extended permit will expire on July 10, 2013.

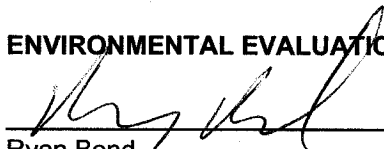
Based on the information provided, District rules have been adhered to.

Staff recommendation is for approval subject to the previously approved General and Special Conditions.

STAFF REVIEW:

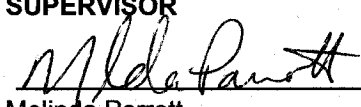
NATURAL RESOURCE MANAGEMENT APPROVAL

ENVIRONMENTAL EVALUATION



Ryan Bond

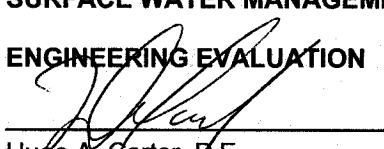
SUPERVISOR



Melinda Parrott

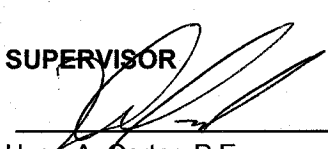
SURFACE WATER MANAGEMENT APPROVAL

ENGINEERING EVALUATION



Hugo A. Carter, P.E.

SUPERVISOR



Hugo A. Carter, P.E.

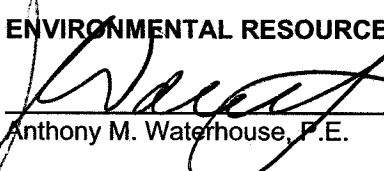
ENVIRONMENTAL RESOURCE PERMITTING DIVISION DIRECTOR :



Anita R. Bain

DATE: 6/26/08

ENVIRONMENTAL RESOURCE REGULATION DEPUTY DEPARTMENT DIRECTOR :



Anthony M. Waterhouse, P.E.

DATE: 6/30/08

**Platt's Creek Mitigation Bank and Water Quality Improvements
Phase 2 Construction and Mitigation Monitoring Work Schedule**

	Activity	Days from Permit Extension Approval	Tentative Date	% Release of Mitigation Credits	Cumulative % Release
Year 2008	1 SFWMD Board Meeting & ERP Extension Approval		July 10, 2008		
Year 2010	2 Finalize Construction Bid Documents	540	January 1, 2010		
	3 Project Bidding	600	March 2, 2010		
	4 Award Contract	720	June 30, 2010		
	5 Submittal of Recorded Conservation Easement	727	July 7, 2010	0%	0%
		Days from Contract Award			
	6 Notice to Proceed	30	July 30, 2010		
	7 Mobilization	60	August 29, 2010		
	8 Installation of Erosion Control Measures	67	September 5, 2010		
	9 Begin clearing of vegetation at mitigation site	67	September 5, 2010		
	10 Begin excavation of soil material at mitigation site	80	September 18, 2010		
Year 2011	11 Finalize site grading for mitigation area	300	April 26, 2011		
	12 Inspection of site grading by SFWMD	345	June 10, 2011		
	13 Certification of appropriate grading	345	June 10, 2011	0%	0%
	14 Commencement of wetland plantings	360	June 25, 2011		
	15 Completion of wetland plantings and removal of turbidity barriers specific to mitigation area	420	August 24, 2011		
	16 Submittal of Final Approved Trust Fund Document	420	August 24, 2011		
	17 Submittal of "Time-Zero" report	420	August 24, 2011	15%	15%
Year 2012	18 Submittal of semiannual report #1	600	February 20, 2012		
	19 Submittal of Year 1 annual report	785	August 23, 2012		
	20 Compliance 1st year performance criteria	785	August 23, 2012	50%	65%
Year 2013	21 Submittal of semiannual report #2	965	February 19, 2013		
	22 Submittal of Year 2 annual report	1150	August 23, 2013		
	23 Compliance 2nd year performance criteria	1150	August 23, 2013	15%	80%
Year 2014	24 Submittal of semiannual report #3	1330	February 19, 2014		
	25 Submittal of Year 3 annual report	1515	August 23, 2014		
	26 Compliance 3rd year performance criteria	1515	August 23, 2014	10%	90%
Year 2015	27 Submittal of semiannual report #4	1695	February 19, 2015		
	28 Submittal of Year 4 annual report	1880	August 23, 2015		
	29 Compliance 4th year performance criteria	1880	August 23, 2015	5%	95%
Year 2016	30 Submittal of semiannual report #5	2060	February 19, 2016		
	31 Submittal of Year 5 annual report	2245	August 22, 2016		
	32 Compliance 5th year performance criteria	2245	August 22, 2016	5%	100%

Note: The stormwater facility has been constructed during Phase 1 of this project. Phase 1 included the discharge channel, detention pond, pumping station, retaining walls, and sump structure.

STAFF REPORT DISTRIBUTION LIST

PLATT'S CREEK EXTENSION

Application No: 080410-9

Permit No: 56-00003-M

INTERNAL DISTRIBUTION

- X Hugo A. Carter, P.E. - 4220
- X Ryan Bond - 4250
- X Melinda Parrott - 4250
- X A. Bain - 4220
- X A. Waterhouse - 4220
- X ERC Martin/St. Lucie - 6880
- X J. Golden - 4210
- X Permit File

GOVERNING BOARD MEMBERS

- Mr. Charles J Dauray
- Mr. Eric Buermann
- Mr. Malcolm S. Wade, Jr.
- Mr. Michael Collins
- Mr. Patrick Rooney, Jr.
- Mr. Paul C Huck, Jr.
- Mr. Robert Montgomery
- Ms. Melissa Meeker
- Ms. Shannon A. Estenoz

EXTERNAL DISTRIBUTION

- X Permittee - St Lucie County Public Works
- X Engr Consultant - Hazen And Sawyer P C

GOVERNMENT AGENCIES

- X City of Port St Lucie - Planning Div
- X Dept of Environmental Protection - Port St. Lucie
- X St. Lucie County Community Development Director
- X St. Lucie County Engineer
- X St. Lucie County Environmental Resource Manager

OTHER INTERESTED PARTIES

- X Sierra Club - Central Florida Group P.O. Box 941692

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
STAFF REPORT ROUTE SHEETAPP TYPE: IND ENVIRONMENTAL RESOURCE (PERMIT EXTENSION)APPLICATION NO: 080410-9PROJECT NAME: PLATT'S CREEK EXTENSIONSCHEDULED FOR 10-JUL-2008

GOVERNING BOARD

	<u>Name</u>	<u>Due Date</u>	<u>Date Signed</u>
ENGINEERING EVAL.	<u>Hugo A. Carter, P.E.</u>	<u>17-JUL-2008</u>	<u>23 June 08</u>
ENVIRONMENTAL EVAL.	<u>Ryan Bond</u>	<u>17-JUL-2008</u>	<u>23 Jun 08</u>
SUPERVISOR SWM	<u>Hugo A. Carter, P.E.</u>	<u>17-JUL-2008</u>	<u>23 June 08</u>
SUPERVISOR NRM	<u>Melinda Parrott</u>	<u>17-JUL-2008</u>	<u>24 June 08</u>
OKEE/MSL REG. DIV. DIR.	<u>Donald R. Loving</u>	<u>17-JUL-2008</u>	
DIV. DIR., ERP	<u>Anita R. Bair</u>		<u>6/26/08</u>
DEPUTY DIR., ERR	<u>Anthony M. Waterhouse</u>		<u>6/30/08</u>

RESOURCE CODESADJACENT TO SAVE OUR RIVERS LANDS
SENSITIVE RECEIVING BODY
NO WETLAND ISSUES ASSOCIATED WITH THIS APPLICATION
PRE-CONSTRUCTION MEETING REQUIRED

STAFF REPORT DISTRIBUTION LIST

ADDRESSES

St Lucie County Public Works
2300 Virginia Ave
Fort Pierce FL 34982

Mr. Charles J Dauray
Sfwmd Governing Board, 1162
P.O.Box 24680
West Palm Beach FL 33416-4680

Mr. Malcolm S. Wade, Jr.
111 Ponce De Leon Ave
Clewiston FL 33440

Mr. Patrick Rooney, Jr.
Palm Beach Kennel Club
1111 N. Congress Avenue
West Palm Beach FL 33409

Mr. Robert Montgomery
Sfwmd
3301 Gun Club Road
West Palm Beach FL 33406

Ms. Shannon A. Estenoz
National Parks Conserv. Assoc.
450 N. Park Rd, Suite 301
Hollywood FL 33021

City of Port St Lucie - Planning Div
121 Sw Port St Lucie Blvd
Port St Lucie FL 34984-5099

St. Lucie County Community Development Director
2300 Virginia Avenue
Fort Pierce FL 34982

St. Lucie County Environmental Resource Manager
2300 Virginia Avenue
Fort Pierce FL 34982

Sierra Club - Central Florida Group P.O. Box 941692

Maitland FL 32794

Hazen And Sawyer P C
2101 N W Corporate Blvd Suite 301
Boca Raton FL 33431

Mr. Eric Buermann
Squire, Sanders & Dempsey L.L.P.
200 South Biscayne Blvd, Ste 4000
Miami FL 33131-2398

Mr. Michael Collins
Po Box 803
Islamorada FL 33036

Mr. Paul C Huck, Jr.
Sfwmd
3301 Gun Club Road
West Palm Beach FL 33406

Ms. Melissa Meeker
Hesperides Group
6526 S. Kanner Hwy # 339
Stuart FL 34997

Dept of Environmental Protection - Port St. Lucie
1801 Se Hillmoor Drive, C 204
Port St. Lucie FL 34952

St. Lucie County Engineer
2300 Virginia Avenue
Fort Pierce FL 34982

FOR AGENCY USE ONLY

ACOE Application # _____	DEP/WMD Application # _____
Date Application Received _____	Date Application Received _____
Proposed Project Lat. ☐ N ☐ O	Fee Received _____
Proposed Project Long. ☐ N ☐ O	\$ _____
	Fee Receipt # _____

SECTION A

Are any of the activities described in this application proposed to occur in, on, or over wetlands or other surface waters?

☒ yes ☐ no

Is this application being filed by or on behalf of a government entity or drainage district?

☒ yes ☐ no

A. Type of Environmental Resource Permit Requested (check at least one)

- ☐ Noticed General - include information requested in Section B.
- ☐ Standard General (Single Family Dwelling)-include information requested in Sections C and D.
- ☒ Standard General (all other projects) - include information requested in Sections C and E.
- ☐ Individual (Single Family Dwelling) - include information requested in Sections C and D.
- ☐ Individual (all other projects) - include information requested in Sections C and E.
- ☐ Conceptual - include information requested in Sections C and E.
- ☐ Mitigation Bank Permit (construction) - include information requested in Section C and F.
(If the proposed mitigation bank involves the construction of a surface water management system requiring another permit defined above, check the appropriate box and submit the information requested by the applicable section.)
- ☐ Mitigation Bank (conceptual) - include information requested in Section C and F.

B. Type of activity for which you are applying (check at least one)

- ☐ Construction or operation of a new system including dredging or filling in, on or over wetlands and other surface waters.
- ☐ Alteration or operation of an existing system which was not previously permitted by a WMD or DEP.
- ☒ Modification of a system previously permitted by a WMD or DEP. Provide previous permit numbers. 56-00003-M S?
 - ☒ Alteration of a system ☐ Extension of permit duration ☐ Abandonment of a system
 - ☐ Construction of additional phases of a system ☐ Removal of a system

C. Are you requesting authorization to use State Owned Lands? ☐ yes ☒ no
(If yes include the information requested in Section G.)

D. For activities in, on or over wetlands or other surface waters, check type of federal dredge and fill permit requested:

- ☐ Individual ☐ Programmatic General
- ☐ General ☐ Nationwide ☒ Not Applicable

E. Are you claiming to qualify for an exemption? ☐ yes ☒ no
If yes provide rule number if known. _____

080410-9 =

sfwmd.gov

OWNER(S) OF LAND	ENTITY TO RECEIVE PERMIT (IF OTHER THAN OWNER)
NAME Donald B. West, P.E.	NAME
ADDRESS 2300 Virginia Avenue	ADDRESS
CITY, STATE, ZIP Ft. Pierce, FL 34982	CITY, STATE, ZIP
COMPANY AND TITLE St. Lucie County Public Works Director	COMPANY AND TITLE
TELEPHONE (772) 462-1485 FAX (772) 462-2362	TELEPHONE () FAX ()
AGENT AUTHORIZED TO SECURE PERMIT (IF AN AGENT IS USED)	CONSULTANT (IF DIFFERENT FROM AGENT)
NAME Robert B. Taylor, Jr., P.E.	NAME
COMPANY AND TITLE Hazen and Sawyer, P.C. Senior Associate	COMPANY AND TITLE
ADDRESS 2101 N.W. Corporate Blvd., Suite 301	ADDRESS
CITY, STATE, ZIP Boca Raton, Florida 33431	CITY, STATE, ZIP
TELEPHONE (561) 997-8070 FAX (561) 997-8159	TELEPHONE () FAX ()

Name of project, including phase if applicable Platt's Creek Stormwater Management Facilities and Wetland Restoration, Outlet Swale Modifications

Is this application for part of a multi-phase project? ☒ yes ☐ no

Total applicant-owned area contiguous to the project 100 ac

Total project area for which a permit is sought 85 ac

Impervious area for which a permit is sought 0.1 ac

What is the total area (metric equivalent for federally funded projects) of work in, on, or over wetlands or other surface waters?

0 acres _____ square feet _____ hectares _____ square meters

Number of new boat slips proposed. 0

Project location (use additional sheets, if needed)

County(ies) St. Lucie

Section(s) 33 Township 35S Range 40E

Section(s) = Township = Range =

Land Grant name, if applicable N/A

Tax Parcel Identification Number 2433-131-0002-000-3

Street address, road, or other location 3915 Sunrise Boulevard

City, Zip Code if applicable Ft. Pierce, FL 34982

080410-9

Describe in general terms the proposed project, system, or activity. The modifications resulting from this permit include the elimination of the mitigation bank portion of the original permit and renovation of the temporary outfall, see proposed plans in Appendix A.

If there have been any pre-application meetings, including at the project site, with regulatory staff, please list the date(s), location(s), and names of key staff and project representatives. One meeting occurred on October 11, 2007 at 3:30 PM. The following people attended:

Hugo Carter - SFWMD, Mindy Parrott - SFWMD, Mike Wrock - SFWMD
Don West - SLC, Jason Bessey - SLC
Rob Taylor - H&S, Caitlin Feikle - H&S.

Please identify by number any MSSW/Wetland resource/ERP/ACOE Permits pending, issued or denied for projects at the location, and any related enforcement actions.

Agency	Date	No.\Type of Application	Action Taken
South Florida Water Management District	April 10, 2003	56-00003-M Ind. Mitigation Banking (new construction/operation)	

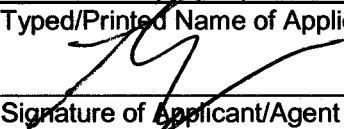
Note: The following information is required **only** for projects proposed to occur in, on or over wetlands that need a federal dredge and fill permit and/or authorization to use state owned submerged lands and is not necessary when applying solely for an Environmental Resource Permit. Please provide the names, addresses and zip codes of property owners whose property directly adjoins the project (excluding applicant). Please attach a plan view showing the owner's names and adjoining property lines. Attach additional sheets if necessary.

1.	2.
3.	4.

080410-9 =

sfwmd.gov

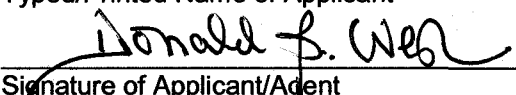
By signing this application form, I am applying, or I am applying on behalf of the applicant, for the permit and any proprietary authorizations identified above, according to the supporting data and other incidental information filed with this application. I am familiar with the information contained in this application and represent that such information is true, complete and accurate. I understand this is an application and not a permit, and that work prior to approval is a violation. I understand that this application and any permit issued or proprietary authorization issued pursuant thereto, does not relieve me of any obligation for obtaining any other required federal, state, water management district or local permit prior to commencement of construction. I agree, or I agree on behalf of my corporation, to operate and maintain the permitted system unless the permitting agency authorizes transfer of the permit to a responsible operation entity. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

Robert B. Taylor, Jr., P.E.
Typed/Printed Name of Applicant (If no Agent is used) or Agent (If one is so authorized below)
 4/7/08
Signature of Applicant/Agent Date

Senior Associate
(Corporate Title if applicable)

AN AGENT MAY SIGN ABOVE ONLY IF THE APPLICANT COMPLETES THE FOLLOWING:

I hereby designate and authorize the agent listed above to act on my behalf, or on behalf of my corporation, as the agent in the processing of this application for the permit and/or proprietary authorization indicated above; and to furnish, on request, supplemental information in support of the application. In addition, I authorize the above-listed agent to bind me, or my corporation, to perform any requirement which may be necessary to procure the permit or authorization indicated above. I understand that knowingly making any false statement or representation in this application is a violation of Section 373.430, F.S. and 18 U.S.C. Section 1001.

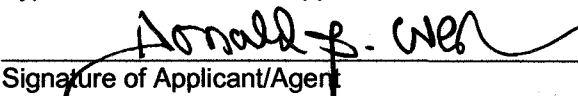
Donald B/ West, P.E.
Typed/Printed Name of Applicant
 4/09/08
Signature of Applicant/Agent Date

St. Lucie County, Public Works Director
(Corporate Title if applicable)

Please note: The applicant's original signature (not a copy) is required above.

PERSON AUTHORIZING ACCESS TO THE PROPERTY MUST COMPLETE THE FOLLOWING:

I either own the property described in this application or I have legal authority to allow access to the property, and I consent, after receiving prior notification, to any site visit on the property by agents or personnel from the Department of Environmental Protection, the Water Management District and the U.S. Army Corps of Engineers necessary for the review and inspection of the proposed project specified in this application. I authorize these agents or personnel to enter the property as many times as may be necessary to make such review and inspection. Further, I agree to provide entry to the project site for such agents or personnel to monitor permitted work if a permit is granted.

Donald B. West P.E.
Typed/Printed Name of Applicant
 4/09/08
Signature of Applicant/Agent Date

St. Lucie County, Public Works Director
(Corporate Title if applicable) 080410-9



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

MARTIN/ST. LUCIE SERVICE CENTER Willoughby Crossroads, 780 SE Indian Street, Stuart, FL 34997
(772) 223-2600 • FL WATS 1-800-250-4100 • Suncom 269-2600 • Fax (772) 223-2608 • www.sfwmd.gov/msl/

No. 83466-1

RECEIPT

**ST LUCIE COUNTY BOARD OF COUNTY COMMISSIONERS
2300 VIRGINIA AVE
FORT PIERCE, FL 34982**

Project		Application
PLATT CREEK STORMWATER SWALE MODIFICATIONS		080410-9
Revenue Account	Application Type	Fee
462500	ERP GENERAL PERMIT STANDARD GEN. PERMIT - MOD	\$ 1,000.00

Transaction Details			
Date	Transaction	Reference	Amount
11-APR-08	PAYMENT MADE BY ST LUCIE COUNTY BOARD OF COUNTY COMMISSIONERS	Check# 09782751	\$ 1,000.00

Processed by : DEBATES
Date : 11 APR 2008
Branch Office : MSL



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

NOTICE

April 11, 2008

Subject: Environmental Resource Permit Application
Application No: 080410-9
Applicant: St. Lucie County
St. Lucie County, S33 /T 35S/R 40 E

The South Florida Water Management District is currently processing the attached application. If you have any comments or objections concerning this project, please submit them in writing to this office within 30 days of receipt of this notice.

This is also an opportunity for applicable State agencies to concur with or object to the proposed project under the federal consistency provisions of the Coastal Zone Management Act. Findings of inconsistency must describe how the project conflicts with your agency's statutory authorities in the Florida Coastal Management Program and provide alternative measures, if any, which would make the project consistent. Commenting agencies must provide a copy of any letters of inconsistency to the Florida Coastal Management Program Administrator, Department of Environmental Protection, 3900 Commonwealth Boulevard, Mail Station 47, Tallahassee, Florida 32399-3000.

Please refer to the applicants name and application number as referenced above in any correspondence to help facilitate processing. Questions or comments concerning this project should be addressed to Mindy Parrott at (772) 223-2600 ext. 3608 or Hugo Carter at (772) 223-2600 ext. 3621 or sent to e-mail address epermits@sfwmd.gov.

Application documents are now available online and be accessed through the e-Permitting database. You may view these documents by going to www.sfwmd.gov and accessing the e-Permitting link.

BAC:db

Attachments

cc: US Army Corps of Engineers
Fish and Wildlife Conservation, Imperiled Species Management Section
Department of State, Division of Historical Resources
Regional Planning Council
Department of Community Affairs

**SOUTH FLORIDA WATER
MANAGEMENT DISTRICT**

**BACK-UP
MATERIAL**

PERMIT NUMBER:

56-0003-M

APPLICATION NUMBER:

080410-9

Wrock, Mike

From: Carter, Hugo
Sent: Thursday, May 01, 2008 11:35 AM
To: Wrock, Mike
Subject: FW: CERPEWS Notification for Application Number 080410-9
Attachments: 080410-9.jpg

From: Waterhouse, Anthony
Sent: Tuesday, April 29, 2008 1:00 PM
To: Carter, Hugo
Subject: FW: CERPEWS Notification for Application Number 080410-9

Hugo – Please have Mike prepare the CERP coordination memo.

From: Tobar, Juan
Sent: Tuesday, April 29, 2008 10:05 AM
To: Waterhouse, Anthony
Subject: CERPEWS Notification for Application Number 080410-9

Application Number **080410-9** is in the **IRL - NORTHFORK FLOODPLAIN RESTORATION**

Application Number: 080410-9
Permit Number: 56-00003-M
Project Name: PLATT CREEK STORMWATER SWALE MODIFICATIONS
Hyperlink: [To Online Documents](#)
Project Purpose: NULL
Applicant Name: ST LUCIE COUNTY PUBLIC WORKS
Acreage: 85
Landuse Code: OTH
County: ST LUCIE
Section/Township/Range: S33/T35S/R40E
CERP Name: IRL - NORTHFORK FLOODPLAIN RESTORATION
CERP Level: 3
Relation: APPLICATION IN
ERR SWM Reviewer: MIKE J. WROCK
ERR NRM Reviewer: DAVID BOND
ERR ERC Field Representative: SCOTT B MCNABB
Local Project Sponsor: BETH KACVINSKY
Local Project Sponsor E-mail: bkacvins@sfwmd.gov
USACE PM: MICHAEL ROGALSKI
USACE PM E-mail: michael.b.rogalski@usace.army.mil

Early Warning System (EWS) FAQ

Q: What is this Early Warning System?

A: This EWS system was designed to notify interested parties of South Florida Water Management District - Environmental Resource Regulation permit applications that have come in for work on different areas of interest (AOI).

Q: What is the AOI?

A: The AOI for this EWS are the boundaries for the Comprehensive Everglades Restoration Plan.

5/15/2008

Q: What do I do with this notification?

A: Consult with the appropriate reviewer or project manager to verify that the permit activity applied for is consistent with the area of interest designation.

Q: What gets classified as IN?

A: The system classifies a permit application as IN if a portion of or the entire permit application crosses an AOI boundary. Thus, the permit application does not have to be totally within an AOI to receive this classification.

Q: What gets classified as ADJACENT?

A: The system classifies a permit application as ADJACENT if the permit application is within 300 feet from an AOI.

Q: What is the Relation field?

A: The Relation field is where you can find a description of the relationship between the permit application and the AOI.

Q: What are all the possible relations?

A1: APPLICATION IN - A portion of or the entire application is within an AOI boundary.

A2: APPLICATION ADJACENT - The application is within 300 feet of an AOI boundary.

A3: APPLICATION OUT RELATED PERMIT IN - The application is not within an AOI boundary but a portion or the parent permit is within an AOI boundary.

A4: APPLICATION OUT RELATED PERMIT ADJACENT - The application is not within an AOI boundary but the parent permit is within 300 feet of an AOI boundary.



Legend

-  Sections
-  Township/Range
-  Roads
-  Canals
-  080410-9
-  CERP Component



1:6000

0 0.05 0.1

Miles

DISCLAIMER:
This map is a conceptual tool utilized for project development and implementation only. This map is not self-executing or binding, and does not otherwise affect the interests of any person including any vested rights or existing uses of real property. Any information, including but not limited to maps and data, received from the SFWMD is provided "as is" without any warranty and the SFWMD expressly disclaims all express and implied warranties of merchantability and fitness for a particular purpose. The District does not make any representations regarding the use, or the results of the use, of the information provided to you by the District.

\\data\er\420\4240\gis\data\prdst\er\delist\permit\perm_erp\general\2008\080410-9.jpg - 4/29/2008



sfwmd.gov
South Florida Water Management District
Environmental Resource Regulation Department
Regulatory Information Management - GIS
3301 Gun Club Road, West Palm Beach, Florida 33406
561-686-8800 - www.sfwmd.gov

CERP Early Notification System
ERP Application Number: 080410-9

ADDITIONAL INFORMATION ROUTING

Regulation Department

Application Number: 080410-9

County: St. Lucie

Permit Number: 56-02886-P

Project Name: PLATT CREEK STORMWATER SWALE MODIFICATIONS

Response Date: 5/7/2008 30 Day Deadline: 10-MAY-2008

Processed By: LJ Date: 5/7/2008

Fee Code: PS7A

TRACKING SYSTEM UPDATED ☒ YES ☐ NO *
*SEE COMMENTS

APPLICATION TYPE

☒ ERP

☐ SWM

☐ WU

☐ D/F

☐ EAA

☐ FWD

☐ PERMIT TRANSFER

SWM Reviewer: Mike Wrock

WU Reviewer: -

NRM Reviewer: David "Ryan" Bond

Environmental Resource Compliance Division
Vault

*COMMENTS:

USA-UNSOLICITED ADDITIONAL INFORMATION, PLANS

Scanned by:

Date:

HAZEN AND SAWYER

Environmental Engineers & Scientists

Hazen and Sawyer, P.C.
2101 Corporate Boulevard
Boca Raton, FL 33431
561 997-8070
Fax: 561 997-8159

To: **SOUTH FLORIDA WATER MGMT DISTRICT**

St. Lucie/Martin Service Center

Address: **780 S.E. Indian Street**

Stuart, Florida 34997

Attention: **Hugo Carter**

Date: **May 6, 2008**

Job: **St. Lucie County Platt's Creek**

SFWMD Permit No. 56-00003-M

Application No. 080410-9

We Are Sending You: ☒ **Herewith** ☐ Under Separate Cover
☐ Reports ☐ Tracings ☐ Prints
☐ Shop Drawings ☐ Specifications
☐ Samples ☐ Contracts ☒ **Other**

Sent By: ☐ Blue Printer ☐ Hold for Pickup
☐ Messenger ☐ Mail
☐ UPS ☒ **Federal Express**

No.	Sheet No.	Date	Description
4	C-2		Proposed Site Plan, Outlet Swale Modifications - Signed and Sealed
4	C-3		Miscellaneous Details - Signed and Sealed

Remarks: _____

RECEIVED

Transmitted:

- ☐ At Your Request
☐ For Your Information
☐ For Your Comments
☒ **For Your Approval**
☐ For Distribution
☐ For Correction
☐ Furnish as Submitted
☐ Furnish as Corrected
☐ Revise and Resubmit

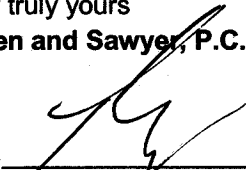
Copies to:

Don West
Jason Bessey
Caitlin Feikle

MAY 07 2008

MSLSC

Very truly yours
Hazen and Sawyer, P.C.

By: 
Robert B. Taylor, Jr., P.E.

File: **40259-001-5.0**

40259-001T027.doc

Wrock, Mike

From: Parrott, Melinda

Sent: Wednesday, June 11, 2008 3:54 PM

To: Bates, Denise

Cc: Bond, Ryan; Carter, Hugo; Wrock, Mike

Subject: APPLICATION 080410-9 - *Platts Creek Snake / Mt. Bank*

Hi Denise- When you get a chance, please change this application to an Individual Extension request.

Mindy Parrott, PWS
Supervising Environmental Analyst
Okeechobee- Martin- St. Lucie Regulatory Division
Martin / St. Lucie Service Center
South Florida Water Management District

(772) 223-2600 x3608
mparrott@sfwmd.gov

For SFWMD permit information, forms and other application resources go to Permitting

To submit a new application or additional information electronically, go to
<http://my.sfwmd.gov/ePermitting>

6/11/2008

Wrock, Mike

From: Parrott, Melinda
Sent: Thursday, June 05, 2008 9:59 AM
To: Carter, Hugo; Wrock, Mike
Subject: FW: Platts Creek Mitigation Bank Permit

We will be getting a waiver on application 080410-9.

Mindy Parrott
772-223-2600 x3608

For SFWMD permit information, forms and other application resources go to Permitting

To submit a new application or additional information electronically, go to
<http://my.sfwmd.gov/ePermitting>

From: Brown, Robert
Sent: Wednesday, June 04, 2008 7:14 PM
To: Parrott, Melinda
Cc: Loving, Donald
Subject: Platts Creek Mitigation Bank Permit

Mindy,

I spoke with Lee Ann Lowery this evening and she relayed to me that St. Lucie County will be submitting a letter to the District tomorrow requesting that the pending application be modified to extend the mitigation bank permit for an additional two years.

BB

6/6/2008

Revised 12/08/98

WAIVER OF THE 90 DAY REVIEW TIME LIMIT

Permit and/or Application No.: 080410-9

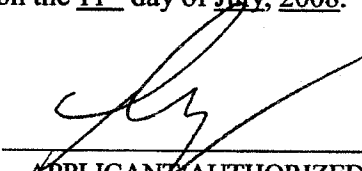
Project Name: Platt's Creek Stormwater Management Facilities and
Wetland Restoration - Outlet Swale Modifications

Applicant's Name: St. Lucie County Public Works

The undersigned applicant (or the applicant's agent retained by the applicant to apply on his behalf for Permit Application No. 080410-9), has read Section 120.60(1), Fla. Stat. and Rules 28-107.002, 40E-0.103 and 40E-1.603, Fla. Admin. Code, and fully understands the applicant's rights set forth therein.

With regard to the above-referenced permit application, the undersigned hereby waives the right set forth in the above-cited Statute and Rules to have the South Florida Water Management District's Governing Board approve or deny the instant permit application within the 90 day timeframe prescribed by Section 120.60(1), Fla. Stat., and Rules 28-107.002, 40E-0.103 and 40E-1.603, Fla. Admin. Code. This waiver is freely and voluntarily given by the undersigned on this 5th day of June, 2008.

The undersigned hereby certifies that he/she is authorized to make this waiver on behalf of the applicant. This waiver shall expire on the 11th day of July, 2008.

BY: 

APPLICANT/AUTHORIZED AGENT

Robert B. Taylor Jr., P.E.

PRINT NAME

Hazen and Sawyer, P.C.

COMPANY

(561) 997-8070

PHONE NUMBER

June 5, 2008

Mr. Hugo Carter
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
St. Lucie/Martin Service Center
780 S.E. Indian Street
Stuart, Florida 34997

St. Lucie County
Platt's Creek Mitigation Bank and Water Quality
Improvement Project
Environmental Resource Permit (ERP) No. 56-00003-M
Application No. 080410-9

Dear Mr. Carter:

On April 10, 2003, the South Florida Water Management District (SFWMD) issued ERP No. 56-00003-M for the construction and operation of the following:

- An 82.4 acre mitigation bank intended to provide ecological enhancement to the North St. Lucie River Watershed; and
- A 19.6 acre stormwater treatment facility intended to treat runoff from approximately 1,000 acres in St. Lucie County.

As the expiration of the ERP No. 56-00003-M approached, a meeting was held with the County, Hazen and Sawyer and the SFWMD on October 11, 2007. At the time, the County considered it preferable to remove the mitigation bank portion of the permit and desired to make other minor site modifications. As a result, an application was submitted to the SFWMD on April 10, 2008 for a permit modification which proposed eliminating the mitigation banking instrument and modifying the existing outfall. After further consideration, the County has determined that it wants to retain the mitigation bank portion of the project and is currently coordinating with the SFWMD on the appropriate manner in which to modify Application No. 080410-9, submitted on April 10, 2008.

The existing permit was active through April 10, 2008; therefore, we respectfully request a permit extension of five years as part of the application to modify the permit. This will accommodate the uncertain schedule for the balance of the construction, which is still indeterminate and

HAZEN AND SAWYER

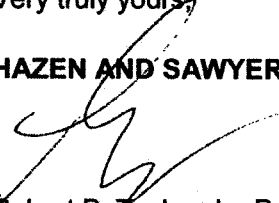
Hugo Carter, P.E.
June 5, 2008

heavily dependent upon funding availability. Additional information regarding this schedule will be forthcoming

If you have any questions regarding this matter, please feel free to give me a call.

Very truly yours,

HAZEN AND SAWYER, P.C.



Robert B. Taylor, Jr., P.E.
Senior Associate

c: Mindy Parrott
Bob Brown
Don West
Jason Bessey
40259-001

Wrock, Mike

From: Parrott, Melinda
Sent: Thursday, June 05, 2008 3:18 PM
To: Taylor, Robert B.
Cc: Bond, Ryan; Wrock, Mike
Subject: RE: Waiver Form

Rob- the waiver is fine, please go ahead and send that in as soon as possible. As for the letter, I think the best course of action is to modify the application to request an extension of the mitigation bank permit. The application was submitted on the day the permit would have expired- that's why we can still extend it. So withdrawing the application would be a bad idea if they want to keep the bank. Please describe in the letter what part of the swale modifications in the application 080410-9 are still proposed, so we can figure out how to proceed (administratively) with the application.

One thing we will need for the extension is an updated work schedule for the mitigation bank.

Thank you.

Mindy Parrott
772-223-2600 x3608

For SFWMD permit information, forms and other application resources go to Permitting

To submit a new application or additional information electronically, go to
<http://my.sfwmd.gov/ePermitting>

From: Taylor, Robert B. [mailto:rbtaylor@hazenandsawyer.com]
Sent: Thursday, June 05, 2008 3:08 PM
To: Parrott, Melinda
Subject: FW: Waiver Form

Robert B. Taylor, Jr.
Hazen and Sawyer, P.C.
2101 NW Corporate Boulevard
Boca Corporate Center, No. 301
Boca Raton, Florida 33431
561-997-8070
561-997-8159 (fax)
rbtaylor@hazenandsawyer.com

From: Taylor, Robert B.
Sent: Thursday, June 05, 2008 12:51 PM
To: 'Bond, Ryan'
Cc: McNally, Teresa; Feikle, Caitlin T
Subject: RE: Waiver Form

Ryan,

Please take a look at the draft letter and waiver form which are attached. The extension request letter

6/6/2008

leaves things open ended with regard to modifying or withdrawing the pending application. In speaking with Don West (SLC) last night, he is okay with simply withdrawing the application if that works for you all. If this language looks okay to you, Hugo and Mindy, please let me know and I will sign and email you a pdf this afternoon. Would you like me to address this to you or Hugo (I will copy the other)?

Thanks for your help in this matter,

Rob

Robert B. Taylor, Jr.
Hazen and Sawyer, P.C.
2101 NW Corporate Boulevard
Boca Corporate Center, No. 301
Boca Raton, Florida 33431
561-997-8070
561-997-8159 (fax)
rbtaylor@hazenandsawyer.com

From: Bond, Ryan [mailto:rbond@sfwmd.gov]
Sent: Wednesday, June 04, 2008 4:29 PM
To: Taylor, Robert B.
Subject: Waiver Form

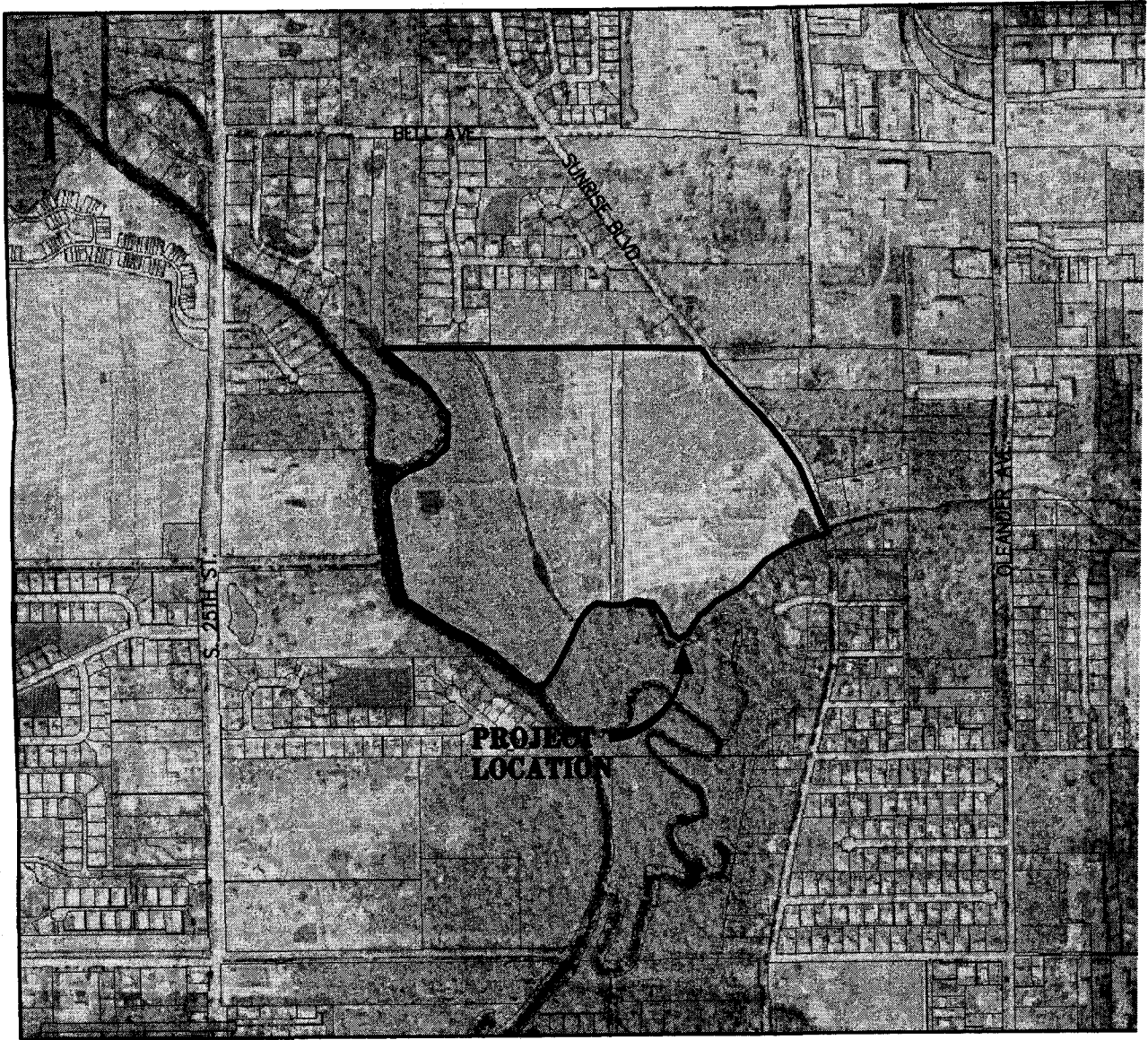
Mr. Taylor,

Attached is the waiver form. I filled out a portion of the form. Please review the document carefully to make sure that I entered correct information. Please let me know if you have any questions. Thank you.

Ryan Bond, MBA
Environmental Analyst 3
South Florida Water Management District
780 SE Indian Street
Stuart, FL 34997
(772) 223-2600 x3620
my.sfwmd.gov/permitting

Please note that Florida has a broad public records law and that all correspondence via email may be subject to disclosure.

6/6/2008



N

(no scale)

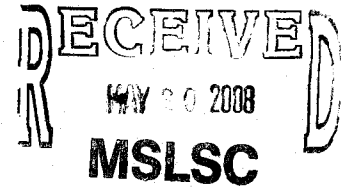
**PLATT CREEK STORMWATER SWALE
MODIFICATIONS
Location Map**

Application 080410-9

Exhibit 1

May 23, 2008

Thomas F. McGowan, P.E.
District Engineer
NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT
14666 Orange Avenue
Fort Pierce, Florida 34945



North St. Lucie River Water Control District
Permit Application
Request for Additional Information

Dear Mr. McGowan,

Hazen and Sawyer have received your comment letter dated May 9, 2008. Responses to each comment are included below:

1. **Comment:** The NSLRWCD Board of Supervisors has made recent changes to the permit application form which includes requiring an owner's signature on applications. We have provided the applicant with copies of the current NSLRWCD permit application form; please revise the originally submitted information to include the owner's signature and return.

Response: A revised permit application form with the owner's signature is attached to this letter.

2. **Comment:** The applicant is proposing water, sewer and reclaimed crossings of NSLRWCD Canal No. 107. The applicant shall show the proposed crossings on the Construction Plans in plan view and in cross-sectional view. The plan detail provided shall clearly show the proposed proximity or configuration with the proposed culvert crossings of Canal No. 107 and shall demonstrate that the crossings meet the design criteria specified in the *NSLRWCD Permit Application and Criteria Manual*. Please be aware that the proposed utility crossings will require a separate permit application to the NSLRWCD. The current application form may be found on the District website, www.nslrwcd.org.

Response: Drawing C-22 and C-32 have been revised to show the proposed utilities in plan and profile views respectively; signed and sealed copies of these drawings are included with this letter. Drawings C-16 through C-21 and C-23 through C-25 are also being reissued for continuity; these sheets have been revised to show the proposed utilities also. The permit application and check for \$650 for this application are attached with this letter.

3. **Comment:** From the construction plans, it appears that the applicant is proposing to fill the ditch along McCarty Road south of the NSLRWCD Canal No. 90 right-of-way in

O:40707-005L005

HAZEN AND SAWYER

Thomas F. McGowan, P.E.
May 21, 2008
Page 2 of 5

anticipation of future improvements to the McCarty Road system. The applicant shall be aware that the permit approval for this project will include a condition that this ditch cannot be filled until a County-approved alternative discharge scenario for the McCarty Road system is established.

Response: Acknowledged.

4. **Comment:** The Stage-Storage Calculations for the South Basin-Buildout do not match what is modeled. The applicant has agreed to review and revise the calculations as necessary.

Response: The stage-storage calculations for the buildout condition of the south basin have been revised and are attached. The dimensions of several of the dry detention areas were adjusted to reflect those currently designed. The southern wet detention pond was increased in size slightly (the north-south length grew by 85') to compensate and to achieve the stage-storage volume modeled. The calculated stage-storage volume is now slightly higher than the volume used in the Cascade model. Therefore, the Cascade model results are conservative and have not been altered.

5. **Comment:** The proposed headwall configuration at the outfall to NSLRWCD Canal No. 90, as currently designed, is unacceptable. The applicant shall revise the outfall to enter perpendicular to the canal top of bank and so as to not inhibit current District access for canal maintenance. As discussed in our April 23, 2008 meeting, a manhole in the canal right-of-way is an acceptable alternative to facilitate a perpendicular headwall entry to the canal system. The applicant shall also revise the outfall details on Sheet C-31 to update the cross-section of the proposed configuration. Contrary to our discussions at our 4/23/08 meeting, the NSLRWCD Board of Supervisors has discouraged the use of fabric formed concrete mattresses as end treatments in the canal right-of-way.

Also, from Sheet C-19 in the plans, it appears the proposed outfall has an invert of 17.00 ft-NAVD while the upstream Control Structure No. 2 shows a pipe invert at elevation 15.78 ft-NAVD. The applicant has agreed to revise the drainage pipe invert and slopes.

Response: The headwall configuration at the Canal No. 90 outfall has been revised. A manhole has been added within the right-of-way in order to achieve a perpendicular outfall. The manhole is located approximately 16' back from the top of bank and will be set with a top elevation at grade. The outfall pipe from Control Structure No. 2 has also been revised to provide positive drainage to Canal No. 90. Drawings C-18 and C-19 have been revised to reflect this change; signed and sealed copies of the revised drawings are included with this letter.

Since fabric-formed concrete mattresses are no longer an option for the outfall end treatment, the applicant has opted to use a precast concrete headwall as currently designed. As you noted in our April 23, 2008 meeting there is a conflict with the precast headwall detail and the two outfall pipe sizes. The outfall to Canal No. 107 has been revised from 15" RCP to 24" RCP. The precast headwall

HAZEN AND SAWYER

Thomas F. McGowan, P.E.
May 21, 2008
Page 3 of 5

detail has been revised to correctly show the dimensions for an FDOT Index 250 precast headwall for 24" RCP. Drawings C-22 and C-31 have been revised to reflect this; signed and sealed copies are included with this letter.

6. **Comment:** The applicant has provided scaled cross-sections for the proposed outfalls to NSLRWCD Canal No. 90 and 107. However, the following information needs to be added or revised to clarify the proposed design:
- a. Extend cross-sections P and Q on Sheet C-31 of the plans to the property line through the entire NSLRWCD canal right-of-way, or at a minimum to the toe of slope of the adjacent canal.
 - b. Label the proposed outfall invert and surveyed right-of-way, top of bank, and toe of slope elevations in cross-sections P and Q.
 - c. Show the top of bank lines in plan view.
 - d. Add turbidity barriers to the plan view.

Response:

- a. **Sections P and Q have been revised to show the opposite top of bank. See revised Drawing C-31.**
 - b. **The outfall invert elevations have been clarified and the requested information added. See revised Drawing C-31.**
 - c. **The top of bank lines for Canal No. 90 and Canal No. 107 have been added. See revised Drawings C-19 through C-24.**
 - d. **Turbidity barriers have been shown at the outfall locations. See revised Drawings C-19 and C-22.**
7. **Comment:** The applicant has shown riprap bank stabilization for the project outfalls to the NSLRWCD Canal No. 90 and 107 rights-of-way. The riprap requirements are as follows: the riprap should extend from the toe of slope to 2 feet below the top of bank of the canal, with the remaining 2 feet to be sodded. The riprap stabilization shall extend 10 feet on either side of the proposed outfall pipe and should not be installed on the canal bottom or on the canal banks opposite the outfall pipes. To comply with these requirements, the applicant shall revise the plans as detailed below:
- a. Remove the riprap located at the canal bottom from section J on Sheet C-32.
 - b. Add riprap below the canal crossing wing walls to slope to match the existing canal bottom.
 - c. Revise the notes on sheet C-31 to specify the riprap shall extend 10' on each side of the headwall.
 - d. Revise sections J and K on sheet C-32 of the construction plans to show the riprap consistently.
 - e. Clarify the notes on the construction plans for the areas to be sodded.

HAZEN AND SAWYER

Thomas F. McGowan, P.E.
May 21, 2008
Page 4 of 5

Response:

- a. Per our discussion during our April 23, 2008 meeting, the riprap has been removed from the canal bottom at each end of the culvert crossing; the rock bedding beneath the culvert has been terminated at the ends of the culvert.
 - b. Riprap has been added below the wing walls; see revised Drawing C-32.
 - c. The notes on Drawings C-19, C-22 and C-31 have been revised.
 - d. Sections J and K have been revised as previously noted.
 - e. The areas to be sodded have been clarified on the revised sections.
8. **Comment:** The applicant is currently proposing a 12' x 6' reinforced concrete box crossing of NSLRWCD Canal No. 107 for access within the project site. We estimate a contributing drainage area of 1.5 square miles for the canal system upstream of the proposed crossing. Per *NSLRWCD Permit Application and Criteria Manual*, this drainage area results in a design discharge of 200 cfs. The proposed crossing currently meets the design criteria. However, a smaller crossing supported by appropriate sizing calculations could be acceptable. Regardless, the applicant needs to revise the construction plans to include the following information:
- a. Combine section K on sheet C-32 with Section E on sheet C-27 to form a single scaled cross-section, showing both the existing and proposed condition.
 - b. Label the crossing invert, right-of-way, canal top of bank and toe of slope elevations accordingly.
 - c. Revise Section K on sheet C-32 to show the width of crossing, invert elevation, surveyed canal bottom, top of bank and toe of slope.

The applicant is referred to Comment 2 in conjunction with this comment.

Response: Based on the design discharge of 200 cfs, the culvert has been reduced to an 8' x 7' reinforced concrete box. The revised culvert size was calculated based on Chapter 8 of the *FDOT Drainage Manual*; the calculations are attached for reference.

- a. Section E has been superimposed onto Section K to show the existing and proposed conditions as requested; see revised Drawing C-32. Section E has also been left as an existing cross section on Drawing C-27.
 - b. The requested information has been added.
 - c. The requested information has been added.
9. **Comment:** For work adjacent to NSLRWCD rights-of-way, it is District policy to require a minimum of a 20-foot wide maintenance area parallel to the canal, with a minimum 10:1 slope, from top of bank to the nearest horizontal or vertical obstruction. In the event that a clear and unobstructed area of sufficient horizontal width is not available within existing District rights-of-way, the applicant will be required to grant sufficient easement to meet this policy.

HAZEN AND SAWYER

Thomas F. McGowan, P.E.
May 21, 2008
Page 5 of 5

From the survey provided, it appears that there is not sufficient width for the required maintenance easement along the north and south banks of NSLRWCD Canal No. 107, and along the west bank of NSLRWCD Canal No. 90 north of the confluence with Canal No. 107. We have provided an exhibit (attached to this letter) of this area showing the dimensions from the plans and survey, which suggest 10-ft. and 8-ft. easement widths north and south of Canal 107, respectively, and a 3-ft. easement width for Canal 90 north of the confluence with Canal 107. The applicant needs to provide easements necessary to accomplish the necessary 20-foot maintenance width in these areas.

The applicant shall also provide a note on the plans that any perimeter fencing berm grading, and landscaping proposed for this project will not encroach the NSLRWCD right-of-way or any future easement area.

Response: The maintenance easement requirements have been provided to the City of Port St. Lucie. Drawings C-22 through C-24 have been revised to show the proposed easement dimensions.

- A3. **Comment:** For your information, current NSLRWCD Board policy is to limit construction permits to two years. As discussed, your project may be delayed due to budget constraints. We request that you provide an estimated schedule for the Board's consideration.

Response: The City of Port St. Lucie currently anticipates construction of the Glades Office Complex to begin in early 2011; this is three (3) years later than the estimated construction commencement date listed on the original permit application. This revised construction schedule is reflected on the permit application for utility construction attached to this letter.

Please note, as stated in the District's letter, comments A1 and A2 do not require responses. If you have any questions or require additional information, please contact this office.

Very truly yours,

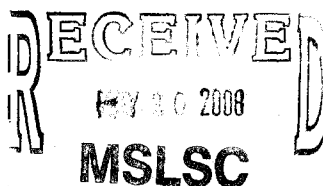
HAZEN AND SAWYER, P.C.



Patrick J. Moore, P.E.

Attachments

c: C. Donohue / NSLRWCD
M. Wrock / SFWMD
L. Southerly / PSL
R. Schoenborn / PSL
R. Taylor / H&S
File: 40707-005.5.4



No. _____ - _____ - _____ - _____

NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT

("District")

14666 Orange Avenue • Fort Pierce, Florida 34945 • (772) 461-5050 • FAX (772) 461-9446

Application to Connect to, or Use, District Facilities, or for Utility Construction*

A. Application Information:

Name: City of Port St. Lucie Utility Systems

Address: 900 SE Ogden Lane
Port St. Lucie, Florida

Telephone: (772) 873-6400

Fax: (772) 873-6405

Owner's Engineer of Record (if applicable): Hazen and Sawyer, P.C.

B. Project Information: (Check appropriate box and attach drawings to show location and details):

- ☒ Culvert connection to District canal for irrigation or gravity drainage.
☐ Pump connection to District canal for irrigation or drainage.
☒ Installation of culvert or water control structure in District canal for crossing or water control.
☐ Electric ☐ Telephone ☐ Gas ☐ Cable Television
☐ Other (specify): _____

Location: Section(s) 17 Township: 36S Range: 39E Canal No. 90 and 107

Drainage area served: 79.5 acres (For connection to or use of District facilities.)

Other appropriate description: Culvert crossing of Canal 107. Gravity drainage connections to
Canal 90 and 107.

C. Construction Schedule:

Estimated commencement date: 02-01-08 Estimated completion date: 12-31-08

D. Application, Review or Use Fee: \$ 2,300

(Submit fee with this application in accordance with the District's fee schedule.)

ACKNOWLEDGEMENT AND ACCEPTANCE:

I hereby certify that the information shown above is accurate to the best of my knowledge, and that I agree to satisfy or abide by all requirements of this Permit, including "Standard Provisions" itemized on the reverse, and "Special Conditions" imposed by the District, as reflected by my signature below:

Owner Signature: _____

Owner Name (Type or Print): _____

Date: 4/14/08

Special Conditions: (for District Use Only):

Application Approved and Permit for Construction Issued:

By: _____ Date of Approval: _____
For the North St. Lucie River Water Control District

Permit Expiration Date: _____ Construction Expiration Date: _____

Project Certification Received and Accepted:

By: _____ Date of Approval: _____
For the North St. Lucie River Water Control District

Certification Expiration Date: _____

**This Application will become a Permit if and when approved and signed by an authorized representative of the District.*

STANDARD PROVISIONS

for

Application / Permit No. _____

If this Application for a Permit is approved, I do acknowledge, understand, and agree that:

1. I hereby indemnify and hold the District harmless from claims for property damage or personal injury arising from the installation or use of the permitted facility, and that this indemnification extends to damage to the facility itself that may occur from District operation and maintenance work.
2. Approval of this application does not relieve the Permittee from securing any and all other permits that may be required by other entities or governmental agencies, including, but not limited to, the South Florida Water Management District, the Florida Department of Environmental Protection, and St. Lucie County.
3. The use of, or construction within, the District's right-of-way shall conform to the details of the **attached approved drawings** supporting this application. **Modifications must be approved by the District in writing prior to construction.**
4. If required in the interests of the District's operation and maintenance program, or by any modifications to the District's Standard Provisions, I agree to alter, replace, relocate, or remove the permitted facilities at no cost to the District, all as is more fully set forth by District Policy Resolution duly recorded in O.R. Book 669 at page 699 of the Public Records of St. Lucie County, Florida, but subject to the limitations thereof.
5. The lands to be benefited by this application are, or may be, subject to flooding during periods of high water resulting from heavy rains or other acts of God. This Permit will be accepted subject to this possibility, which is recognized not to be within the control of the District.
6. Any other requirements that may be imposed by the District are binding upon me, my successors and assigns.
7. Any Permit issued as an approval of this application other than one issued in irrevocable, recordable form pursuant to the Policy Resolution referenced in item 4, above, shall not be transferable from the Permittee to a subsequent owner or owners of all, or a portion of, the subject property without the express, written approval of the District.
8. Any Permit issued as approval of this application is strictly subject to all of the rules of the District, duly promulgated from time to time, which are on file and available for examination at the offices of the District by those having interest.
9. If a Permit is granted, I shall notify the District not less than 24 hours prior to the beginning and completion of the work, to enable the coordination and scheduling of inspections.
10. I accept total responsibility for any erosion of, or shoaling in, the District's right-of-way or canals that results from the permitted work, and I shall repair or remove same promptly, at no expense to the District.
11. During and after construction, I shall prevent material from the construction area from being discharged to, or settling in, District canals.
12. Unless authorized by Permit, I shall neither place, construct or plant, nor cause to be placed, constructed or planted, any object or improvement within the District right-of-way without the express written prior approval of the District.
13. Within thirty (30) days of completion of the work, I shall submit a written statement to the District certifying that the work was performed and completed in accordance with the Permit and the approved drawings. If the work deviates from the Permit or approved drawings, the certification shall state the nature and extent of those deviations.
14. If this Permit is for a drainage connection, then drainage discharge from the area served shall not exceed the volumetric equivalent of 2.0 inches of depth over the area for any 24-hour period (38 gallons per minute per acre) from the 10-year frequency, 72-hour duration rainfall.
15. If a Permit is issued for a hydraulic connection of property with a District canal, I shall not discharge hyacinths or other aquatic vegetation into the District canal.
16. The Permittee, his agents and contractors, shall conduct the work in a manner that will not impair the use, or potential use, of the District right-of-way and facilities. In no case shall drainage or irrigation canals or appurtenant works be obstructed or restricted.
17. All irrigation and drainage connections to District facilities shall be clearly marked with a post of contrasting colors to identify the location and extent of the permitted installation.
18. If access is permitted via an existing culvert crossing installed in District right-of-way, the Permittee is advised that the crossing may be permitted for use by other affected owners, as such crossings are limited in number by the District.
19. The District reserves the right to permit the use of culvert crossings installed in rights-of-ways by other affected owners of District lands, as culvert crossings are subject to distance limitations imposed by the District.
20. All utility installations shall be clearly marked with above-ground signs or markers, as required by the District's "Permit Information and Criteria Manual."

No. _____

NORTH ST. LUCIE RIVER WATER CONTROL DISTRICT

("District")

14666 Orange Avenue • Fort Pierce, Florida 34945 • (772) 461-5050 • FAX (772) 461-9446

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Telephone: (772) 873-6400

Fax: (772) 873-6433

Owner's Engineer of Record (if applicable): Hazen and Sawyer, P.C.

B. Project Information: (Check appropriate box and attach drawings to show location and details):

☐ Culvert connection to District canal for irrigation or gravity drainage.

☐ Pump connection to District canal for irrigation or drainage.

☐ Installation of culvert or water control structure in District canal for crossing or water control.

☐ Electric ☐ Telephone ☐ Gas ☐ Cable Television

☒ Other (specify): Potable water, sanitary forcemain, reclaimed water

Location: Section(s) 17 Township: 36 S Range: 39 E Canal No. 107

Drainage area served: 79.5 acres (For connection to or use of District facilities.)

Other appropriate description: All three utility crossings will occur at the proposed culvert crossing already submitted for review.

C. Construction Schedule:

Estimated commencement date: 02-01-11 Estimated completion date: 12-31-11

D. Application, Review or Use Fee: \$ 650

(Submit fee with this application in accordance with the District's fee schedule.)

ACKNOWLEDGEMENT AND ACCEPTANCE:

I hereby certify that the information shown above is accurate to the best of my knowledge, and that I agree to satisfy or abide by all requirements of this Permit, including "Standard Provisions" itemized on the reverse, and "Special Conditions" imposed by the District, as reflected by my signature below:

Owner Signature: _____

Owner Name (Type or Print): _____

Date: 5/22/08

Special Conditions: (for District Use Only):

Application Approved and Permit for Construction Issued:

By: _____ Date of Approval: _____
For the North St. Lucie River Water Control District

Permit Expiration Date: _____ Construction Expiration Date: _____

Project Certification Received and Accepted:

By: _____ Date of Approval: _____
For the North St. Lucie River Water Control District

Certification Expiration Date: _____

**This Application will become a Permit if and when approved and signed by an authorized representative of the District.*

STANDARD PROVISIONS

for

Application / Permit No. _____

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13. Within thirty (30) days of completion of the work, I shall submit a written statement to the District certifying that the work was performed and completed in accordance with the Permit and the approved drawings. If the work deviates from the Permit or approved drawings, the certification shall state the nature and extent of those deviations.
14. If this Permit is for a drainage connection, then drainage discharge from the area served shall not exceed the volumetric equivalent of 2.0 inches of depth over the area for any 24-hour period (38 gallons per minute per acre) from the 10-year frequency, 72-hour duration rainfall.
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20. All utility installations shall be clearly marked with above-ground signs or markers, as required by the District's "Permit Information and Criteria Manual."

**City of Port St. Lucie
Glades Administration Complex**

South Basin - Buildout

Area Summary	SF	Acres
Total	2,369,664	54.40
Future Building	92,000	2.11
Roads & Parking	200,000	4.59
Future Roads & Parking	556,220	12.77
Water Management - Wet	230,910	5.30
Water Management - Dry	243,755	5.60
Berm	109,777	2.52
Pervious*	937,002	21.51

** Not including dry detention
water management or
berm areas.*

First 1-inch of runoff 4.53 Ac-ft.

2.5 x % impervious
Site area for % impervious 47.0 Ac.
 % impervious 0.369
Amount to be treated 0.92 in.
 Volume 3.76 Ac-ft.

Detention Volume Required 4.53 Ac-ft.
 Detention Type Wet
 Detention Credit 0%
 Volume Required 4.53 Ac-ft.

First 1-inch of runoff governs

Dry Pretreatment Required Yes
 Pretreatment Volume 2.05 Ac-ft.

Detention Volume Provided
 Dry Detention
 Volume 10.97 Ac-ft
 Surface Area 5.60 Ac
 Wet Detention
 Volume 17.83 Ac-ft
 Surface Area 5.30 Ac

Total Storage 28.80 Ac-ft.
Total Surface Area 10.90 Ac
 474,665 SF

**City of Port St. Lucie
Glades Administration Complex**

South Basin - Buildout

Dry Detention Swales

Wet Season Water Table

18.50 NAVD

Eastern - North Section

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	15 ft
Top Width	30 ft
Cross Section	56.25 SF
Length	1,375 ft
Volume	77,343.8 CF
	1.78 Ac-ft.
Top Surface Area	41,250 SF
	0.95 Ac
Bottom Surface Area	20,625 SF
	0.47 Ac

Eastern - South Section

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	25 ft
Top Width	40 ft
Cross Section	81.25 SF
Length	1,005 ft
Volume	81,656.3 CF
	1.87 Ac-ft.
Top Surface Area	40,200 SF
	0.92 Ac
Bottom Surface Area	25,125 SF
	0.58 Ac

Western - North Section

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	15 ft
Top Width	30 ft
Cross Section	56.25 SF
Length	1,530 ft
Volume	86,062.5 CF
	1.98 Ac-ft.
Top Surface Area	45,900 SF
	1.05 Ac
Bottom Surface Area	22,950 SF
	0.53 Ac

Western - South Section

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	30 ft
Top Width	45 ft
Cross Section	93.75 SF
Length	215 ft
Volume	20,156.3 CF
	0.46 Ac-ft.
Top Surface Area	9,675 SF
	0.22 Ac
Bottom Surface Area	6,450 SF
	0.15 Ac

North Parking

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	21.5 NAVD
Depth	2.00 ft
Bottom Width	12 ft
Top Width	24 ft
Cross Section	36 SF
Length	255 ft
Volume	9,180.0 CF
	0.21 Ac-ft.
Top Surface Area	6,120 SF
	0.14 Ac
Bottom Surface Area	3,060 SF
	0.07 Ac

South Parking

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	21.5 NAVD
Depth	2.00 ft
Bottom Width	12 ft
Top Width	24 ft
Cross Section	36 SF
Length	240 ft
Volume	8,640.0 CF
	0.20 Ac-ft.
Top Surface Area	5,760 SF
	0.13 Ac
Bottom Surface Area	2,880 SF
	0.07 Ac

**City of Port St. Lucie
Glades Administration Complex**

South Basin - Buildout

Generator Building

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	60 ft
Top Width	75 ft
Cross Section	168.75 SF
Length	250 ft
Volume	42,187.5 CF
	0.97 Ac-ft.
Top Surface Area	18,750 SF
	0.43 Ac
Bottom Surface Area	15,000 SF
	0.34 Ac

Connector Swale

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	30 ft
Top Width	45 ft
Cross Section	93.75 SF
Length	610 ft
Volume	57,187.5 CF
	1.31 Ac-ft.
Top Surface Area	27,450 SF
	0.63 Ac
Bottom Surface Area	18,300 SF
	0.42 Ac

Vehicle Storage

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	20 ft
Top Width	35 ft
Cross Section	68.75 SF
Length	250 ft
Volume	17,187.5 CF
	0.39 Ac-ft.
Top Surface Area	8,750 SF
	0.20 Ac
Bottom Surface Area	5,000 SF
	0.11 Ac

Northwest Swale

Side Slope	3 :1
Swale Bottom	19.50 NAVD
Swale Top	22.0 NAVD
Depth	2.50 ft
Bottom Width	20 ft
Top Width	35 ft
Cross Section	68.75 SF
Length	1140 ft
Volume	78,375.0 CF
	1.80 Ac-ft.
Top Surface Area	39,900 SF
	0.92 Ac
Bottom Surface Area	22,800 SF
	0.52 Ac

Wet Detention Pond

South Detention Area

Side Slope	4 :1
Swale Bottom	18.50 NAVD
Swale Top	22.0 NAVD
Depth	3.50 ft
Bottom Width	330 ft
Top Width	358 ft
Cross Section	1204 SF
Length	645 ft
Volume	776,580.0 CF
	17.83 Ac-ft.
Top Surface Area	230,910 SF
	5.30 Ac
Bottom Surface Area	212,850 SF
	4.89 Ac

**City of Port St. Lucie
Glades Administration Complex**

South Basin - Buildout

Stage - Storage Calculations

Wet Season Water Table	18.5 NAVD
Assumed Roadway Elev.	22.3 NAVD
Assumed Finished Floor	23.5 NAVD
Site Storage Start	22.00 NAVD
Perimeter High Point	24.5 NAVD

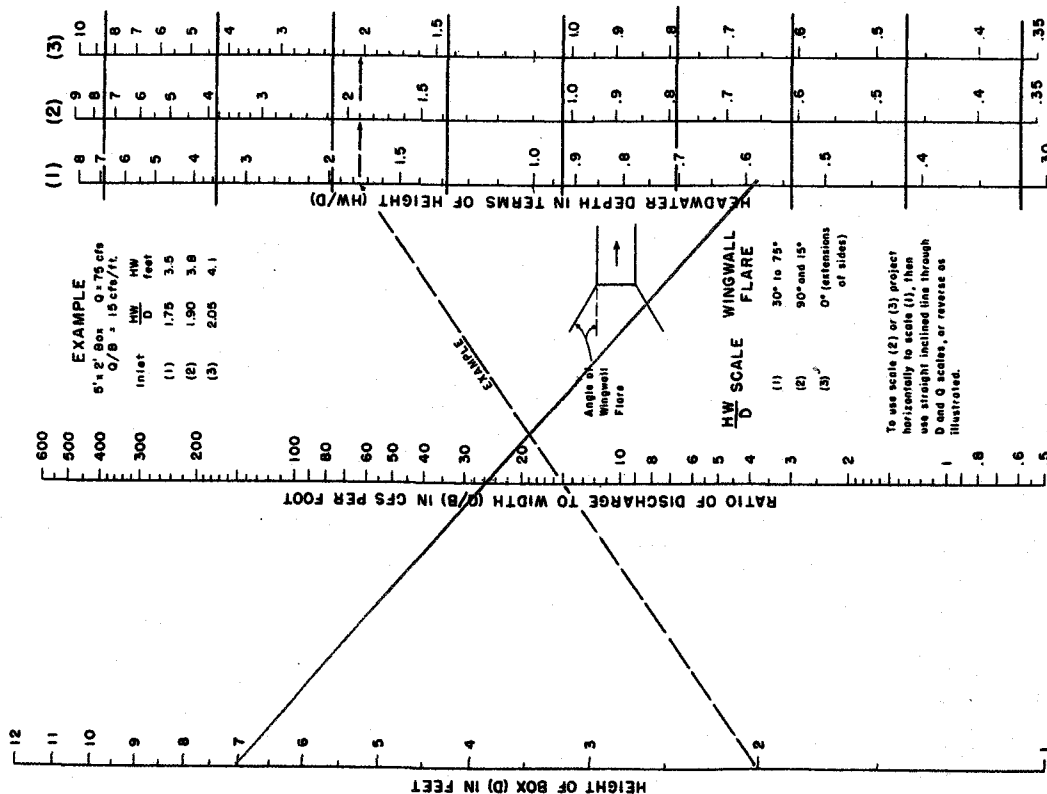
	Storage (ac-ft)						
Stage (NAVD)	18.5	19.5	20.00	20.5	21.00	21.5	22.00
Eastern Swale - North	0.00	0.00	0.26	0.57	0.92	1.33	1.78
Eastern Swale - South	0.00	0.00	0.31	0.65	1.02	1.43	1.87
Western Swale - North	0.00	0.00	0.29	0.63	1.03	1.48	1.98
Western Swale - South	0.00	0.00	0.08	0.16	0.26	0.36	0.46
Connector Swale	0.00	0.00	0.22	0.46	0.72	1.01	1.31
<i>Dry Detention Subtotal</i>	<i>0.00</i>	<i>0.00</i>	<i>1.15</i>	<i>2.47</i>	<i>3.95</i>	<i>5.60</i>	<i>7.40</i>
North Parking Swale	0.00	0.00	0.04	0.09	0.14	0.21	0.28
South Parking Swale	0.00	0.00	0.04	0.09	0.15	0.22	0.25
Generator Building Swale	0.00	0.00	0.18	0.36	0.56	0.76	0.97
Vehicle Storage	0.00	0.00	0.06	0.13	0.21	0.30	0.39
Northwest Swale	0.00	0.00	0.28	0.60	0.96	1.36	1.80
Wet Detention Pond	0.00	4.95	7.46	10.01	12.59	15.19	17.83
Site	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	4.95	8.99	13.29	17.83	22.63	27.61

Stage (NAVD)	22.5	23.00	23.50	24.00
Eastern Swale - North	2.25	2.72	3.20	3.67
Eastern Swale - South	2.34	2.80	3.26	3.72
Western Swale - North	2.50	3.03	3.56	4.08
Western Swale - South	0.57	0.68	0.80	0.91
Connector Swale	1.52	1.73	1.94	2.15
<i>Dry Detention Subtotal</i>	<i>9.18</i>	<i>10.97</i>	<i>12.75</i>	<i>14.53</i>
North Parking Swale	0.35	0.42	0.49	0.56
South Parking Swale	0.29	0.32	0.35	0.39
Generator Building Swale	1.14	1.31	1.49	1.66
Vehicle Storage	0.45	0.51	0.57	0.62
Northwest Swale	2.06	2.32	2.58	2.85
Wet Detention Pond	20.48	23.13	25.78	28.43
Site	1.94	7.77	17.49	31.10
	34.37	45.02	59.56	77.98

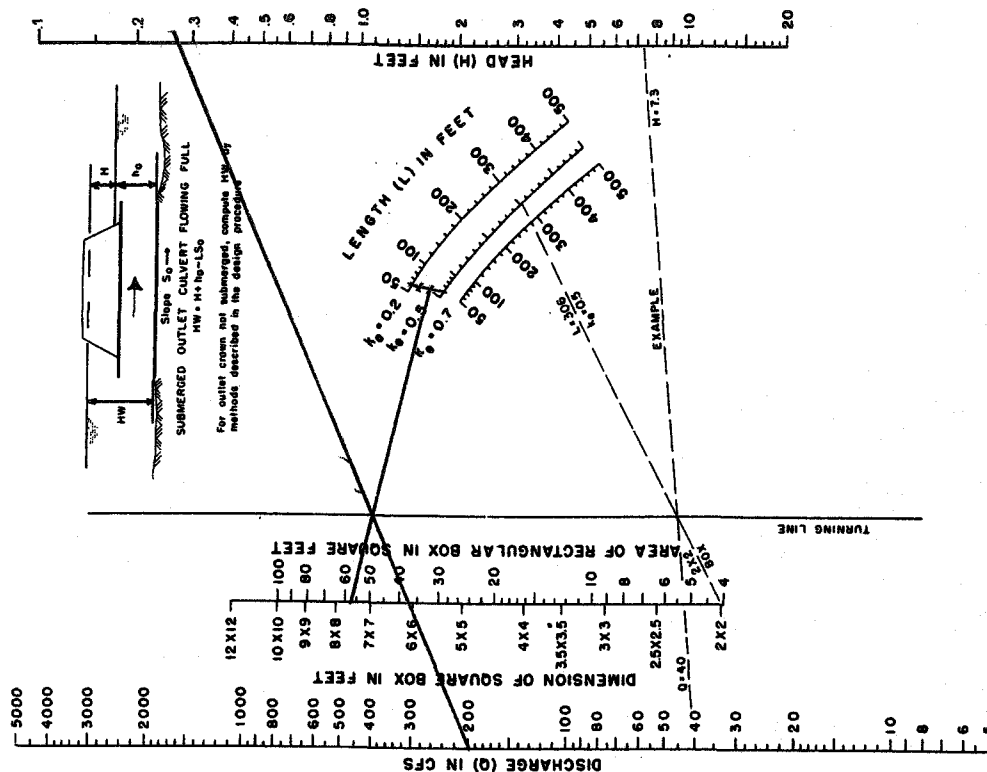
Design by _____
Checked by _____
Approved by _____

FIGURE 8-2
Worksheet for Culvert Capacity Calculations

A) INLET CHART



B) OUTLET CHART--Flowing Full, $n = 0.012$

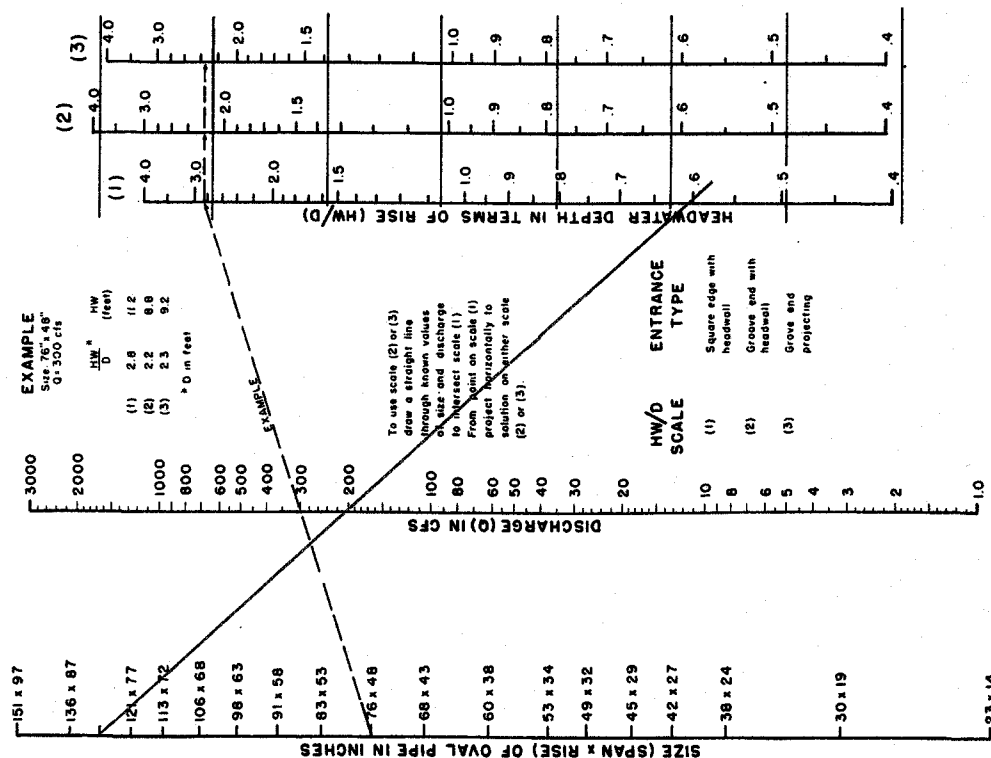


Standard Format: Span x Rise

Reference: USDOT, FHWA, HEC-5 (1965).

FIGURE 8-3
Inlet and Outlet Nomographs for Concrete Box Culverts

A) INLET CHART



B) OUTLET CHART--Flowing Full, $n = 0.012$

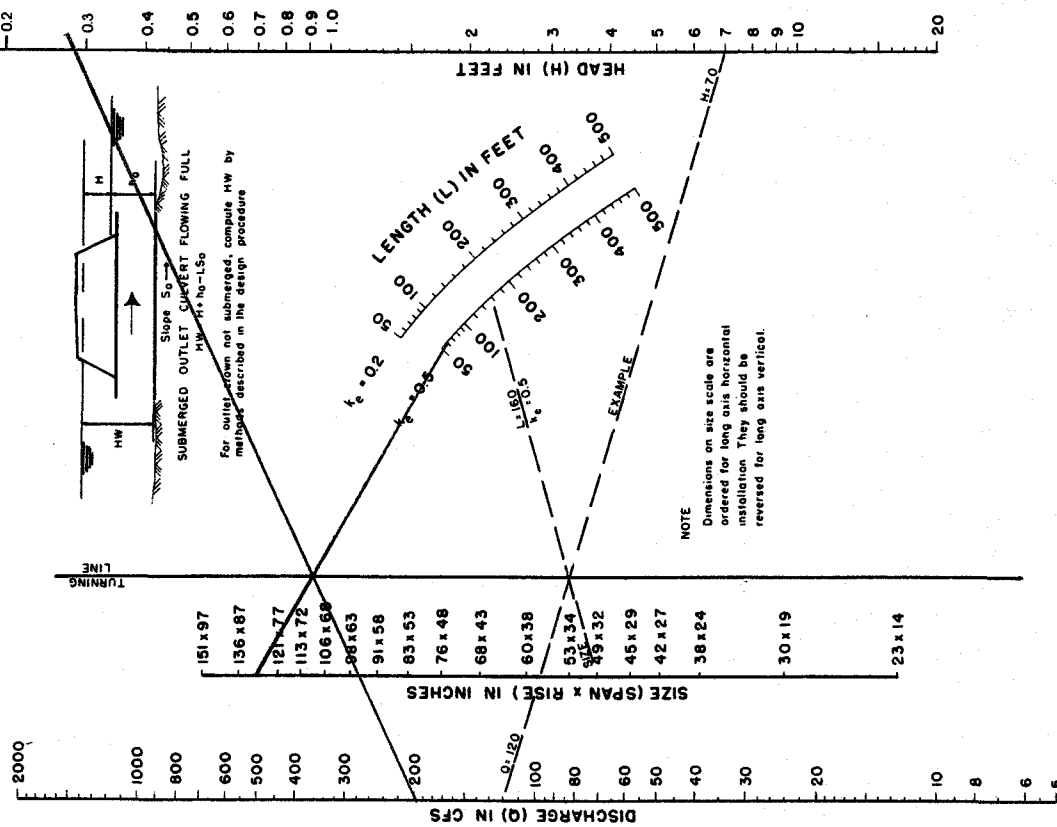
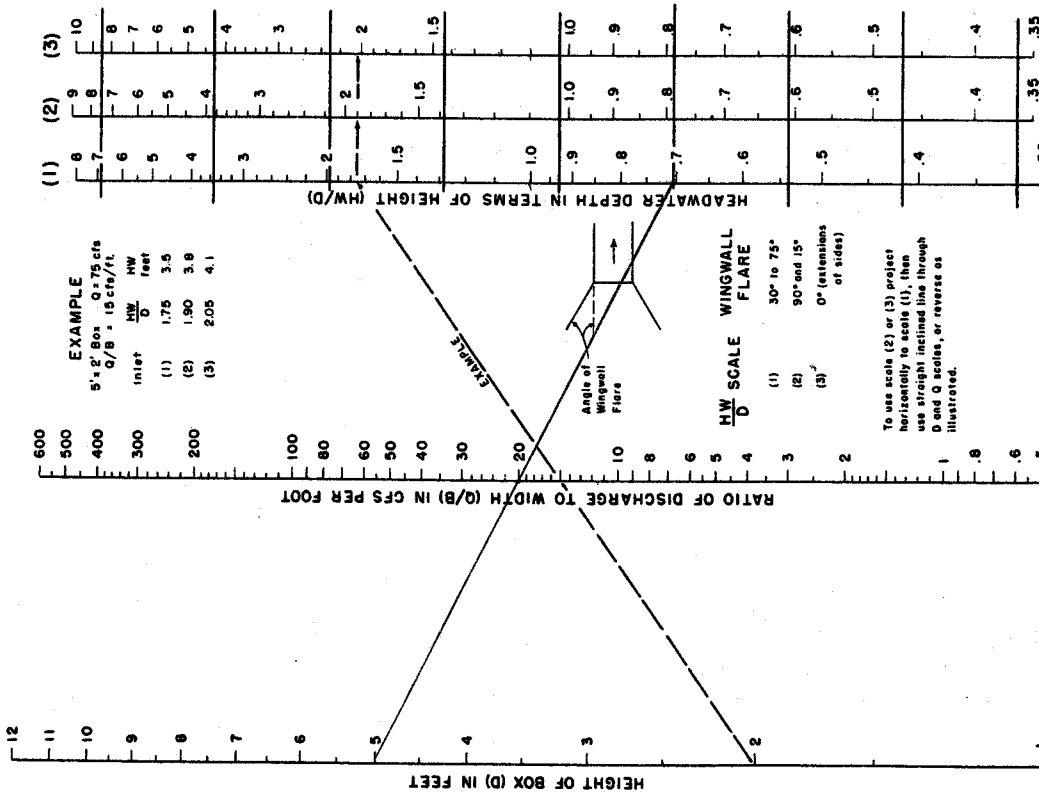


FIGURE 8-6
Inlet and Outlet Nomographs for Oval Concrete Pipe Culverts--Long Axis Horizontal

Reference: USDOT, FHWA, HEC-5 (1965).

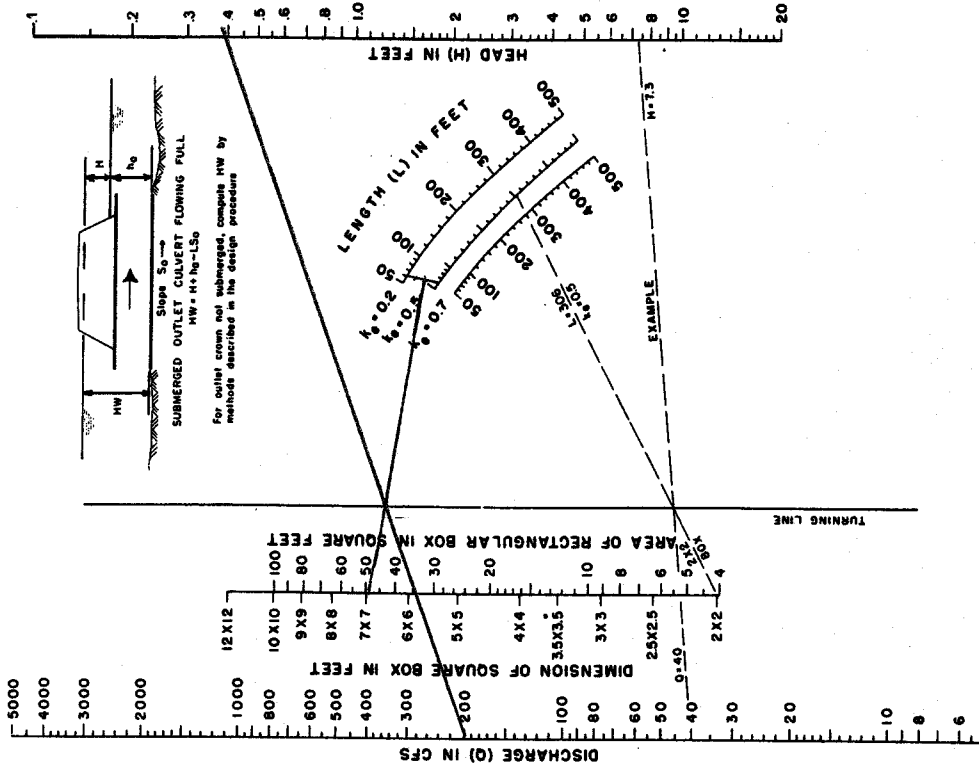
A) INLET CHART



Reference: USDOT, FHWA, HEC-5 (1965).

FIGURE 8-3
Inlet and Outlet Nomographs for Concrete Box Culverts

B) OUTLET CHART--Flowing Full, $n = 0.012$



Standard Format: Span x Rise

Last Date For Agency Action:

INDIVIDUAL MITIGATION BANKING STAFF REPORT

Project Name: Platt'S Creek Mitigation Bank And Water Quality Improvement

Permit No.: 56-00003-M

Application No.: 010831-18

Associated File: 021122-10 WU
021122-11 WU

Application Type: Mitigation Banking (New Construction/Operation)

Location: St Lucie County, S33/T35S/R40E

Permittee : St Lucie County Board Of County Commissioners

Operating Entity : St Lucie County Board Of County Commissioners

Project Area: 102 acres

Project Land Use: Mitigation

Receiving Body: NORTH FORK OF ST LUCIE RIVER

Special Drainage District: NA

Total Acres Wetland Preserved Onsite: .00

Total Acres Presv/Mit Compensation Onsite: 82.40

Conservation Easement To District : Yes

Sovereign Submerged Lands: No



PROJECT PURPOSE:

The applicant is requesting construction and operation approval of a 19.6 acre stormwater treatment facility and a 82.40 acre mitigation bank (hereon, Bank). The current land use of the site is agricultural and has been utilized as a citrus grove. This parcel is adjoined by Platt's Creek, a natural tributary of the North Fork St Lucie River (NFSLR), to the south, the North Fork St. Lucie River to the west, Sunrise Blvd. to the East and the Raintree Forest residential development to the north.

In accordance with Section 373.4136, F.S., the applicant has provided reasonable assurances that the proposed mitigation bank will improve ecological conditions of the regional watershed, provide viable and sustainable ecological and hydrological functions for the proposed mitigation service area, be effectively managed in perpetuity, not destroy areas of significant ecological value, achieve mitigation success and is adjacent to lands that will not adversely affect the perpetual viability of the mitigation bank.

Staff recommends approval to construct the 19.6 acre stormwater treatment facility and the 82.40 acre mitigation bank, with conditions.

PROJECT EVALUATION:

PROJECT SITE DESCRIPTION:

LOCATION:

The proposed Platt's Creek Mitigation Bank (PCMB) and Stormwater Treatment Area (STA) is located at the northwest intersection of Sunrise Blvd and Midway Rd in Section 33, Township 35S, Range 40E of St Lucie County. A location map and aerial photographs depicting the project area as well as a legal description of the parcel are included as Exhibits 2 and 3.

ECOLOGICAL SIGNIFICANCE OF THE BANK SITE TO THE REGIONAL WATERSHED:

The Platt's Creek Mitigation Bank is located within a major watershed, the North St Lucie River Watershed (NSLW). Therefore, the implementation of the proposed restoration plan for this mitigation site will serve to provide ecological enhancement to the NSLW. A map that depicts the boundaries of the NSLW watershed is included in page 2 of 3 of Exhibit 10. This site has also been identified as a potential acquisition site in regional preservation plans. Existing conservation areas in the vicinity of the Platt's Creek Mitigation Bank include the Savannas State Park, the North Savannas, the Jonathan Dickinson State Park, the south Fork of the St. Lucie River and the NFSLR.

The location of the PCMB, directly adjacent to the NFSLR, provides an opportunity to restore, preserve and manage a significant portion of the area's ecosystem. The proposed mitigation activities will restore the wetland functions of this parcel by recreating the natural wetland communities that historically existed and that have been eliminated as a result of the current agricultural activities onsite. Also, the restoration of this parcel to a native wetland community, will provide benefits to the receiving waters of the NFSLR by the elimination of agricultural runoff from the directly adjacent citrus grove operation, restoration of the hydroperiod and re-vegetation of the floodplain habitat of the NFSLR. It will also result in the restoration of the natural storage and water purifying functions of the NFSLR floodplain and closes a gap in the NFSLR greenway corridor. Restoration of the historical natural communities along the upper reaches of the NFSLR will assist in improving the water quality of the St Lucie Estuary (SLE) and Indian River Lagoon (IRL), enhance the fisheries habitat and provide an ecologically beneficial area for development to off-set unavoidable wetland impacts within the service area. Without the implementation of the proposed restoration plan, the watershed will not benefit from the improved water quality and enhanced wetland functions this project will provide. Additionally the current citrus grove operation would continue and the potential for residential or commercial development of this parcel would remain.

ASSESSMENT OF CURRENT SITE CONDITIONS:

The current site conditions consist of the existing citrus grove. The surface water management system that exists onsite consists of a series of drainage ditches and pump systems designed to maintain a lower water table onsite. No wetland areas exist onsite.

Soils:

The site where the Platt's Creek Mitigation Bank is proposed is located within the flood plain of the NFSLR which historically consisted of Pine Flatwood Forests, Wetland mixed Forests and Freshwater marshes. The soils of this site are consistent with the soils typically found on the aforementioned habitat types. The soil mapping units found on the site are the following; Wabasso sand (48), Ankona sand (2), Susana sand (43), Riviera fina sand (38) and Arents 0 to 5 % slopes (4). All the soils onsite exhibit hydric soil characteristics and are or have inclusions of hydric soils as listed and described in the Hydric Soils of Florida Handbook (Second Edition 1995, Florida Association of Environmental Soil Scientists). A detailed description and map of the soils within this parcel are included on pages 2 and 3 of Exhibit 4.

Topography:

The existing topography of the site ranges from 10' to 2.5' NGVD. The existing ground elevations onsite are considered a result of the agricultural operation onsite, therefore, it is not anticipated that these existing ground elevations reflect the natural ground elevations of this parcel. Additional topographic information is included in the file.

Hydrological features:

The Platt's Creek Mitigation Bank site had a direct connection or formed part of the NFSLR head waters, based on interpretation of documentation that reflect historical conditions of the area, such as the Davis Map, historical aerial photography and/or soils of the area. Historic vegetative cover and topographic information of the project area indicates that the historic hydrology was fed by runoff from the surrounding parcels that sheet-flowed toward the NFSLR flood plain prior to the construction of the existing drainage features.

Beginning in the 1920's, dredging activities commenced within the NFSLR and the surrounding areas to provide drainage and flood control in the basin. After the construction of the drainage systems the hydrologic regime of the site was significantly altered, the site does not receive sheet flow from adjacent parcels and the majority of the water onsite comes from rain events and/or ground water seepage. The existing surface water management system maintains an artificially controlled hydrologic regime on the parcel. The agricultural operation on the site has lowered the groundwater table and altered the historic hydrologic condition and native plant communities of the site.

Land Use Conditions:

According to historical aerials half (1/2) of the property area was converted to a citrus operation prior to the 1940's with the remaining portions been converted within the 1960's. During this time frame the existing surface water management system was constructed and remains operational to this date. The surface water management system was designed to drain the parcel to make it suitable for the citrus operation.

The Platt's Creek Mitigation Bank site exists as uplands. The entire site was historically wetlands as discussed in this report and the supporting documentation included in the file. The land use designation for the current conditions of the parcel is CITRUS - FLUCCS 221, (FLUCCS stands for Florida Land Use, Cover and Forms Classification System, Handbook of the State of Florida Department of Transportation, January 1999 Third Edition), see page 1 of Exhibit 4.

Ecological significance:

The Platt's Creek Mitigation Bank is directly adjacent to the NFSLR. The NFSLR was previously classified as a Save Our Rivers (SOR) acquisition area. A track of land located directly south of Platt's Creek is a public parcel owned and managed by the South Florida Water Management District. The addition of this parcel as a natural preserve and mitigation area will provide benefit to the wetland functions of this parcel and to the protected area adjacent to this project. In addition, the proposed mitigation bank will be directly connected to forested floodplain wetlands located to the south and will form part of the natural corridor along the NFSLR. The wildlife and watershed benefits are described in the discussion of ecological significance to the regional watershed.

Adjacent lands:

The subject parcel is within a riverine corridor targeted for public acquisition by the State of Florida Conservation and Recreational Lands program (CARL) the Florida Greenways and Trails Program, the South Florida Water Management District SOR Program and the St Lucie County's Environmentally Significant Lands (ESL) Program. To date approximately 1,600 acres along the NFSLR has been purchased for preservation, restoration, and recreational purposes, see page 3 of Exhibit 10. The majority of the conservation lands along the NFSLR corridor are managed by the State of Florida Department of Environmental Protection, Bureau of Coastal and Aquatic Managed Areas, as a State buffer preserve. The NFSLR buffer preserve include lands both north and south of the Platt's Creek Mitigation Bank site. All additional lands acquired through the aforementioned conservation programs will be managed as part of the NFSLR State Buffer Preserve. These NFSLR State Buffer Preserve areas are safeguarded from activities that could result in a detrimental effect to the native upland, wetland and other surface waters functions that these ecosystems provide. Therefore, it is not anticipated that future uses of the adjacent areas will detrimentally affect, or be contrary to, the proposed wetland restoration activities, page 3 of Exhibit 10.

PROPOSED PROJECT:

The proposed mitigation activities within the Platt's Creek Mitigation Bank include a total of 82.40 acres of wetland restoration. The specific habitat types to be restored are the following, 10.33 Acres of Hydric Hammock (FLUCCS 624), 39.24 Acres of Freshwater Marsh (FLUCCS 641), 13.51 Acres of Hydric Flatwoods (FLUCCS 625) and 19.32 Acres of Flood Plain Forest (FLUCCS 615).

The activities proposed at the Bank are oriented toward the restoration of the naturally occurring wetland habitats within the NFSLR floodplain. In order to achieve this, the entire Bank parcel will be graded to an adequate ground elevation to support the habitats proposed. After the completion of the initial grading activities, and documentation of observed indicators of adequate hydrologic patterns for each of the habitat types proposed, a planting program will be implemented for each of the habitat type. After the completion of the aforementioned initial phases of the project a perpetual management plan for the Bank will commence. A detailed description of the proposed restoration activities is included as Exhibit 6A. The schedule for the completion of all project related activities is included as page 2 of Exhibit 7.

SURFACE WATER MANAGEMENT SYSTEM:

The proposed Stormwater Treatment Area (STA) is designed to capture and treat the "first flush" of runoff from the approximately 1,100 acre Platt's Creek watershed and provide additional water to the proposed mitigation bank. Flow from the basin passes through an 84" culvert where Sunrise Blvd. crosses Platt's Creek. The STA includes a sump at the downstream end of the 84" culvert under Sunrise Blvd., a pump station, and a detention pond. The sump has walls at varying elevations that act as weirs to capture low flows and bypass higher flows. The pump station contains four pumps with varying on-off elevations to correspond with the intensity of the storm event. The system is designed to operate in stages:

- 1) Base Flow-The sump has a 72 inch long by 4 inch high rectangular orifice at elevation 1.4 ft. NGVD to allow Platt's Creek base flow to pass through the sump.
- 2) Capture of First Flush-As flow through the culvert under Sunrise Blvd. increases, stages in the sump rise triggering the four pumps in sequence, starting with the 18 cfs pumps then the 67 cfs pumps at higher flows.
- 3) Moderate Storm Bypass-Storms slightly greater than the water quality events will exceed the capacity of the four pumps. A wall (weir) in the sump at elevation 3.2 ft. NGVD allows the moderate storms to bypass the system after the first flush flow has entered the sump.
- 4) High Flow Bypass-For larger storm events (greater than the 5 year storm), a wall (weir) in the sump at elevation 4.0 NGVD allows large storms to bypass the system without changing upstream or downstream flooding impacts.

As designed, the project will capture the first 0.66 inches of runoff from all storm events. Water that is pumped into the pond is discharged to the mitigation area prior to flowing into Platt's Creek downstream of the sump.

Based on the provided hydrologic analysis, included by reference in the file with relevant sections attached as Exhibit 13, the applicant has demonstrated that the proposed mitigation bank site will not be dependent on the surface water flows from the STA to achieve an adequate hydrologic regime. Therefore, staff determines that the hydrologic characteristics of the bank site will function independent from the STA and are self-sustaining.

WATER QUANTITY:

Discharge Rate :

The proposed project is designed to capture the "first flush" of runoff for diversion to the STA. The

applicant's consultant analyzed several storms including the 25 year and 100 year 3 day storms. There is no significant change in discharge due to the proposed STA and mitigation area.

Offsite Flows:

Offsite areas to the north and northeast of the project have historically discharged through the project site. The applicant's engineer has provided calculations that document that the proposed project will not have an effect on these offsite areas. The flows through Platt's Creek were also analyzed to document that the project will have no effect in the basin upstream of the culvert under Sunrise Blvd.

Control Elevation :

Basin	Area (Acres)	Ctrl Elev (ft, NGVD)	WSWT Ctrl Elev (ft, NGVD)	Method Of Determination
Site	102.00	1.4	1.40	Other

Receiving Body :

Basin	Str.#	Receiving Body
Site	Bleeder	Platt's Creek
Site	High Weir	Platt's Creek
Site	Low Weir	Platt's Creek
Site	Pumps	Pond

Discharge Structures:

Pumps:

Basin	Str#	Count	Type	Capacity	Elev. (ft, NGVD)
Site	Pumps	1	Axial Flow	18cfs	1.7 (on) / .5 (off)
Site	Pumps	1	Axial Flow	18cfs	2 (on) / .8 (off)
Site	Pumps	1	Axial Flow	67cfs	2.3 (on) / .9 (off)
Site	Pumps	1	Axial Flow	67cfs	2.5 (on) / 1 (off)

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev. (ft, NGVD)
Site	High Weir	1	Sharp Crested	70'				4 (crest)
Site	Low Weir	1	Sharp Crested	100'				3.2 (crest)

Water Quality Structures:

Bleeders:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Invert Angle	Invert Elev. (ft, NGVD)
Site	Bleeder	1	Rectangular Orifice	72"	4"				1.4

WATER QUALITY:

The proposed Stormwater Treatment Area (STA) is designed to capture the "first flush" of runoff from the contributing basins. The project as proposed will treat approximately 0.66 inches of runoff from a basin that was substantially developed prior to District requirements for water quality treatment. The water quality treatment provided by this project is not to be used for any new projects in the basin. New projects must comply with current criteria for water quality treatment. Erosion and turbidity control

measures will be utilized during the project construction and will be placed as depicted in the project construction plan, pages 5 and 16 of Exhibit 8. No adverse water quality impacts are anticipated as a result of the proposed project.

The authorization for construction of the surface water management system associated with the STA is issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code; therefore, the state water quality certification is waived, as indicated in Special Condition 25.

Basin	Treatment Method		Vol Req.d (ac-ft)	Vol Prov'd (ac-ft)
Site	Treatment	Wet Detention	16 acres 59	59

WETLANDS:

The applicant proposes to restore the wetland functions of the project parcel, currently affected by the citrus operation, to the historic natural conditions, in particular, one of the goals of the proposed project is for the Bank to provide adequate habitat for wetland-dependent wildlife species. Due to the current state of the site and past soil alterations within the parcel, the entire project site must undergo extensive restoration activities to achieve the proposed goal of wetland functions onsite.

Mitigation Proposal:

The Platt's Creek Mitigation Bank site involves the restoration of four (4) distinct habitat types. As part of the restoration activities targeted for this Bank, the existing ground elevations will be lowered (scraped down) to elevations that will be representative of each of the proposed habitats. The existing topsoil material will be treated for the control of exotic plant seeds and nourished with appropriate soil amendments and fertilizers (as needed) within the upper twenty-four (24) inches of final grade after compaction. After certification of appropriate grading, the area will be planted with the corresponding plant species for that habitat type as indicated in the planting plan, pages 20 to 24 of Exhibit 6A. The proposed restoration is targeted to maximize the particular wetland functions of each of the proposed habitats. Following is a discussion of the natural scenario for each of the proposed habitats onsite (Also, see pages 17 to 19 of Exhibit 6A);

Hydric Hammock Restoration (10.33 Acres):

Under natural conditions this community is characterized by well developed hardwood or cabbage palm canopy with a relatively sparse understory dominated by bluestem and ferns. The soil texture typically consists of a high organic content in the upper layer underlain by a sand or highly organic sandy loam layer. The normal hydroperiod will include inundation for over sixty (60) days per year. Vegetation within this community is approximately eighty percent (80%) obligate and facultative species.

Freshwater Marsh Restoration (39.24 Acres):

This wetland community is typically dominated by a wide assortment of herbaceous plant species. Generally, freshwater marshes are characterized by tall emergent and floating leafed plant species. The soils are sandy to organic with variable water depths and inundation regimes. Under a natural scenario the freshwater marsh communities typically undergo inundation for approximately two hundred and fifty (250) days per year. Also, these communities do not typically have a vegetative canopy (overstory). Vegetation within this community consists of approximately eighty percent (80%) obligate and facultative species.

Hydric Flatwoods Restoration (13.51 Acres):

Hydric flatwoods communities consist of a forest with a relatively open canopy that consists of slash pine.

The subcanopy is sparse, and groundcover consists of a diverse mix of grasses and herbs. Also, there is minimal relief on the topography of these areas (flat lands). This community is commonly found occupying areas rich in ancient shallow marine deposits. Soils within this community are generally sandy, poorly drained, fine-textured and sometimes underlain with organic matter. Due to the poor permeability of the soils in this areas, standing water can be noticed through the year. The water table is typically found within a depth of ten (10) inches of the surface for two (2) to four (4) months during the wet season, and within a depth of forty (40) inches for more than six (6) months. Vegetation within this community consists of approximately eighty percent (80%) obligate and facultative species.

Floodplain Forest Restoration (19.32 Acres):

Floodplain forest communities typically exist at the lowest elevations closest to the water table and are the wettest types of hardwood forests. The floodplain forest typically exists as a transition between hydric hammock communities and very wet river floodplains. Even that the plant species in this ecosystem cannot tolerate long periods of flooding, they periodically become inundated. The hydroperiod is typically represented by inundation nearly every year for two percent (2%) to fifty percent (50%) of the growing season. This community usually does not have standing water during the dry season. The maintenance of natural hydrologic regimes is critical to the health of the floodplain forest community and to the downstream systems they are connected to. Vegetation within this community consists of approximately eighty percent (80%) obligate and facultative species.

EXOTIC AND NUISANCE SPECIES MANAGEMENT:

Exotic and nuisance plant species will be controlled by physical and chemical means. Exotic plant maintenance will be performed by the permittee on a semianual basis, and as needed, depending on conditions. Wetland areas will be maintained free of listed exotic vegetation, as defined by the Exotic Pest Plant Council, nuisance vegetation will not exceed ten percent (10%) of the total vegetative coverage in any of the preserve areas, after each maintenance activity and exotic and/or nuisance vegetation cannot exceed ten percent (10%) of coverage in any area of the Bank between maintenance activities, as required by Special Condition 22. The Exotic and Nuisance plant species management plan is included in this permit as pages 4 to 6 of Exhibit 6B.

PRESERVATION AND LONG TERM MANAGEMENT:

Maintenance and Monitoring:

The applicant proposes to monitor the success of the targeted community types with vegetative transects and monitoring stations. The parameters to be monitored include; desirable vegetative composition, desirable vegetative density, percent (%) of coverage of desired plant species, exotic and/or nuisance plant coverage, wildlife utilization, and performance of the hydrologic regime.

In order to measure and document the vegetative composition within the Platt's Creek Mitigation Bank, the applicant proposes to establish three (3) monitoring transects within the site. A vegetative sample quadrant (with a size of 10 meters X 10 meters) will be established every two hundred (200) feet. Each of the proposed transects will have a 4"X4"X24" concrete monument (hereon, monument), designed to indicate the transect's commencement point. Each monument will contain a metal plate that indicates the transect number, compass bearing, and date. All monuments will be located using a Global Positioning System (GPS) and it's Latitude and Longitude location coordinates recorded. A panoramic photo station will be located at all monument locations. The proposed panoramic photo documentary of the mitigation areas will consist of panoramic photos (photographic capture zone will consist of no less than one hundred eighty (180) degrees of view), each photo will contain a scaling pole designed to measure vegetative growth and the photos will be included in the semiannual monitoring reports. The applicant will conduct semiannual vegetation surveys of each of the transects during the five (5) year monitoring program.

The wildlife utilization will be recorded via qualitative measurements of wildlife species utilization of the mitigation areas. These qualitative measurements will be executed during the sampling iterations and will consist of the identification of observed wildlife and observed wildlife utilization (roosting, feeding, foraging, nesting and/or occasional transitory use). To perform the qualitative analysis of macroinvertebrates and

aquatic wildlife species, such as fish, the applicant intends to use dip-nets, cast nets, seines and/or dredge. The results of the wildlife utilization monitoring results will be included in the semiannual monitoring reports.

To document the hydrologic iterations the applicant proposes to place DATA loggers within all four (4) of the proposed habitat areas. The DATA loggers will be surveyed and the elevation referenced to NGVD. A Rain DATA logger will also be installed within the Bank premises programmed to record rain events on a daily basis and is equipped with a self-emptying collector bucket. Documentation of the hydrologic information will be summarized graphically and included in the semiannual reports.

Page 1 of Exhibit 5 indicates the location of the monitoring transects, photo stations, staff gauge and reference points. Exhibit 6B contains a more descriptive analysis of the proposed monitoring and maintenance activities proposed onsite.

Long-Term Management:

After the Platt's Creek Mitigation Bank has met all the success criteria requirements, completed the initial monitoring and maintenance requirements and provided satisfactory evidence that the Trust Fund for Long Term Management (Exhibit 12 A) is fully funded for the project, the Bank will commence the perpetual management phase of the project. Long-Term management of the Platt's Creek Mitigation Bank includes the semianual maintenance control of exotic and/or nuisance plant species, so these plant species do not exceed ten percent (10%) of coverage within any area of the Bank, as required by Special Condition 22. St. Lucie County Board of County Commissioners is the entity responsible for the perpetual management of the mitigation areas, as indicated in Special Condition 6.

RECREATIONAL AND/OR EDUCATIONAL ACTIVITIES:

The applicant does not propose any passive recreational and/or educational uses within the Platt's Creek Mitigation Bank. No passive recreational and/or educational activities are authorized within the mitigation bank area. If in the future the applicant proposes to include passive recreational and/or educational uses within the mitigation bank area, such activities will require review and approval from the District prior to the commencement of such activities. The only activities authorized within the mitigation bank area are those associated with the monitoring and maintenance plan for this project, as required by Special Conditions 12, 14 and 22.

MITIGATION SERVICE AREA:

The Platt's Creek Mitigation Bank Mitigation Service Area consists of the North St Lucie River Basin, as shown in page 1 of Exhibit 10. The North St Lucie River Basin is a large drainage basin and encompasses approximately 123,668.4 acres of land. The Platt's Creek Mitigation Bank's ability to offset wetland impacts will be determined on a project-by-project basis for the project in which impacts are proposed, in accordance with the rules and criteria active at the time of impact application, as required by Special Condition 13.

All Savannas Preserve wetlands and estuarine habitat contained within the North St Lucie River Basin are excluded from the MSA, as required by Special Condition 26. The Savannas State Preserve (Preserve) is located in St. Lucie and Martin Counties, generally described as lying within sections 1, 2, 11, 12, 13, 14, and 24, Township 36 South, Range 40 East, sections 7, 18, 19, 29, 30, 31, and 32, Township 36 South, Range 41 East, sections 4, 5, 8, 9, 16, and 21, Township 37 South, Range 41 East, and as more particularly described in the official records of Martin and St. Lucie Counties. The Preserve contains the best remaining segment of Florida's East Coast savannas, including extensive freshwater marshes and wet prairie systems. It is a diverse ecosystem comprised of eight natural community types as well as more than 1,000 vascular plant, aquatic invertebrate, vertebrate and periphyton species, including 57 species classified as endangered, threatened, special concern or rare. Therefore, these exclusions from the MSA are based on the unique characteristics and functions of these habitats that cannot be fully offset within the Platt's Creek Mitigation Bank.

CUMULATIVE IMPACTS:

Since the MSA is limited to the North St Lucie River Drainage Basin (basin), a cumulative impact analysis

will not be required for wetland impacts located within the MSA, when the Platt's Creek Mitigation Bank fully offsets the proposed impact.

CREDIT ASSESSMENT METHODOLOGY:

The Platt's Creek Mitigation Bank (Bank) credit assessment methodology consists of the combination of three (3) assessments, wetland functional assessment of existing and proposed conditions, a temporal lag (Time Lag) assessment and a risk assessment (Risk). The calculated credits available at the bank consist of the wetland functional benefit assessed with the corresponding Time Lag for each of the habitat types proposed. The Risk will be applied to the calculation of the number of credits necessary to offset an impact, as required by Special Condition 11. The proposed restoration activities within the Bank will generate 69.51 credits out of the 82.4 acres of mitigation area. These 69.51 credits will offset 34.75 Wetland Rapid Assessment Procedure units of impact. The functional, Time Lag and Risk assessments are included in the Mitigation Bank Instrument, and incorporated in this permit as pages 8 to 13 of Exhibit 6B.

FUNCTIONAL ASSESSMENT METHODOLOGY:

The Wetland Rapid Assessment Procedure (WRAP)(SFWMD Technical Publication REG-001, 2nd Edition, April 1999) was utilized as the functional assessment tool to evaluate the existing and anticipated conditions of the wetland areas within the Platt's Creek Mitigation Bank (Bank). Based on a review of the existing habitat value of the project and the proposed restoration activities, and the resulting ecological value from the implementation of this Bank to other significant ecological resources and habitats of the region, the proposed Bank will achieve an ecological improvement of 74.01 WRAP units over a period of twenty (20) years. A WRAP unit is calculated as the acreage of impact multiplied by the WRAP score per acre of impact.

TEMPORAL LAG ASSESSMENT:

The "Joint State/Federal Mitigation Bank Crediting Procedure for Florida (Operational Draft)" (US Army Corps of Engineers, Oct 1998), describes the process utilized by the applicant and the District to assign temporal lag factors to the achievement of various goals proposed by the Platt's Creek Mitigation Bank. The temporal lag factors are assigned based on the estimated time lapse from the restoration activities until the proposed habitat type offsets the adverse wetland impacts by achieving the ecological improvement anticipated in the functional assessment. The ecological improvement anticipated on each of the proposed habitat areas was multiplied by the temporal lag factors based on the anticipated achievement of the assessed component of the mitigation area. The temporal lag assessment results in a reduction of 4.5 credits from the total credits, for a net availability of 69.51 credits.

RISK ASSESSMENT:

The likelihood of mitigation success is not fully accounted in the functional and temporal lag assessments. Therefore, to account for the likelihood of mitigation success a risk assessment was performed for the Platt's Creek Mitigation Bank (Bank). The risk factors assessed for this Bank include: the uncertainty of the significant effort and time for the restoration activities to convert the existing citrus grove back into a fully functional mature wetland system, uncertainty for adequate post-restoration hydrologic regime on all habitats proposed, the vulnerability of the mitigation area for the establishment of plant communities other than those proposed and the reduction in ecological value that could result, the uncertainty of future land use changes on the surrounding parcels that could result in secondary impacts to the proposed system, lack of ability to perform fire management activities and the potential catastrophic events that could delay the restoration of the site.

The mitigation activities were evaluated using the aforementioned risk factors and were assigned the corresponding risk value, based on the level of risk applicable (one (1) for no risk to three (3) for high risk). Since the proposed restoration activities involve the restoration of an existing citrus grove into a functional wetland system, for the restoration activities alone a high-risk value of three (3) was considered appropriate. However, the following were also considered when assigning the level of risk; the proposed activities will occur within lands targeted for the restoration of regionally significant ecological resources (e.g. Comprehensive Everglades Restoration Plan, Save Our Rivers and the Indian River Restoration Plan), the restoration activities includes a dense and diverse planting scheme of targeted native plant

species within the proposed habitat areas, the site will be graded to ensure an adequate hydrologic regime and the site will be managed in perpetuity as a natural wetland preserve with restrictions of use. Also, this site is contiguous to other preserved conservation areas as shown in page 3 of Exhibit 10. The aforementioned considerations resulted in the lowering of the calculated risk value to a moderate-risk with a score of two (2).

The amount of credits necessary to offset proposed impacts is adjusted based on the risk calculated. In order to account for the risk that this Bank will not achieve full functional maturity within the temporal lag time frames and to the extent anticipated on the functional assessment, the impacts must be offset with credits equal to two (2) times the amount of WRAP units of impact, as required by Special Condition 11.

CREDIT RELEASE SCHEDULE:

The release of mitigation credits is based on the achievement of specific goals and/or completion of activities that award the release of limited quantities of the total available credits. Activities that will result in the release of credits are the preservation of the area through the recording of the conservation easement, the completion of mitigation activities such as site grading and planting of appropriate vegetation, and achievement of the success criteria goals at each level for each of the habitat areas proposed. The credits available for sale will be released as indicated in the approved credit release schedule included as Exhibit 7 and as required by Special Condition 7. In the event that at any given time the bank is not in material compliance with the terms and conditions of this permit, no mitigation credits may be withdrawn as required by Special Condition 16, and section 4.4.5.6 of the District's Basis of Review.

The following table summarizes the allocation of credits, as adjusted for temporal lag, by the activities proposed:

Primary Mitigation Activity	Acres	Credits Released	
		Forested/# of Credits	Herbaceous/# of Credits
Submittal of Recorded Conservation Easement	82.4	[0%][0]	[0%][0]
Certification of Appropriate Site Grading		[0%][0]	[0%][0]
Submittal of Time Zero Report After Planting		[15%][3.53]	[15%][6.90]
Compliance with First Year Performance Criteria		[50%][11.77]	[50%][22.99]
Compliance with Second Year Performance Criteria		[15%][3.53]	[15%][6.90]
Compliance with Third Year Performance Criteria		[10%][2.35]	[10%][4.60]
Compliance with Fourth Year Performance Criteria		[5%][1.18]	[5%][2.30]
Compliance with Fifth Year Performance Criteria		[5%][1.18]	[5%][2.30]

Totals	82.4	100%	100%

Page 2 of Exhibit 7 provide a more detailed description of the phases and anticipated completion dates.

SUCCESS CRITERIA:

The success criteria proposed for each mitigation activity is designed to quantify improvements in site hydrology and vegetative structure and composition that represents the targeted habitat types, as required by Special Condition 17. In order to address the temporal aspects of the proposed restoration activities during the initial monitoring and maintenance period, the success criteria was divided by phases. By phasing the success criteria parameters, specific thresholds of coverage and survivorship for the planted material can be assessed on an annual basis. The specific success criteria are included in pages 12 to 13 of Exhibit 6B.

Wetland Inventory :

CONSTRUCTION NEW -Platt's Creek Mitigation Bank and Water Quality Improvement ONSITE

Pre-Development		Post-Development				
	Total Existing	Impacted	Undisturbed	Enhanced	Preserved	Restored/ Created
Fresh Water Forested	.00					29.65
Fresh Water Herbaceous	.00					52.75
Total:	.00					82.40

LEGAL ISSUES:

CONSERVATION EASEMENT AND RELATED DOCUMENTATION:

The Platt's Creek Mitigation Bank wetlands will be placed under a conservation easement. A draft conservation easement has been provided and is included as Exhibit 9 of this permit. The District's Office of Counsel has reviewed and approved the conservation easement. The permittee is required to execute and record a conservation easement that is in substantial conformance with Exhibit 9 no later than thirty (30) days after permit issuance, but prior to the commencement of construction activities within the site, as required by Special Condition 23.

TRANSFERENCE OF CREDITS:

The permittee is required to apply for a minor modification to this permit whenever credits from the Platt's Creek Mitigation Bank (Bank) are to be sold, as required by Special Condition 10.

A ledger of all transactions regarding debits and credits from the Bank, including those for permits issued for wetland impact mitigation from any permitting agency will be kept by the South Florida Water Management District (District). The applicant is responsible for coordinating an interagency notification system with the District to ensure that credits are accurately accounted for and that all agencies are aware of the credits available for use within the Bank.

FINANCIAL RESPONSIBILITY:

LONG-TERM MANAGEMENT FUND:

A trust fund for the long term management of the Platt's Creek Mitigation Bank (Bank) will be established by the applicant, in substantial conformance with the District approved Trust Fund for Long-term Management included as Exhibit 12A, as required by Special Condition 24. The Bank sponsor shall fully fund a Trust fund Agreement in the amount of \$722.00 per acre of mitigation area in order to implement the terms of the perpetual management plan for the Bank, as required by Special Condition 9. The full trust fund amount will be \$59,492.80, Exhibit 12 A. This represents the fund balance necessary to generate sufficient interest to manage the Bank in perpetuity. The Banker is required to adjust the amount of

financial responsibility provided for the long-term management every two (2) years and provide to the District a cost adjustment statement accompanied by supporting documentation as required by Special Condition 8, in accordance with Section 4.4.10.7 of the District's Basis of Review.

The form attached as Exhibit 12A has been reviewed and approved by Office of Counsel, as meeting the requirements of Section 4.4.10.5(a) of the District's Basis of Review.

CONSTRUCTION AND IMPLEMENTATION FUND:

The first release of mitigation credits is scheduled to occur after the 82.4 acre mitigation area is entirely constructed and certified by District staff. Therefore, a trust fund for the construction and implementation of the Platt's Creek Mitigation Bank (Bank) is not required.

CERTIFICATION AND MAINTENANCE OF THE WATER MANAGEMENT SYSTEM:

It is suggested that the permittee retain the services of a Professional Engineer registered in the State of Florida for periodic observation of construction of the surface water management (SWM) system. This will facilitate the completion of construction completion certification Form #0881 which is required pursuant to Section 10 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, and Rule 40E-4361(2), Florida Administrative Code (F.A.C.).

Pursuant to Chapter 40E-4 F.A.C., this permit may not be converted from the construction phase to the operation phase until certification of the SWM system is submitted to and accepted by this District. Rule 40E-4.321(7) F.A.C. states that failure to complete construction of the SWM system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization unless a permit extension is granted.

For SWM systems permitted with an operating entity who is different from the permittee, it should be noted that until the permit is transferred to the operating entity pursuant to Rule 40E-1.6107, F.A.C., the permittee is liable for compliance with the terms of this permit.

The permittee is advised that the efficiency of a SWM system will normally decrease over time unless the system is periodically maintained. A significant reduction in flow capacity can usually be attributed to partial blockages of the conveyance system. Once flow capacity is compromised, flooding of the project may result. Maintenance of the SWM system is required to protect the public health, safety and the natural resources of the state. Therefore, the permittee must have periodic inspections of the SWM system performed to ensure performance for flood protection and water quality purposes. If deficiencies are found, it is the responsibility of the permittee to correct these deficiencies in a timely manner.

RELATED CONCERNS:**Water Use Permit Status:**

The applicant has submitted water use authorization requests (Applications # 021122-10 & 021122-11) for onsite dewatering and temporary irrigation. Both of these applications are under review at the date of this report. Based on the information provided the proposed water use activities will not result in adverse water resource impacts. No other Water Use activity have been proposed to this time. This permit does not release the permittee from obtaining all necessary Water Use authorization(s) prior to the commencement of activities which will require a Water Use authorization not included under the review of applications 021122-10 & 021122-11.

Potable Water Supplier:

Potable water is not required for this project.

Waste Water System/Supplier:

Wastewater service is not required for this project.

Right-Of-Way Permit Status:

A Right-of-Way permit is not required for this project.

DRI Status:

This project is not a DRI.

SWIM Basin:

This project is located within the Indian river Lagoon SWIM basin.

Water Preserve Area/ CERP:

This project lies within, or immediately adjacent to, an area which has previously been identified as a possible location for a Comprehensive Everglades Restoration Program (CERP) project. The project is located within the Indian River Lagoon Feasibility Study CERP boundary. Environmental Resource Regulation staff have coordinated review of this application with the Indian River Lagoon Feasibility Study Project Manager who has determined that this application is not incompatible with the future restoration goals for this CERP project, as currently envisioned.

Historical/Archeological Resources:

The District has received correspondence from the Florida Department of State, Division of Historical Resources indicating that the agency has no objections to the issuance of this permit.

DCA/CZM Consistency Review:

The District has not received a finding of inconsistency from the Florida Department of Community Affairs or other commenting agencies regarding the provisions of the federal Coastal Zone Management Plan.

Third Party Interest:

No third party has contacted the District with concerns about this application.

Enforcement:

There has been no enforcement activity associated with this application.

STAFF RECOMMENDATION:

The Staff recommends that the following be issued :

Construction and operation of a 19.6 acre stormwater treatment facility and an 82.40 acre mitigation bank (102 total acres) to be known as Platt's Creek Mitigation Bank and Water Quality Improvement Project.

Based on the information provided, District rules have been adhered to.

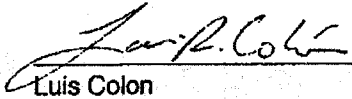
Staff recommendation is for approval subject to the attached General and Special Conditions.



STAFF REVIEW:

NATURAL RESOURCE MANAGEMENT DIVISION APPROVAL

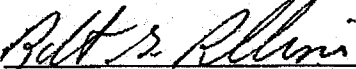
ENVIRONMENTAL EVALUATION


Luis Colon

SUPERVISOR


Donald L. Medellin

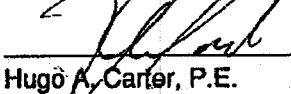
DIVISION DIRECTOR :


Robert G. Robbins

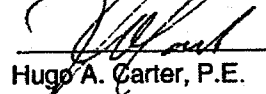
DATE: 3-31-03

SURFACE WATER MANAGEMENT DIVISION APPROVAL

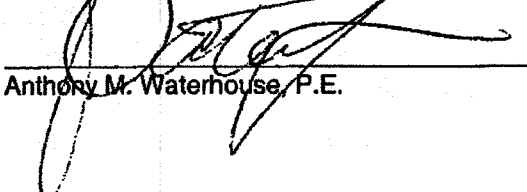
ENGINEERING EVALUATION


Hugo A. Carter, P.E.

SUPERVISOR


Hugo A. Carter, P.E.

DIVISION DIRECTOR :


Anthony M. Waterhouse, P.E.

DATE: 3/28/03

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on April 10, 2008.
2. Activities associated with the implementation of the mitigation, monitoring and maintenance plan(s) shall be completed in accordance with the work schedule attached as page 2 of Exhibit No. 7. Any deviation from these time frames will require prior approval from the District's Environmental Resource Compliance staff. Such requests must be made in writing and shall include (1) reason for the change, (2) proposed start/finish and/or completion dates; and (3) progress report on the status of the project development or mitigation effort.
3. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
4. All correspondence, submittals and notifications required by the following permit conditions must be submitted to the South Florida Water Management District in the Martin/St Lucie service center office (210 Atlanta Ave., Stuart, Florida 34994).
5. Any future changes in land use or treatment of wetland and/or upland areas may require a permit modification and additional review by District environmental/engineering staff. Prior to the permittee instituting any future changes not authorized by this permit, the permittee shall notify the District of such intentions for a determination of any necessary permit modifications.
6. The permittee (St. Lucie County Board of County Commissioners) shall be responsible for the successful completion of the mitigation bank, including the monitoring and maintenance of the bank for the duration of the mitigation plan, in accordance with the attached exhibits.
7. The work schedule shown in page 2 of Exhibit No.7 shall be implemented regarding the release of credits for sale within the mitigation bank.
8. (A) The permittee shall, every two (2) years, adjust the amount of financial responsibility provided for the long-term management of the bank. A cost adjustment statement, along with supporting verifiable documentation, shall be submitted to the District for review and approval. The long term management cost adjustment shall include inflation as well as changes in the cost to carry out the long term management conditions of this permit (i.e. nuisance/exotic species control, consultant fees, monitoring activities and reports, and any other costs associated with long-term management). If interest generated by the trust fund is less than the amount of long-term management cost estimates, the permittee shall, upon District approval of the cost adjustment statement, increase the value of the trust fund to reflect the new estimate within sixty (60) days. If the interest generated by the trust fund is greater than the total amount of the current cost estimate, the permittee may reduce the value of the trust fund to reflect the new estimate upon receiving District approval of the cost adjustment statement.

(B) The permittee shall adjust the amount of the trust fund at times other than the cost adjustment period when the costs associated with compliance with the permit conditions exceed the current amount of financial responsibility and such financial assurances are deemed necessary to ensure compliance with the permit conditions.
9. The permittee shall establish a trust fund agreement meeting the criteria in Section 4.4.10 of the District's Basis of Review and in conformance with attached Exhibit 12A. The trust fund agreement must be approved by the District prior to the release of credits from the mitigation bank. The trust fund agreement shall provide for the following:

(A) Identifies the District as the primary beneficiary, with procedures for other named permitting agencies to draw on the bond(s) or other mechanism(s) pursuant to an interagency agreement. No withdrawal shall be permitted without the prior written approval of the District.

(B) If the terms and conditions of the permit are not met, the financial mechanism(s) may be drawn upon by the District upon first demand after providing reasonable notice to the permittee.

SPECIAL CONDITIONS

- (C) The trust fund agreement shall be effective and fully funded prior to the withdrawal of credits, in accordance with Exhibit 12A. The trust fund is to be funded in the amount of \$722.00 per acre to a full amount of \$59,492.80. These amounts shall be subject to adjustment pursuant to Special Condition 8.
- (D) The financial mechanism(s) shall not be canceled or terminated without the prior written approval of the District; nor shall it terminate prior to the completion of applicable permit conditions.
- (E) The principle amount of the trust fund shall not be reduced or withdrawn without the prior written approval of the District.
- (F) Interest on the trust fund may only be withdrawn by the operating entity for the sole purpose of complying with the terms of the long-term management plan. Interest from the fund shall not be withdrawn without the written approval of the District.
10. The permittee must submit a minor permit modification in conjunction with the purchase of any credits from the bank, within thirty (30) days following the purchase of the credits. The minor modification shall consist of a ledger containing the name, permit/application number and authorization date of the project for which the credits were purchased, authorizing agency, number and type (herbaceous and/or forested) of credits purchased, and acreage of wetland impacts offset, and remaining number and type of credits available at the bank. No fee is required for such minor modifications, pursuant to section 373.4136(5)(d), F.S.
 11. The credit assessment method in place for this bank, and which will also be utilized to deduct credits from the bank in accordance with section 373.414(18), F.S., includes a functional assessment methodology, a temporal lag assessment methodology, and a risk assessment methodology. The functional assessment and temporal lag assessment methodologies were incorporated into the number of credits available at the bank and are more fully discussed in the staff report. The risk assessment methodology, established by this Special Condition, will be assessed when credits are deducted from the bank. In order to fully account for the likelihood of mitigation success, or risk of mitigation failure other than as already accounted for and specified in this permit, applicants offsetting impacts in this bank must purchase the number of credits equal to two (2) multiplied by (X) Wetland Rapid Assessment Procedure (WRAP) units of impact, where WRAP units of impact equals (=) WRAP score of impact multiplied by (X) acres of impact.
 12. Hunting activities on the site shall be limited to only those activities that may be required for the proper management and control of exotic and nuisance wildlife. Hunting is not allowed except by the permittee authorized personnel. This permit does not authorize the construction of any paths, roads, access trails, blinds, or any other facilities or infrastructure for the purposes of hunting. Such facilities may require modification of this permit. This permit does not relieve the permittee, and/or authorized personnel of the necessity to comply with hunting with hunting regulations of the Florida Fish and Wildlife Conservation Commission, U.S. Fish and Wildlife Service and/or any other regulatory agencies. Further restrictions on hunting activities and/or restriction on mitigation credits sales, may be implemented by the District if compliance inspections or other information reveals that these activities are detrimental to the wetland functions and values of this project.
 13. District determination of the suitability of this bank to offset impacts within the mitigation service area (MSA), including assessment of potential adverse cumulative impacts to the water resources, will be conducted on a project-by-project basis in accordance with criteria in effect at the time of application for wetland impact authorization.
 14. Facilities other than those stated herein shall not be constructed without an approved modification of this permit. Facilities for the purpose of hiking, fishing, hunting and research are not authorized with this permit.
 15. All contractors must be provided with a copy of the staff report and permit conditions prior to the commencement of construction. The permittee is responsible for ensuring that all contractors adhere

SPECIAL CONDITIONS

to the project construction details and methods indicated on the attached permit exhibits and described herein.

16. Project construction, implementation, maintenance/monitoring and long term management shall be accomplished in accordance with the attached exhibits and in accordance with the special conditions outlined herein. Additionally, issuance of this permit is based on the District's reliance on information submitted and commitments made by the permittee that the proposed mitigation design presented in Exhibits 5 to 10 will be achieved and that the targeted success criteria outlined in the staff report and in pages 12 to 13 of Exhibit 6B will be met. If at any time, the District determines that the targeted success criteria have not or are not being met and/or that the milestones events identified in the credit release schedule contained in page 2 of Exhibit 7 have not been satisfactorily accomplished, then no mitigation credits shall be withdrawn or released until it is demonstrated that the targeted success criteria and/or milestones events have been achieved.
17. The success criteria, for the interim monitoring and maintenance period, is included in this permit as pages 12 to 13 of Exhibit 6B.
18. The District reserves the right to require remedial measures to be taken by the permittee if monitoring or other information demonstrates that adverse impacts to onsite or offsite wetlands, upland conservation areas or buffers, or other surface waters have occurred due to project related activities.
19. Operation of the surface water management system shall be the responsibility of the St. Lucie County Board of County Commissioners.
20. A mitigation program for the Platt's Creek Mitigation Bank shall be implemented in accordance with Exhibits No. 6A and 6B. The permittee shall restore 10.33 acres of Hydric Hammock, 39.24 acres of Freshwater Marsh, 13.51 acres of Hydric Flatwoods and 19.32 acres of Flood Plain Forest Habitats.
21. Any changes to the proposed plant material, as included in pages 5 to 8 of Exhibit 6A, will require a modification of this permit in accordance with the rules active at the time of application for permit modification.
22. A maintenance program shall be implemented in accordance with Exhibit No. 6B for the restored wetlands on a regular basis to ensure the integrity and viability of those areas as permitted. Maintenance shall be conducted in perpetuity to ensure that the conservation area is maintained free from Category 1 exotic vegetation (as defined by the Florida Exotic Pest Plant Council at the time of permit issuance) immediately following a maintenance activity. Coverage of exotic and nuisance plant species shall not exceed ten percent (10%) of total cover between maintenance activities. In addition, the permittee shall manage the conservation areas such that exotic/nuisance plant species do not dominate any one section of those areas.
23. (A) Prior to the release of credits, the permittee shall submit two certified copies of the following; recorded conservation easement for the mitigation area and associated buffers, site map of conservation easement, legal description of conservation easement, Survey of conservation easement (prepared by a State of Florida Certified Professional Surveyor), Certified appraisal of the fair market value of the interest to be conveyed and the Owner's title policy and title insurance commitment in an amount at least equal to the fair market value, as established by the certified appraisal of the fair market value of the property. Please also supply the survey data in a digital CAD (.dxf) or GIS (ESRI Coverage) format. The files should be in the Florida State Plane coordinate system, East Zone (3601) with a data datum of NAD83, HARN with the map units in feet. This data should reside on a CD or floppy disk and be submitted to the District's Environmental Resource Compliance Division in the service area office where the application was submitted.

(B) A conservation easement shall be recorded within thirty (30) days of District approval of the information required in sub-section (A) of this special condition. The recorded easement shall be granted to the District and the Florida Department of Environmental Protection and shall be in substantial conformance with Exhibit 9. Any proposed modifications to the approved form must

SPECIAL CONDITIONS

receive prior written consent from the District. The easement must be free of encumbrances or interests in the easement which the District determines are contrary to the intent of the easement and shall contain the activity restrictions set forth in section 704.06(1) Florida Statutes. In the event it is later determined that there are encumbrances or interests in the easement which the District determines are contrary to the intent of the easement, the permittee shall be required to provide release or subordination of such encumbrances or interests. No credits shall be released until the District has received a certified copy of the District approved recorded conservation easement.

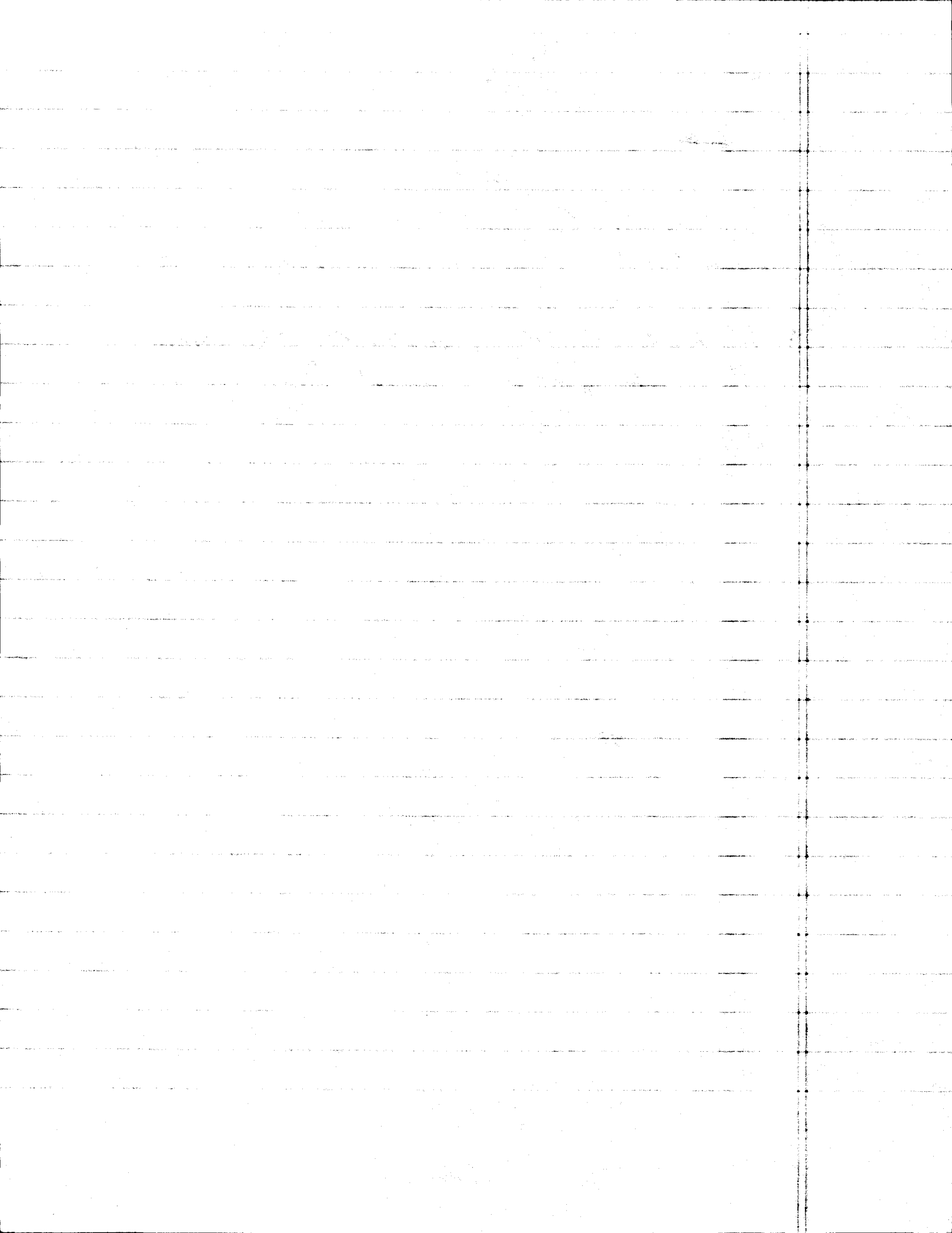
24. No earlier than 60 days prior to the first scheduled release of mitigation credits, the permittee shall provide the District with documentation that a trust fund in the amount of \$59,492.80 has been established and dedicated to the long term management of the Platt's Creek Mitigation Bank. The trust fund shall be in substantial conformance with Exhibit 12A.
25. The authorization for construction of the surface water management system is issued pursuant to the water quality net improvement provisions referenced in Rule Section 40E-4.303(1), Florida Administrative Code; therefore, the state water quality certification is waived.
26. All Savanna's Preserve wetlands and estuarine habitat contained within the North St. Lucie River Basin are excluded from the Platt's Creek Mitigation Bank Mitigation Service Area, as shown on page 1 of Exhibit 10.
27. A monitoring program shall be implemented in accordance with Exhibit No. 6B. The monitoring program shall extend for a period of 5 years with annual reports submitted to District staff. At the end of the first monitoring period the mitigation area shall contain an 80% survival of planted vegetation. The 80% survival rate shall be maintained throughout the remainder of the monitoring program, with replanting as necessary. If native wetland, transitional, and upland species do not achieve an 80% coverage within the initial two years of the monitoring program, native species shall be planted in accordance with the maintenance program. At the end of the 5 year monitoring program the entire mitigation area shall contain an 80% survival of planted vegetation and an 80% coverage of desirable obligate and facultative wetland species.

Platts Creek

~~6004~~

- Area of construction and L.V.
breakdown (but I think it's all previous).

→ 85 acres since it includes removing
Mit. Bank ^{removal} which channel falls on.



HAZEN AND SAWYER

Environmental Engineers & Scientists

Hazen and Sawyer, P.C.
Mardi Executive Center
1905 South 25th Street, No. 103
Fort Pierce, FL 34947
772 489-0066
Fax: 772 489-0299

To: **SOUTH FLORIDA WATER MANAGEMENT DISTRICT**

St. Lucie/Martin Service Center

Address: 780 S.E. Indian Street

Stuart, Florida 34997

Date: April 9, 2008

Job: St. Lucie County Platt's Creek

SFWMD Permit No. 56-00003-M

Attention: Hugo Carter

We Are Sending You: ☒ Herewith ☐ Under Separate Cover
☐ Reports ☐ Tracings ☐ Prints
☐ Shop Drawings ☐ Specifications
☐ Samples ☐ Contracts ☐ Other

Sent By: ☐ Blue Printer ☐ Hold for Pickup
☐ Messenger ☐ Mail
☐ UPS ☒ Federal Express

No.	Sheet No.	Date	Description
1			Application - Original signed
4			Application - Copies
5			Set of Drawings - Signed and Sealed
1			Check in the amount of \$500.00

Remarks:

RECEIVED
APR 10 2008
WOLSC

Transmitted:

- ☐ At Your Request
☐ For Your Information
☐ For Your Comments
☒ For Your Approval
☐ For Distribution
☐ For Correction
☐ Furnish as Submitted
☐ Furnish as Corrected
☐ Revise and Resubmit

Copies to:

Don West
Jason Bessey
Rob Taylor

Very truly yours
Hazen and Sawyer, P.C.

File: 40259-001-5.0

By: Caitlin T. Feikle
Caitlin T. Feikle, E.I.



ALL ISSUING AGENCIES Permit History

Permit No:56-00003-M

Project Description:PLATT'S CREEK MITIGATION BANK AND WATER QUALITY IMPROVE

April 11, 2008

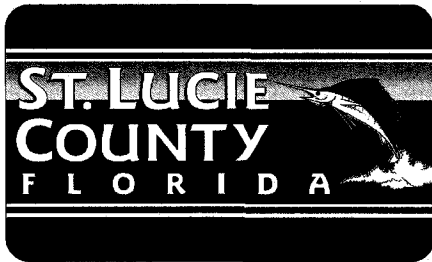
Issue Date	App#	APP Description	Purpose	M/O	Permittee	Project
10-APR-03	010831-18	MIT NEW INDIVIDUAL	CONSTRUCT/OPERATE		ST LUCIE COUNTY BOARD OF COUNT	PLATT'S CREEK MITIGATION BANK AND WATER QUALI
	080410-9	ERP MOD GENERAL	STANDARD GEN. PERMIT		ST LUCIE COUNTY PUBLIC WORKS	PLATT CREEK STORMWATER SWALE MODIFICATIONS

* Denotes application was not issued by SFWMD.
Issued by Miami-Dade County or Broward County.

St. Lucie County

Platt's Creek Stormwater Management Facilities and Wetland Restoration

Outlet Swale Modifications



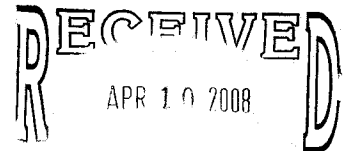
Environmental Resource Permit Application

080410-9 =

ORIGINAL SUBMITTAL

APR 10 2008

M / SL



HAZEN AND SAWYER
Environmental Engineers & Scientists

April 2008

St. Lucie County Board of Commissioners
Platt's Creek Stormwater Management Facilities
and Wetland Restoration

Outlet Swale Modifications

ERP Application

Table of Contents

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Section 2	ERP Application
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Appendix B	Calculations for Conveyance Swale Adequacy

List of Exhibits

Exhibit C1	USGS Map
Exhibit C2	Location Map
Exhibit E1	Soils Map
Exhibit E2	Aerial Photograph
Exhibit E3	Land Use Map
Exhibit E4	100-Year Flood Plain Map



Section 1

Transmittal Letter

June 5, 2008

Mr. Hugo Carter
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
St. Lucie/Martin Service Center
780 S.E. Indian Street
Stuart, Florida 34997

RECEIVED
JUN 6 2008
MSLSC

**St. Lucie County
Platt's Creek Mitigation Bank and Water Quality
Improvement Project
Environmental Resource Permit (ERP) No. 56-00003-M
Application No. 080410-9**

Dear Mr. Carter:

On April 10, 2003, the South Florida Water Management District (SFWMD) issued ERP No. 56-00003-M for the construction and operation of the following:

- An 82.4 acre mitigation bank intended to provide ecological enhancement to the North St. Lucie River Watershed; and
- A 19.6 acre stormwater treatment facility intended to treat runoff from approximately 1,000 acres in St. Lucie County.

As the expiration of the ERP No. 56-00003-M approached, a meeting was held with the County, Hazen and Sawyer and the SFWMD on October 11, 2007. At the time, the County considered it preferable to remove the mitigation bank portion of the permit and desired to make other minor site modifications. As a result, an application was submitted to the SFWMD on April 10, 2008 for a permit modification which proposed eliminating the mitigation banking instrument and modifying the existing outfall. After further consideration, the County has determined that it wants to retain the mitigation bank portion of the project and is currently coordinating with the SFWMD on the appropriate manner in which to modify Application No. 080410-9, submitted on April 10, 2008.

The existing permit was active through April 10, 2008; therefore, we respectfully request a permit extension of five years as part of the application to modify the permit. This will accommodate the uncertain schedule for the balance of the construction, which is still indeterminate and

HAZEN AND SAWYER

Hugo Carter, P.E.
June 5, 2008

heavily dependent upon funding availability. Additional information regarding this schedule will be forthcoming

If you have any questions regarding this matter, please feel free to give me a call.

Very truly yours,

HAZEN AND SAWYER, P.C.



Robert B. Taylor, Jr., P.E.
Senior Associate

c: Mindy Parrott
Bob Brown
Don West
Jason Bessey
40259-001

WAIVER OF THE 90 DAY REVIEW TIME LIMIT

Permit and/or Application No.: 080410-9

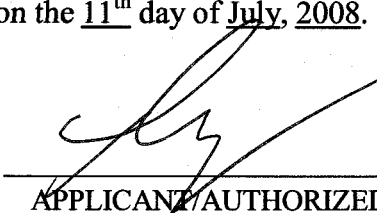
Project Name: Platt's Creek Stormwater Management Facilities and
Wetland Restoration - Outlet Swale Modifications

Applicant's Name: St. Lucie County Public Works

The undersigned applicant (or the applicant's agent retained by the applicant to apply on his behalf for Permit Application No. 080410-9), has read Section 120.60(1), Fla. Stat. and Rules 28-107.002, 40E-0.103 and 40E-1.603, Fla. Admin. Code, and fully understands the applicant's rights set forth therein.

With regard to the above-referenced permit application, the undersigned hereby waives the right set forth in the above-cited Statute and Rules to have the South Florida Water Management District's Governing Board approve or deny the instant permit application within the 90 day timeframe prescribed by Section 120.60(1), Fla. Stat., and Rules 28-107.002, 40E-0.103 and 40E-1.603, Fla. Admin. Code. This waiver is freely and voluntarily given by the undersigned on this 5th day of June, 2008.

The undersigned hereby certifies that he/she is authorized to make this waiver on behalf of the applicant. This waiver shall expire on the 11th day of July, 2008.

BY: 

APPLICANT/AUTHORIZED AGENT

Robert B. Taylor Jr., P.E.

PRINT NAME

Hazen and Sawyer, P.C.

COMPANY

(561) 997-8070

PHONE NUMBER

April 7, 2008

Hugo Carter
SOUTH FLORIDA WATER MANAGEMENT DISTRICT
Martin/St. Lucie County Service Center
780 S.E. Indian Street
Stuart, Florida 34997

St. Lucie County
Platt's Creek Stormwater Management Facilities
and Wetland Restoration
Outlet Swale Modifications
SFWMD Permit No. 56-00003-M

Dear Mr. Carter:

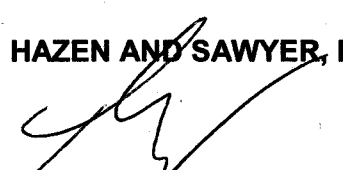
Enclosed, please find the Standard General Environmental Resources Permit (ERP) Modification submittal package for the above referenced project. Included is the appropriate fee of \$1,000.00.

St. Lucie County is proposing to amend its current ERP, No. 56-00003-M, to eliminate the mitigation banking instrument and modify the existing outfall. In place of the mitigation bank, St. Lucie County proposes a constructed wetland area consistent with the previously approved plans and details. It is our understanding that with the removal of the banking instrument, the new permit should be reclassified as a Standard General ERP.

Pertinent information for the site is provided in the attached documents. If you have any questions or need any additional information, please feel free to contact me at (772) 489-0066.

Very truly yours,

HAZEN AND SAWYER, P.C.



Robert B. Taylor, Jr., P.E.
Senior Associate

c: Donald B. West, P.E.
Jason Bessey
Joseph J. Franko, P.E.
Caitlin Feikle, E.I.

40259-001L007.doc



Section 2

ERP Application

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION/

WATER MANAGEMENT DISTRICTS/

U.S. ARMY CORPS OF ENGINEERS

JOINT APPLICATION FOR

ENVIRONMENTAL RESOURCE PERMIT/

**AUTHORIZATION TO USE
STATE OWNED SUBMERGED LANDS/**

FEDERAL DREDGE AND FILL PERMIT

sfwmd.gov

INSTRUCTIONS FOR JOINT APPLICATION FOR ENVIRONMENTAL RESOURCE PERMIT/AUTHORIZATION TO USE STATE OWNED SUBMERGED LANDS/FEDERAL DREDGE AND FILL PERMIT

INTRODUCTION

Attached is a joint application for:

- 1) activities regulated under Part IV of Chapter 373, F.S.;
- 2) activities which require authorization to use state owned submerged lands; and
- 3) activities which require a federal dredge and fill permit.

Certain activities may qualify for an exemption. If an activity qualifies for an exemption, an application is not required, although the use of this application form is the most expeditious way for the agencies to make the determination that the activity qualifies for an exemption. Attachment 2 lists activities and type of permit required for each activity.

If you have any questions please contact the staff of the nearest office of either the Florida Department of Environmental Protection (DEP) or a Water Management District (WMD).

PROCESSING AGENCY/DISTRICT SERVICE CENTERS

The Department of Environmental Protection ("Department" or "DEP") permits some types of activities, and the Water Management Districts ("WMDs") permits others. See Attachment 1, DEP/WMD Permitting Responsibilities, if you do not know which agency should receive your application. Environmental Resource Permit Applications shall be made to the appropriate District/Department Service Center serving the area in which the activity is proposed. Attachment 4 designates the appropriate Services Centers for each geographic area.

COPIES/APPLICATION FEES

Submit an original signed application form plus **four** copies of the form, and **five** complete sets of all the requested drawings and other information to the appropriate DEP or WMD office. Submit the appropriate fee with your application. Application fees are listed in Attachment 3.

DISTRIBUTION TO THE U.S. ARMY CORPS OF ENGINEERS

When activities are proposed in, on or over wetlands or other surface waters, a copy of the application will be forwarded to the Army Corps of Engineers (ACOE) by the reviewing agency. The ACOE will advise you of any additional information required to obtain a federal dredge and fill permit. It is not necessary for the applicant to submit a separate application to the ACOE. The information requested in this application form may be more than required to make a complete application to the Corps. However, it is useful and essential for subsequent evaluation. Reducing unnecessary paperwork and delays is a continuing Corps goal.

DISTRIBUTION TO THE WATER MANAGEMENT DISTRICT FOR STATE LAND APPROVAL

The Water Management District will process all applications for authorization to use state owned submerged lands for those projects for which the WMD also processes the Environmental Resource Permit pursuant to Rule 18-21, F.A.C.

SECTION B

**INFORMATION FOR NOTICED
GENERAL ENVIRONMENTAL RESOURCE PERMITS**

Not Required in this Application.

SECTION C

Environmental Resource Permit Notice of Receipt of Application

This information is required in addition to that required in other sections of the application. Please submit five copies of this notice of receipt of application and all attachments with the other required information. **PLEASE SUBMIT ALL INFORMATION ON PAPER NO LARGER THAN 2' x 3'.**

Project Name:	Platt's Creek Stormwater Management Facilities and Wetland Restoration, Outlet Swale Modifications
County:	St. Lucie County
Owner:	Donald B. West, P.E.
Applicant:	Donald B. West, P.E.
Applicant's Address:	2300 Virginia Avenue, Ft. Pierce, Florida 34982

1. Indicate the project boundaries on a USGS quadrangle map. Attach a location map showing the boundary of the proposed activity. The map should also contain a north arrow and a graphic scale; show Section(s), Township(s), and Range(s); and must be of sufficient detail to allow a person unfamiliar with the site to find it.
2. Provide the names of all wetlands, or other surface waters that would be dredged, filled, impounded, diverted, drained, or would receive discharge (either directly or indirectly), or would otherwise be impacted by the proposed activity, and specify if they are in an Outstanding Florida Water or Aquatic Preserve:
3. Attach a depiction (plan and section views), which clearly shows the works or other facilities proposed to be constructed. Use multiple sheets, if necessary. Use a scale sufficient to show the location and type of works.
4. Briefly describe the proposed project (such as "construct a deck with boatshelter", "replace two existing culverts", "construct surface water management system to serve 150 acre residential development"):
5. Specify the acreage of wetlands or other surface waters, if any, that are proposed to be disturbed, filled, excavated, or otherwise impacted by the proposed activity:
6. Provide a brief statement describing any proposed mitigation for impacts to wetlands and other surface waters (attach additional sheets if necessary):

FOR AGENCY USE ONLY

Application Name:
Application Number:
Office where the application can be inspected:

SECTION C

RESPONSES

1. See Exhibit C1 and C2.
2. Platt's Creek and the North Fork of the St. Lucie River will receive discharge. These surface waters are within the North Fork of the St. Lucie River drainage basin which is a subbasin of the Indian River Lagoon Watershed.
3. Plans included in Appendix A.
4. Construction of a permanent outlet swale to convey treated runoff from the stormwater detention pond to the receiving waters. In the future, work (under this permit) includes restoration and construction of the adjacent 85 acre area to the previously permitted wetland/upland communities.
5. 0.00 acres of wetlands.
6. There are no wetland impacts.

Exhibit C1

USGS Map

[illegible]

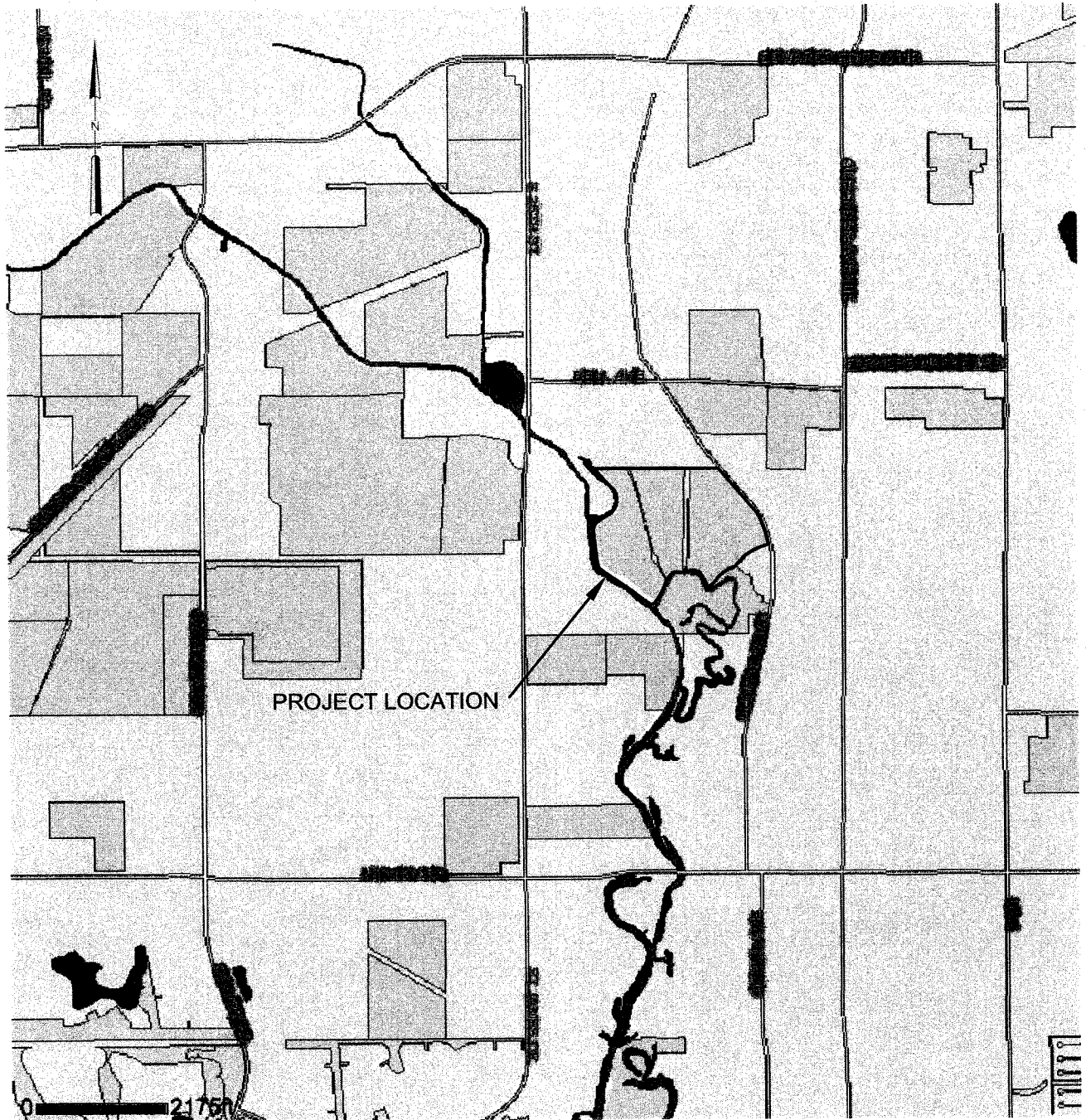
EXHIBIT C1
USGS MAP

NATIONAL GEODETIC VERTICAL DATUM OF 1929
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 1 FOOT IN THE INDIAN RIVER
AND 3 FEET ALONG THE OCEAN

HAZEN AND SAWYER
Environmental Engineers & Scientists

Exhibit C2

Location Map



HAZEN AND SAWYER
Environmental Engineers & Scientists

U.S. FISH AND WILDLIFE SERVICE
NORTH DAKOTA DIVISION
FACILITY NO. 21750
FEDERAL AID TO ADAPTATION NUMBER 2/71

PLATT'S CREEK STORMWATER MANAGEMENT
FACILITIES AND WETLAND RESTORATION

EXHIBIT C2
LOCATION MAP

SECTION D

**INFORMATION FOR STANDARD, GENERAL OR
INDIVIDUAL ENVIRONMENTAL RESOURCE PERMITS
FOR PROJECTS RELATED TO A SINGLE FAMILY
DWELLING UNIT**

Not Required in this Application.

SECTION E

INFORMATION FOR STANDARD GENERAL, INDIVIDUAL AND CONCEPTUAL ENVIRONMENTAL RESOURCE PERMITS FOR PROJECTS NOT RELATED TO A SINGLE FAMILY DWELLING UNIT

Please provide the information requested below if the proposed project requires either a standard general, individual, or conceptual approval environmental resource permit and is not related to an individual, single family dwelling unit, duplex or quadraplex. The information listed below represents the level of information that is usually required to evaluate an application. The level of information required for a specific project will vary depending on the nature and location of the site and the activity proposed. Conceptual approvals generally do not require the same level of detail as a construction permit. However, providing a greater level of detail will reduce the need to submit additional information at a later date. If an item does not apply to your project, proceed to the next item. **PLEASE SUBMIT ALL INFORMATION ON PAPER NO LARGER THAN 24" X 36"**.

I. Site Information

- A. Provide a map(s) of the project area and vicinity delineating USDA/SCS soil types.
- B. Provide recent aerials, legible for photointerpretation with a scale of 1" = 400 ft, or more detailed, with project boundaries delineated on the aerial.
- C. Identify the seasonal high water or mean high tide elevation and normal pool or mean low tide elevation for each on site wetland or surface water, including receiving waters into which runoff will be discharged. Include dates, datum, and methods used to determine these elevations.
- D. Identify the wet season high water tables at the locations representative of the entire project site. Include dates, datum, and methods used to determine these elevations.

II. Environmental Considerations

- A. Provide results of any wildlife surveys that have been conducted on the site, and provide any comments pertaining to the project from the Florida Game and Fresh Water Fish Commission and the U.S. Fish and Wildlife Service.
- B. Provide a description of how water quantity, quality, hydroperiod, and habitat will be maintained in on-site wetlands and other surface waters that will be preserved or will remain undisturbed.
- C. Provide a narrative description of any proposed mitigation plans, including purpose, maintenance, monitoring, and construction sequence and techniques, and estimated costs.
- D. Describe how boundaries of wetlands or other surface waters were determined. If there has ever been a jurisdictional declaratory statement, a formal wetland determination, a formal determination, a validated informal determination, or a revalidated jurisdictional determination, provide the identifying number.
- E. Impact Summary Tables:
 - 1. For all projects, complete Table 1, 2 and 3 as applicable.

2. For docking facilities or other structures constructed over wetlands or other surface waters, provide the information requested in Table 4.
3. For shoreline stabilization projects, provide the information requested in Table 5.

III. Plans

Provide clear, detailed plans for the system including specifications, plan (overhead) views, cross sections (with the locations of the cross sections shown on the corresponding plan view), and profile (longitudinal) views of the proposed project. The plans must be signed and sealed by an appropriate registered professional as required by law. Plans must include a scale and a north arrow. These plans should show the following:

- A. Project area boundary and total land area, including distances and orientation from roads or other land marks;
- B. Existing land use and land cover (acreage and percentages), and on-site natural communities, including wetlands and other surface waters, aquatic communities, and uplands. Use the Florida Land Use Cover & Classification System (FLUCCS) (Level 3) for projects proposed in the South Florida Water Management District, the St. Johns River Water Management District, and the Suwannee River Water Management District and use the National Wetlands Inventory (NWI) for projects proposed in the Southwest Florida Water Management District. Also identify each community with a unique identification number which must be consistent in all exhibits.
- C. The existing topography extending at least 100 feet off the project area, and including adjacent wetlands and other surface waters. All topography shall include the location and a description of known benchmarks, referenced to NGVD. For systems waterward of the mean high water (MHW) or seasonal high water lines, show water depths, referenced to mean low water (MLW) in tidal areas or seasonal low water in non-tidal areas, and list the range between MHW and MLW. For docking facilities, indicate the distance to, location of, and depths of the nearest navigational channel and access routes to the channel.
- D. If the project is in the known flood plain of a stream or other water course, identify the flood plain boundary and approximate flooding elevations; Identify the 100-year flood elevation and floodplain boundary of any lake, stream or other watercourse located on or adjacent to the site;
- E. The boundaries of wetlands and other surface waters within the project area. Distinguish those wetlands and other surface waters that have been delineated by any binding jurisdictional determination;
- F. Proposed land use, land cover and natural communities (acreage and percentages), including wetlands and other surface waters, undisturbed uplands, aquatic communities, impervious surfaces, and water management areas. Use the same classification system and community identification number used in III (B) above.
- G. Proposed impacts to wetlands and other surface waters, and any proposed connections/outfalls to other surface waters or wetlands;
- H. Proposed buffer zones;
- I. Pre and post-development drainage patterns and basin boundaries showing the direction of flows, including any off-site runoff being routed through or around the system; and connections between wetlands and other surface waters;
- J. Location of all water management areas with details of size, side slopes, and designed water depths;

- K. Location and details of all water control structures, control elevations, any seasonal water level regulation schedules; and the location and description of benchmarks (minimum of one benchmark per structure);
- L. Location, dimensions and elevations of all proposed structures, including docks, seawalls, utility lines, roads, and buildings;
- M. Location, size, and design capacity of the internal water management facilities;
- N. Rights-of-way and easements for the system, including all on-site and off-site areas to be reserved for water management purposes, and rights-of-way and easements for the existing drainage system, if any;
- O. Receiving waters or surface water management systems into which runoff from the developed site will be discharged;
- P. Location and details of the erosion, sediment and turbidity control measures to be implemented during each phase of construction and all permanent control measures to be implemented in post-development conditions;
- Q. Location, grading, design water levels, and planting details of all mitigation areas;
- R. Site grading details, including perimeter site grading;
- S. Disposal site for any excavated material, including temporary and permanent disposal sites;
- T. Dewatering plan details;
- U. For marina facilities, locations of any sewage pumpout facilities, fueling facilities, boat repair and maintenance facilities, and fish cleaning stations;
- V. Location and description of any nearby existing offsite features which might be affected by the proposed construction or development such as stormwater management ponds, buildings or other structures, wetlands or other surface waters.
- W. For phased projects, provide a master development plan.

IV. Construction Schedule and Techniques

Provide a construction schedule, and a description of construction techniques, sequencing and equipment. This information should specifically include the following:

- A. Method for installing any pilings or seawall slabs;
- B. Schedule of implementation of a temporary or permanent erosion and turbidity control measures;
- C. For projects that involve dredging or excavation in wetlands or other surface waters, describe the method of excavation, and the type of material to be excavated;
- D. For projects that involve fill in wetlands or other surface waters, describe the source and type of fill material to be used. For shoreline stabilization projects that involve the installation of riprap, state how these materials are to be placed, (i.e., individually or with heavy equipment) and whether the rocks will be underlain with filter cloth;

- E. If dewatering is required, detail the dewatering proposal including the methods that are proposed to contain the discharge, methods of isolating dewatering areas, and indicate the period dewatering structures will be in place (**Note: a consumptive use or water use permit may be required**);
- F. Methods for transporting equipment and materials to and from the work site. If barges are required for access, provide the low water depths and draft of the fully loaded barge; and
- G. Demolition plan for any existing structures to be removed;
- H. Identify the schedule and party responsible for completing monitoring, record drawings, and as-built certifications for the project when completed.

V. Drainage Information

- A. Provide pre-development and post-development drainage calculations, signed and sealed by an appropriate registered professional, as follows:
 - 1. Runoff characteristics, including area, runoff curve number or runoff coefficient, and time of concentration for each drainage basin;
 - 2. Water table elevations (normal and seasonal high) including aerial extent and magnitude of any proposed water table drawdown;
 - 3. Receiving water elevations (normal, wet season, design storm);
 - 4. Design storms used including rainfall depth, duration, frequency, and distribution;
 - 5. Runoff hydrograph(s) for each drainage basin, for all required design storm event(s);
 - 6. Stage-storage computations for any area such as a reservoir, close basin, detention area, or channel, used in storage routing;
 - 7. Stage-discharge computations for any storage areas at a selected control point, such as control structure or natural restriction;
 - 8. Flood routings through on-site conveyance and storage areas;
 - 9. Water surface profiles in the primary drainage system for each required design storm event(s);
 - 10. Runoff peak rates and volumes discharged from the system for each required design storm event(s); and
 - 11. Tail water history and justification (time and elevation);
 - 12. Pump specifications and operating curves for range of possible operating conditions (if used in system).
- B. Provide the results of any percolation tests, where appropriate, and soil borings that are representative of the actual site conditions;
- C. Provide the acreage, and percentages of the total project, of the following:
 - 1. impervious surfaces, excluding wetlands,
 - 2. pervious surfaces (green areas, not including wetlands),

3. lakes, canals, retention areas, other open water areas,
 4. wetlands;
- D. Provide an engineering analysis of floodplain storage and conveyance (if applicable), including:
1. Hydraulic calculations for all proposed traversing works;
 2. Backwater water surface profiles showing upstream impact of traversing works;
 3. Location and volume of encroachment within regulated floodplain(s); and
 4. Plan for compensating floodplain storage, if necessary, and calculations required for determining minimum building and road flood elevations.
- E. Provide an analysis of the water quality treatment system including:
1. A description of the proposed stormwater treatment methodology that addresses the type of treatment, pollution abatement volumes, and recovery analysis; and
 2. Construction plans and calculations that address stage-storage and design elevations, which demonstrate compliance with the appropriate water quality treatment criteria.
- F. Provide a description of the engineering methodology, assumptions and references for the parameters listed above, and a copy of all such computations, engineering plans, and specifications used to analyze the system. If a computer program is used for the analysis, provide the name of the program, a description of the program, input and output data, two diskette copies, if available, and justification for model selection.

VI. Operation and Maintenance and Legal Documentation

- A. Describe the overall maintenance and operation schedule for the proposed system.
- B. Identify the entity that will be responsible for operating and maintaining the system in perpetuity if different than the permittee, a draft document enumerating the enforceable affirmative obligations on the entity to properly operate and maintain the system for its expected life, and documentation of the entity's financial responsibility for long term maintenance. If the proposed operation and maintenance entity is not a property owner's association, provide proof of the existence of an entity, or the future acceptance of the system by an entity which will operate and maintain the system. If a property owner's association is the proposed operation and maintenance entity, provide copies of the articles of incorporation for the association and copies of the declaration, restrictive covenants, deed restrictions, or other operational documents that assign responsibility for the operation and maintenance of the system. Provide information ensuring the continued adequate access to the system for maintenance purposes. Before transfer of the system to the operating entity will be approved, the permittee must document that the transferee will be bound by all terms and conditions of the permit.
- C. Provide copies of all proposed conservation easements, storm water management system easements, property owner's association documents, and plats for the property containing the proposed system.
- D. Provide indication of how water and waste water service will be supplied. Letters of commitment from off-site suppliers must be included.
- E. Provide a copy of the boundary survey and/or legal description and acreage of the total land area of contiguous property owned/controlled the applicant.

VII. Water Use

- A. Will the surface water system be used for water supply, including landscape irrigation, or recreation.
- B. If a Consumptive Use or Water Use permit has been issued for the project, state the permit number.
- C. If no Consumptive Use or Water Use permit has been issued for the project, indicate if such a permit will be required and when the application for a permit will be submitted.
- D. Indicate how any existing wells located within the project site will be utilized or abandoned.

Introduction

St. Lucie County is proposing to modify its current ERP, No. 56-00003-M, by eliminating the mitigation banking instrument and renovating the temporary outfall. It is the intent of this application to broach only items that are proposed to change (or are affected by something that is changing). Information or detail which has already been established in the original permit and is not changing (including items like drainage, hydrology, wetland plantings, etc) will not be included in this permit application.

To give a brief overview, the original application for Platt's Creek included two distinct portions: the stormwater management facilities and the mitigation bank area. The stormwater management facilities have been constructed and include a stormwater sump, the pump station, a discharge channel, the detention pond and a temporary outlet channel. The other portion of the project, the mitigation bank including water control structures, swales and wetland plantings, has not yet been constructed.

In this phase of the project, modifications will be made to the temporary outlet channel, created to return treated flow to Platt's Creek prior to the construction of the constructed wetlands (previously the mitigation bank). All other portions of the site including the stormwater sump, the pump station, the discharge channel and the detention pond will remain unchanged as originally permitted and constructed. The mitigation bank portion of the project will remain unchanged in its proposed form however, it is proposed that the mitigation banking instrument element be eliminated. The previously proposed mitigation bank area is still proposed to be converted to a wetland restoration area. The area will be based on the plans shown in this permit application. If future modifications are proposed St. Lucie County will define the changes and update the permit as needed.

I. Site Information

- A. Soils Map, see Exhibit E1.
- B. Aerial Photograph, see Exhibit E2.
- C. According to NOAA tide prediction tables, the mean high water tide elevation in the North Fork of the St. Lucie River is 1.1 ft. NGVD and the mean low water elevation is 0.1 ft. NGVD.
- D. Water table measurements at several locations on the site were included as Exhibit E3 of the original application, No. 010831-18. Please reference the original application for more information.

II. Environmental Considerations

Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.

III. Plans

- A. Project area boundary and total land area are shown in Exhibit E2. Project site borders Sunrise Boulevard. Also, see attached plans included in Appendix A.

- B. Land Use Map, see Exhibit E3. The existing land use of the Platt's Creek parcel is citrus grove. The existing land cover of the 85 acre property is 98% citrus groves, 1% emergent aquatic vegetation and 1% reservoir.
- C. Topographic survey, see project plans in Appendix A.
- D. 100-Year Floodplain Map, see Exhibit E4.
- E. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- F. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- G. The existing outlet channel and connection to Platt's Creek will be modified as shown in Appendix A.
- H. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- I. Existing drainage includes two distinct flow paths for the site: the stormwater management facilities and the future wetlands area. The existing drainage for the stormwater management facilities includes the collection of stormwater in the sub-basin, diversion of the first 0.66-inches to the pump station, conveyance through the detention pond and effluent flow through the existing outlet channel, see Appendix A. Post Phase 1 construction drainage will be identical to the existing with the only modification being the cross section of the conveyance channel from the existing channel to the proposed swale. The drainage for the future wetlands area, existing and post Phase 1, will remain as shown in the topographic survey in the original application where onsite canals and ditches convey the water to Platt's Creek and the North Fork of the St. Lucie River. In Phase 2, however, the drainage of the site will be modified such that a portion of the stormwater may be routed through the constructed wetlands. This drainage has been described in detail in the original application; see Application No. 010831-18 for details.
- J. All existing project water management areas are presented in Appendix A. There are no proposed water management areas under this contract. All future water management areas were considered under the original application and will not be modified under this permit.
- K. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- L. No structures are proposed in Appendix A.
- M. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- N. Considered under the original application. Will not be amended under this phase. Please reference the original application for more information.
- O. The existing wet detention pond and receiving waters, Platt's Creek and the North Fork of

- F. Equipment transport will be overland.
- G. Demolition of structures is not anticipated. Demolition of the existing channel will consist of backfilling with stockpile on the site.
- H. St. Lucie County will be responsible for project monitoring and as-built certification.

V. Drainage Information

- A. Surface water management calculations are not expected to change from the original application. Appendix B contains calculations that indicate the proposed conveyance swale is ample for pond discharge. Please refer as noted below for more information.
 - 1. See surface water management calculations in Application No. 010831-18.
 - 2. See water table elevations included in Appendix D of Application No. 010831-18.
 - 3. See receiving water elevations in Appendix D of Application No. 010831-18.
 - 4. See design storm data in Appendix D of Application No. 010831-18.
 - 5. See runoff hydrograph(s) in Appendix D of Application No. 010831-18.
 - 6. See stage-storage computations in Appendix D of Application No. 010831-18.
 - 7. See stage-discharge computations in Appendix D of Application No. 010831-18.
 - 8. See flood routings in Appendix D of Application No. 010831-18.
 - 9. See Appendix D of Application No. 010831-18.
 - 10. See Appendix D of Application No. 010831-18.
 - 11. See Appendix D of Application No. 010831-18.
 - 12. See Appendix D of Application No. 010831-18.
- B. See Application No. 010831-18.
- C. Acreage and percentages not expected to change from Application No. 010831-18, see Appendix D.
- D. Floodplain storage and conveyance not applicable.
- E. Water quality treatment system not anticipated to change from original Application No. 010831-18.
- F. See original Application No. 010831-18 and Appendix B for details about original engineering methodology, assumptions and references.

VI. Operation and Maintenance and Legal Documentation

- A. The maintenance and monitoring plan is not expected to change from the original Application No. 010831-18. Please reference for details.
- B. St. Lucie County will be responsible for operation and maintenance.
- C. Easements included in original application and have not been modified. Please reference the original application for more information.
- D. Wastewater service not required on this site. Water service has already been provided.
- E. Provided under the original application. Will not be amended under this phase. Please

the St. Lucie River considered under the original permit will not be modified. The temporary outlet channel modifications are shown in Appendix A.

- P. Floating turbidity barriers will be placed upstream and downstream of all construction. Silt fences will be placed parallel to all rivers, streams and creeks between the water body and areas disturbed by construction. See plans in Appendix A.
- Q. Mitigation bank portion of project has been eliminated. Future planting details and grading plans of wetland restoration will remain as described in the original application. No changes will be made under this permit.
- R. Site grading details attached as Appendix A.
- S. Onsite material storage is not anticipated but will be stored west of the swale if required. Off site disposal of excess material; if necessary, will be the responsibility of the contractor.
- T. It is not believed that dewatering will be necessary for construction. If modifications are made, dewatering plans will be submitted by the contractor prior to construction.
- U. Not applicable.
- V. No negative impacts to off site features are anticipated during construction.
- W. The Country has segregated the remainder of the work which needs to be completed at the Platt's Creek site into two phases. The first phase (Phase I) includes an interim step not originally in the scope of the project. Phase 1 will include modifications to the existing temporary outlet swale. Phase 2 will consist of the development of constructed wetlands including all control structures, grading and planting. The future wetland area will be based on the plans as described in the original application. Since the latter phase is already permitted, the modification to the existing permit will be the interim outlet swale step.

The stormwater is of sufficient quality prior to the exiting the overflow berms (of the detention pond). Therefore, during the interim phase of the project, the stormwater system will function properly meeting all water quality and water quantity as shown in the original application.

IV. Construction Schedule and Techniques

- A. No pilings or seawall slabs are anticipated for this project.
- B. Temporary turbidity and erosion controls will be constructed around the project site at the start of site grading. Temporary control will be removed once vegetative cover has been established.
- C. Project does not involve dredging or excavation in wetland or other surface waters.
- D. Fill of wetlands and surface waters not proposed for this project.
- E. See Section E.III.T.

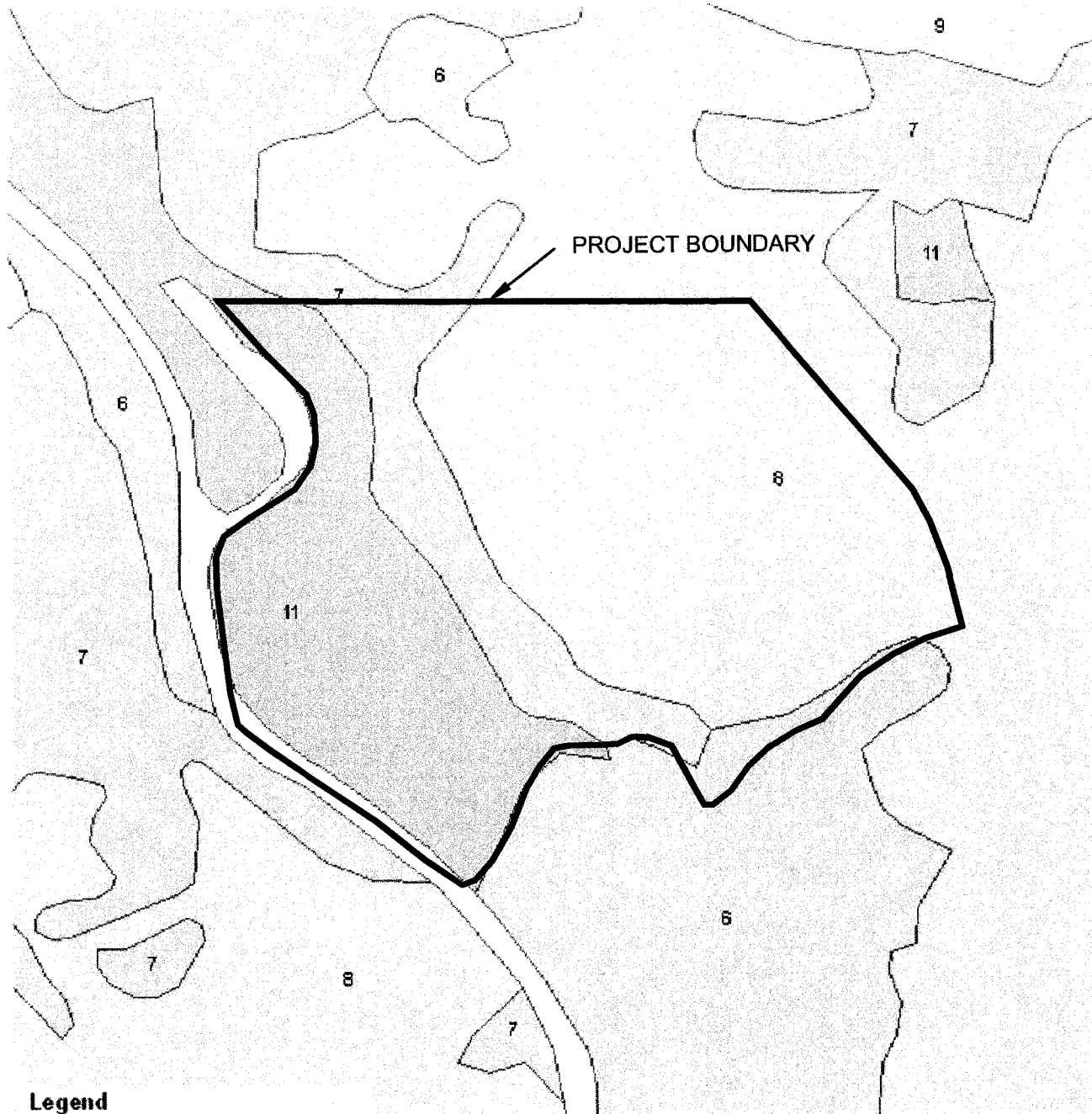
reference the original application for more information.

VII. Water Use

- A. No.
- B. General Water Use Permit No. 56-01963-W was obtained for construction of the previous phase. That construction has already been completed and this permit has expired. No Consumptive Use or Water Use Permits are needed for this project (outlet swale modifications).
- C. Not Applicable.
- D. Not Applicable.

Exhibit E1

Soils Map



Legend

SOIL DATA

UNKNOWN

CODES

0 = NOT CODED	3 = MARLAND ROCKY SOILS	6 = SAND DEPRESSIONS	10 = CENTRAL RIDGE AND DUNES
1 = WATER	4 = EVERGLADES PEAT	7 = FLATS SOILS	11 = URBAN OR MADE LANDS
2 = TIDAL SOILS	5 = MUCK AND DEPRESSIONS	8 = FLATWOOD SOILS	12 = NO SOILS DATA

HAZEN AND SAWYER
Environmental Engineers & Scientists

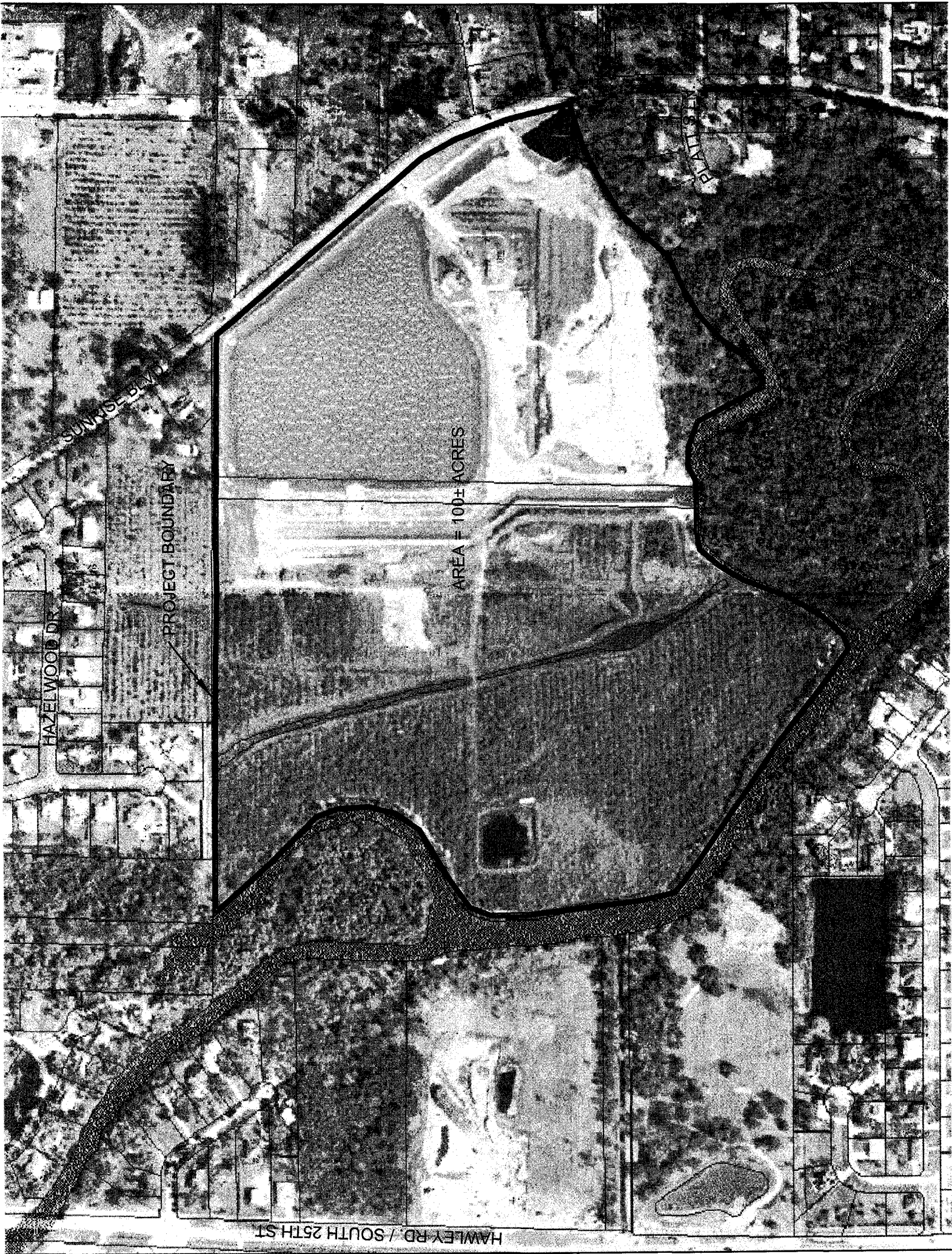
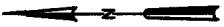
14001 EXECUTIVE CENTER
200 SOUTH 25TH STREET
FORT PIERCE, FL 34937
CERTIFICATE OF AUTHORIZATION NUMBER: 1771

PLATT'S CREEK STORMWATER MANAGEMENT
FACILITIES AND WETLAND RESTORATION

EXHIBIT E1
SOILS MAP

Exhibit E2

Aerial Photograph



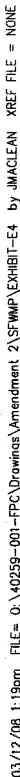
HAZEN AND SAWYER
Environmental Engineers & Scientists
MARO EXECUTIVE CENTER
1905 SOUTH 25TH STREET
FORT PIERCE, FL 34947
(888) 488-0066

PLATT'S CREEK STORMWATER MANAGEMENT
FACILITIES AND WETLAND RESTORATION

EXHIBIT E2
AERIAL PHOTOGRAPH

Exhibit E3

Land Use Map



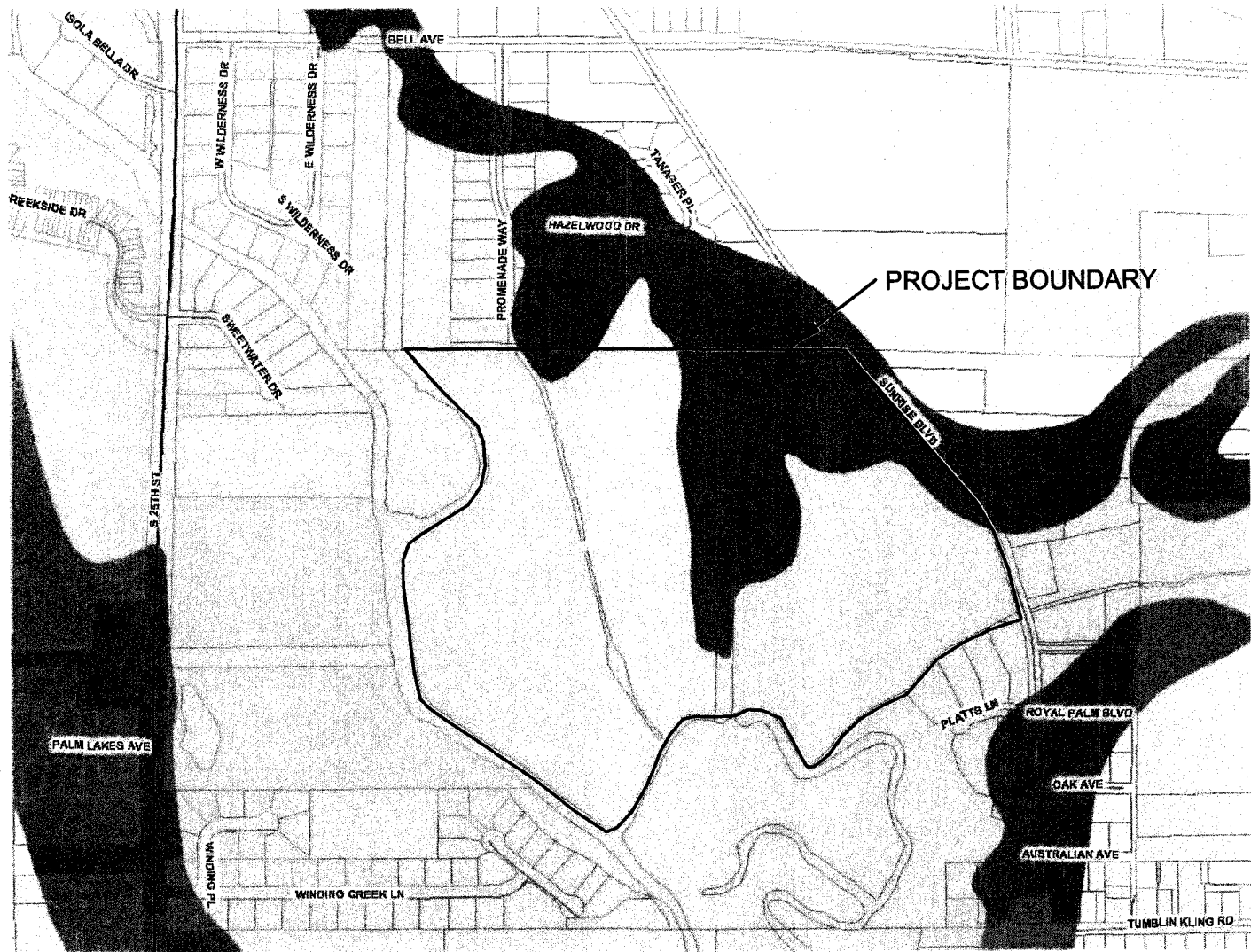
1210 = MEDIUM DENSITY	4220 = UNIMPROVED PASTURES
1400 = COMMERCIAL AND SERVICES	4270 = LIVE OAK
1480 = CEMETERIES	5110 = NATURAL RIVER, STREAM, WATERWAY
1700 = INSTITUTIONAL	5300 = RESERVIORS
1920 = INACTIVE LAND	6170 = MIXED WETLAND HARDWOODS
2110 = IMPROVED PASTURES	6172 = MIXED SHRUBS
2130 = WOODLAND PASTURES	6440 = EMERGENT AQUATIC VEGETATION
2210 = CITRUS GROVES	8200 = COMMUNICATIONS
4200 = UPLAND HARDWOOD FOREST	

MARDI EXECUTIVE CENTER
1905 SOUTH 25TH STREET
FORT PIERCE, FL. 34947
CERTIFICATE OF AUTHORIZATION NUMBER: 2771

EXHIBIT E3
LAND USE MAP

Exhibit E4

100-Year Flood Plain Map



LEGEND

Municipalities	Flood Zones
County Boundary	A
Major Roads	AE
Highway	AH
Major road	AO
Railroad	UNDES
Secondary road	VE
Streets	X
Parcels	X500
	Major Water

HAZEN AND SAWYER
Environmental Engineers & Scientists

MARDI EXECUTIVE CENTER
1905 SOUTH 25TH STREET
FORT PIERCE, FL. 34947
CERTIFICATE OF AUTHORIZATION NUMBER: 2771

PLATT'S CREEK STORMWATER MANAGEMENT
FACILITIES AND WETLAND RESTORATION

EXHIBIT E4
100 YEAR FLOOD PLAIN MAP

SECTION F

INFORMATION FOR MITIGATION BANKS

Not Required in this Application.

SECTION G

**APPLICATION FOR AUTHORIZATION TO USE
STATE OWNED SUBMERGED LANDS**

Not Required in this Application.

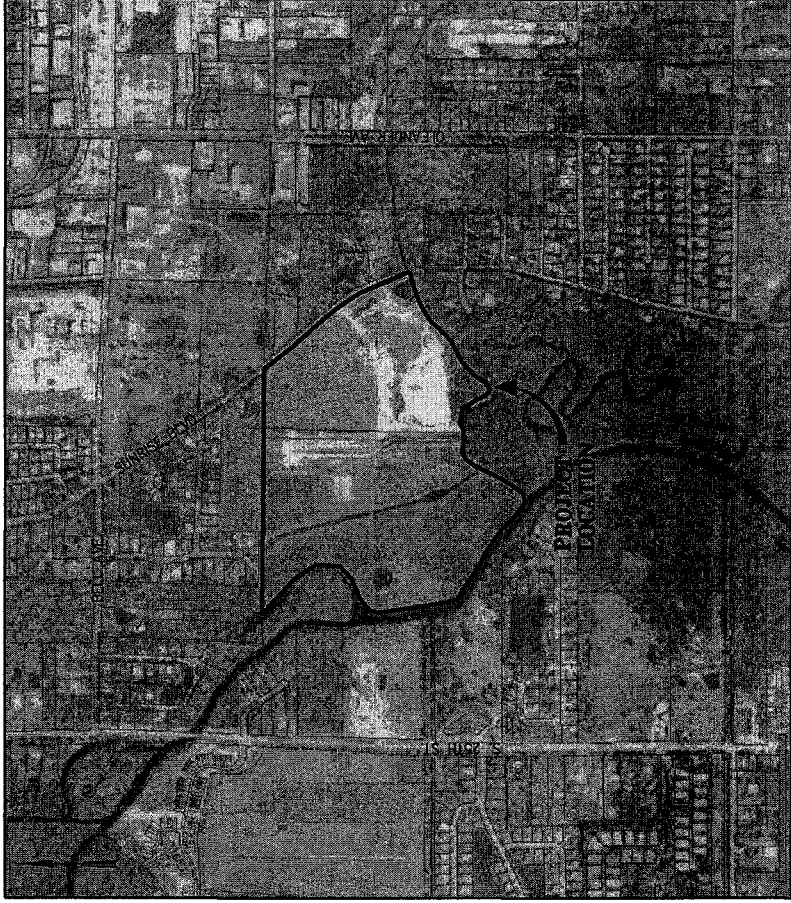
Appendix A

Construction Plans

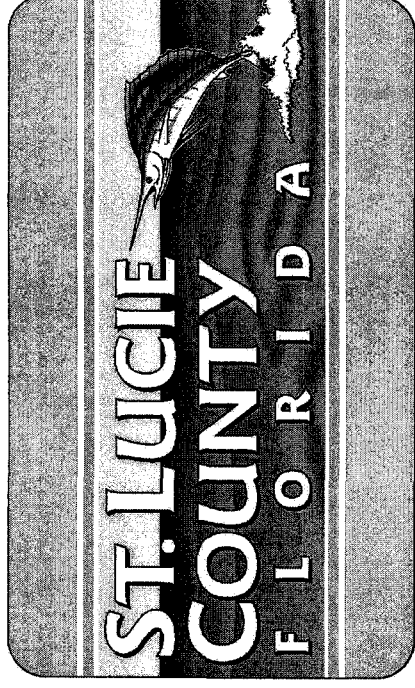
ST. LUCIE COUNTY

PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS

ST. LUCIE COUNTY PROJ. NO. 0307



LOCATION MAP
N.T.S.



DRAWING LIST		
SHEET No.	DRAWING No.	TITLE
1	G-1	GENERAL TITLE SHEET, LIST OF DRAWINGS AND LOCATION MAP SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
2	G-2	
3	C-1	CIVIL EXISTING SITE PLAN PROPOSED SITE PLAN - OUTLET SWALE MODIFICATIONS MISCELLANEOUS DETAILS
4	C-2	
5	C-3	

BOARD OF COUNTY COMMISSIONERS

JOE SMITH	DISTRICT 1
DOUG COWARD	DISTRICT 2
PAULA A. LEWIS	DISTRICT 3
CHARLES GRANDE	DISTRICT 4
CHRIS CRAFT	DISTRICT 5

COUNTY ADMINISTRATION

DOUGLAS M. ANDERSON ADMINISTRATOR

HAZENAND SAWYER
Environmental Engineers & Scientists

HASB Executive Center
1000 South Street
Fort Pierce, FL 34917
CERTIFICATE OF AUTHORIZATION NUMBER: 2771

MARCH 2008

TITLE SHEET,
LIST OF DRAWINGS
AND LOCATION MAP
SHEET 1 OF 5
DRAWING No. G-1

[illegible]

ABBREVIATIONS

SYMBOLS

GENERAL NOTES:

1. ALL ELEVATIONS REFER TO NVD (1929).
2. LOCATION, SIZE, MATERIAL, AGEMENT AND ELEVATIONS OF EXISTING UTILITIES HAVE BEEN DETERMINED FROM AVAILABLE RECORDS. THE INFORMATION IS FURNISHED AS A GUIDE FOR THE CONTRACTOR. THE ENGINEER AND COUNTY DO NOT GUARANTEE THE ACCURACY OR THE INSUFFICIENCY OF THE DATA. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DETERMINING THE TYPE, LOCATION AND PROTECTION OF ALL EXISTING UTILITIES AND STRUCTURES ENCOUNTERED DURING THE COURSE OF OPERATION. TAKE NECESSARY PRECAUTIONS TO ELIMINATE DAMAGE TO THE EXISTING UTILITIES OR REPAIR TO PREEXISTING CONDITIONS AT HIS EXPENSE. PRIOR TO THE START OF THIS PROJECT, THE CONTRACTOR SHALL ESTABLISH COMMUNICATIONS WITH RESPONSIBLE REPRESENTATIVES OF THE UTILITIES TO BE ENCOUNTERED.
3. THE CONTRACTOR SHALL ACCURATELY RECORD THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES AND STRUCTURES ENCOUNTERED AS SPECIFIED.
4. ALL SLOPED AREAS, SHRUBBERY TREES, FENCES, MAILBOXES, DRIVEWAYS ETC. DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR IN THE STATE OF FLORIDA, WHO HAS NOTICED THE PROJECT AND HAS BEEN ISSUED A REFERENCE POINT. THE CONTRACTOR SHALL SUBMIT A SET OF REGISTERED SITE DRAINING AND CERTIFICATE SIGNED BY THE LAND SURVEYOR THAT THE ELEVATIONS AND LOCATIONS OF THE WORK ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
6. SURVEY OF EXISTING CONDITIONS WAS COMPLETED BY CULPEPPER AND TURPIN, INC. WATER LEVELS INDICATED ON THE DRAWINGS ARE WATER LEVELS AT THE TIME OF SURVEY AND MAY DIFFER FROM LEVELS AT THE TIME OF CONSTRUCTION.
7. THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED BY AGENCIES HAVING JURISDICTION OVER THE PROJECT AND/OR WHEN REQUIRED FOR PUBLIC SAFETY.
8. PRIOR TO EXCAVATION IN THE VICINITY OF ANY EXISTING UNDER GROUND FACILITIES, CONTRACTOR SHALL NOTIFY THE RESPECTIVE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITY SO THAT A REPRESENTATIVE CAN BE PRESENT DURING SUCH EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY CONSENTS FROM SUCH FACILITY OWNERS.
9. ALL EXISTING TREES, SHALL BE PROTECTED FROM SUCH EXCAVATION. ON-CALLUTION WORK SHALL BE PROTECTED FROM SUCH EXCAVATION.
10. ALL EXISTING TREES, SHALL BE PROTECTED FROM SUCH EXCAVATION.
11. ALL EXISTING TREES, SHALL BE PROTECTED FROM SUCH EXCAVATION.
12. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUDE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIERS DETAILS.
13. THE CONTRACTOR SHALL MAINTAIN NATURAL DRAINAGE FLOW FROM ADJACENT PROPERTIES AND TO KEEP OPEN DRAIN DURING ALL PHASES OF CONSTRUCTION.
14. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING UTILITY LOCATIONS AND CONTRACT PLANS AND SPECIFICATIONS. ST. LUDE COUNTY ENGINEERING STANDARDS ARE HEREBY INCORPORATED INTO THE CONTRACT. IN THE EVENT OF A CONFLICT BETWEEN STANDARDS THE CONTRACTOR SHALL USE THE MOST SEVERE STANDARD.
15. THE CONTRACTOR SHALL MAINTAIN ELECTRICAL POWER SERVICE TO THE PLATT'S CREEK SITE AT ALL TIMES. ST. LUDE COUNTY ENGINEERING SHALL BE NOTIFIED OF POWER SERVICE INTERRUPTIONS A MINIMUM OF 72 HOURS IN ADVANCE. ALL POWER SERVICE INTERRUPTIONS SHALL BE TEMPORARY AND SERVICE SHALL BE RESTORED AS SOON AS POSSIBLE.
16. THE CONTRACTOR SHALL SUBMIT A COPY OF REGISTERED SITE DRAINING AND CERTIFICATE SIGNED BY THE REGISTERED LAND SURVEYOR THAT THE ELEVATIONS AND LOCATIONS OF THE WORK ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
17. THE CONTRACTOR SHALL SOO AND SEED DISTURBED AREAS AS REQUIRED TO PROVIDE STABLE GROUND COVER. SOO AND SEED TO BE APPROVED BY COUNTY STAFF.



NO.	DATE	ISSUED FOR	BY	DESIGNED	C.T.F.	DRAWN	J.R.M.	CHECKED	F.R.H.	PROJ. ENGR.	R.B.T.	ROBERT B. TAYLOR, JR. P.E. No. 44185	HAZEN AND SAWYER Environmental Engineers & Scientists MARK EVOLVING CENTER 1925 SOUTH 25TH STREET SUITE 200 ARLINGTON, VA 22204 CERTIFICATE OF AUTHORIZATION NUMBER: 2771	SCALE AS NOTED	CONTRACT: CLIENTS' PROJECT: 0307 ENGINEERS' PROJECT: 40259.001 CAD REFERENCE: 40259.001	ST. LUCIE COUNTY  ST. LUCIE COUNTY PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	DATE: MARCH 2008 SHEET: 2 of 5 DRAWING: G-2	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
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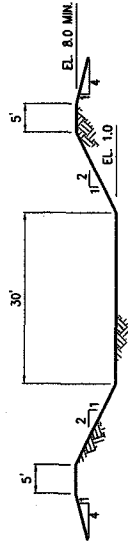
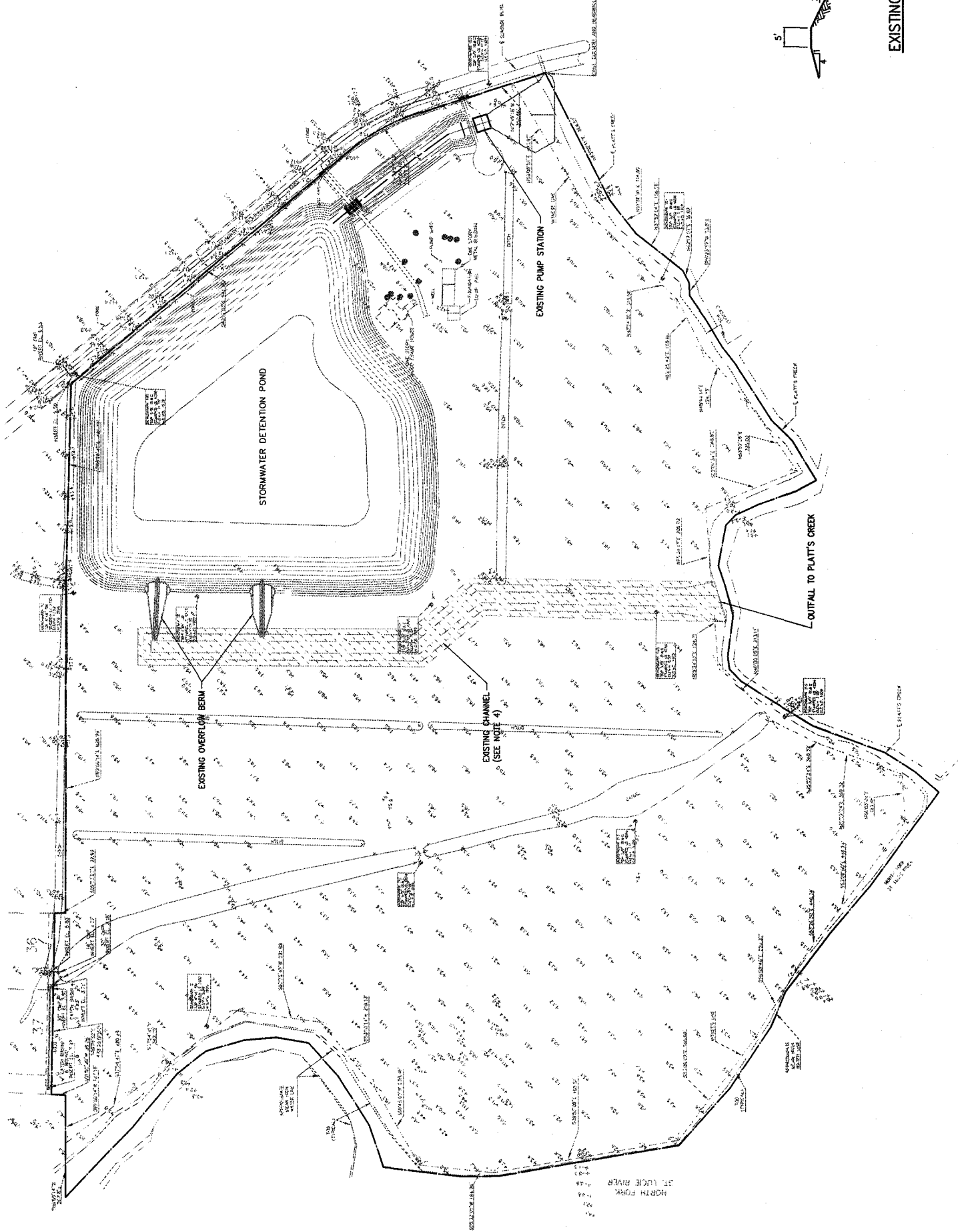
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NOTES:

- EXISTING TOPOGRAPHY PROVIDED BY CULPEPPER AND TERPENING, INC., FT. PIERCE, FLORIDA, FROM SURVEY CONDUCTED ON APRIL 11, 2000.
- EXISTING ELEVATIONS ARE BASED ON F.D.O.T. BENCHMARK 195 85 A 29 RM 2' WITH A PUBLISHED ELEVATION OF 50.157 FEET, BASED ON THE N.G.V. DATUM OF 1929.
- THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO THE PROJECT. THE CONTRACTOR SHALL PREVENT EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.
- PORTIONS OF EXISTING CHANNEL NOT COINCIDING WITH PROPOSED OUTLET SWALE SHALL BE FILLED WITH EXISTING STOCKPILE AS NECESSARY. REFERENCE C-2 AND C-3 FOR THE LOCATION OF THE PROPOSED OUTLET SWALE.
- EXISTING CHANNEL IS LOCATED TO THE WEST OF THE STOCKPILE. THE CONTRACTOR SHALL DETERMINE THE ADEQUACY OF THE STOCKPILE.

LEGEND

- EXISTING SECTION CORNER
- EXISTING BENCH MARK
- EXISTING ELEVATION
- EXISTING INDEX CONTOUR
- EXISTING INTERVAL CONTOUR
- EXISTING CHANNEL CONTOUR
- LIMITS OF CHANNEL FILL (SEE NOTE 4)



EXISTING STORMWATER OUTLET CHANNEL
TYPICAL SECTION
N.T.S.



ST. LUCIE COUNTY		PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS		DATE: MARCH 2008	
ST. LUCIE COUNTY		CONTRACT: 0307		SHEET: 3 OF 5	
HAZEN AND SAWYER Environmental Engineers & Scientists 1805 SOUTH 25TH STREET FORT PIERCE, FLORIDA 34945 CERTIFICATE OF AUTHORIZATION NUMBER: 2771		ENGINEERS PROJECT: 40259.001		DRAWING: C-1	
SCALE: AS NOTED		CLIENTS PROJECT: 0307			
		ENGINEERS PROJECT: 40259.001			
		CAD REFERENCE: 40259.001			
DESIGNED: C.T.F.		DRAWN: J.R.M.		ISSUED FOR: BY:	
CHECKED: F.R.H.		PROJ. ENGR. R.B.T.		DATE:	
NO.		DATE:		PLOT DATE 04/07/08 5:10pm FILE= C:\40259-001-PP\Drawings\Amendment 2\40259001.dwg by JAO/LEW XREF=pgp1 to 59B.	

NOTES:

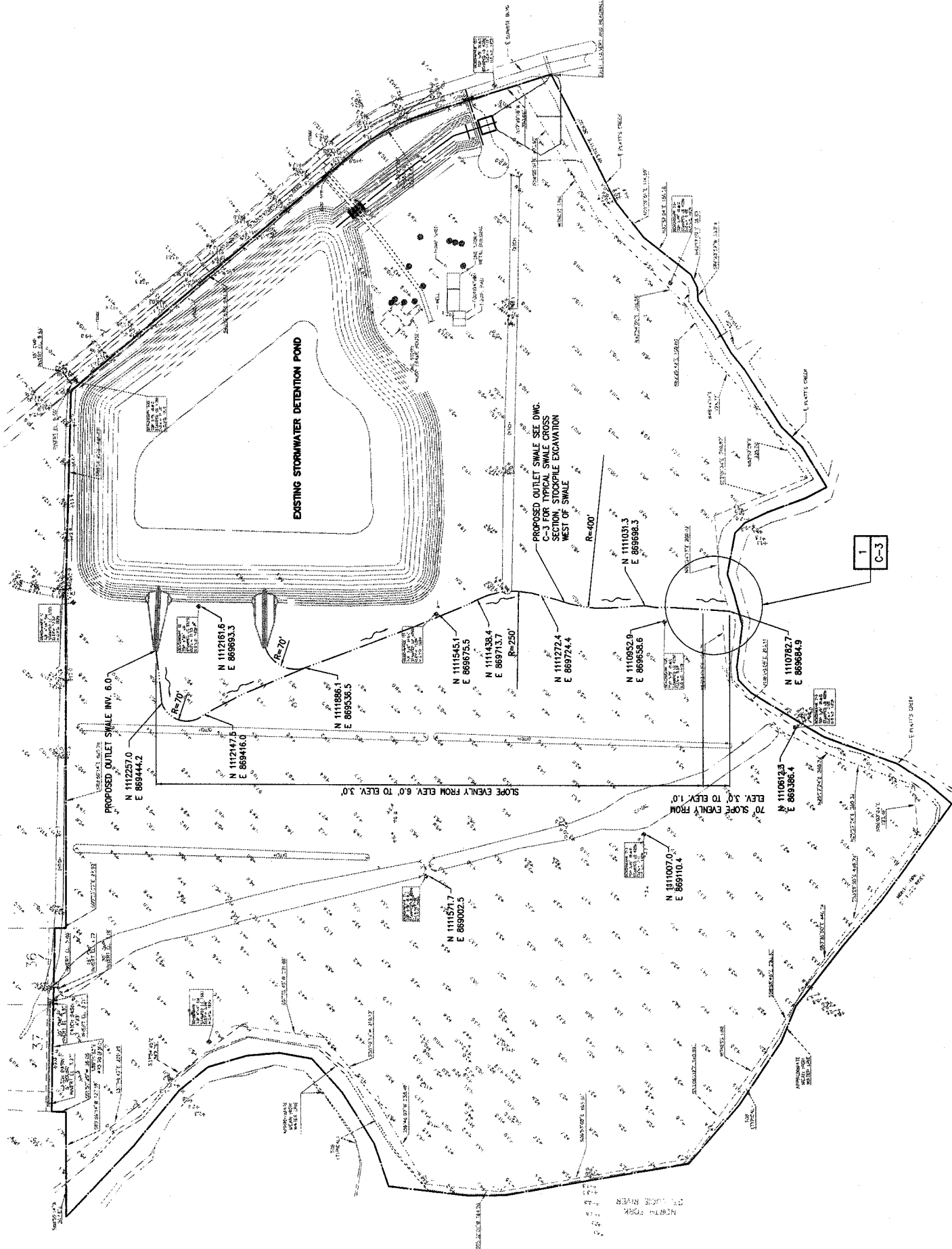
- 1 EXISTING TOPOGRAPHY PROVIDED BY CULPEPPER AND TERRANCE, INC., IN PALM BEACH, FLORIDA, FROM SURVEY CONDUCTED ON APRIL 11, 2006.
- 2 EXISTING ELEVATIONS ARE BASED ON F.D.O.T. BENCHMARK 195 BS A 29 RM 2" WITH A PUBLISHED ELEVATION OF 50.157 FEET, BASED ON THE N.G.V. DATUM OF 1929.
- 3 THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLANT, CREEP AND ROOTS FROM ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.

LEGEND

- EXISTING SECTION CORNER
- EXISTING BENCH MARK
- EXISTING ELEVATION
- PROPOSED SWALE

1"=150'-0"

150 75 0 150'



Hazen and Sawyer
Environmental Engineers & Scientists
1800 SOUTH 25TH STREET
SUITE 200
FORT LAUDERDALE, FL 33311
CERTIFICATE OF AUTHORIZATION NUMBER: 2771

ROBERT B. TAYLOR JR.
No. 44185
P.E.

ST. LUCIE COUNTY
PLATT'S CREEK STORMWATER
MANAGEMENT FACILITIES AND
WETLAND RESTORATION
OUTLET SWALE MODIFICATIONS



CONTRACT: 0307
CLIENT'S PROJECT: 40259.001
ENGINEER'S PROJECT: 40259.001
CAD REFERENCE: 40259.001

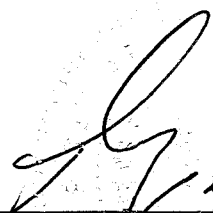
SCALE
AS NOTED

PROPOSED SITE PLAN
OUTLET SWALE MODIFICATIONS

DATE: MARCH 2008
SHEET: 4 of 5
DRAWING: C-2

Appendix B

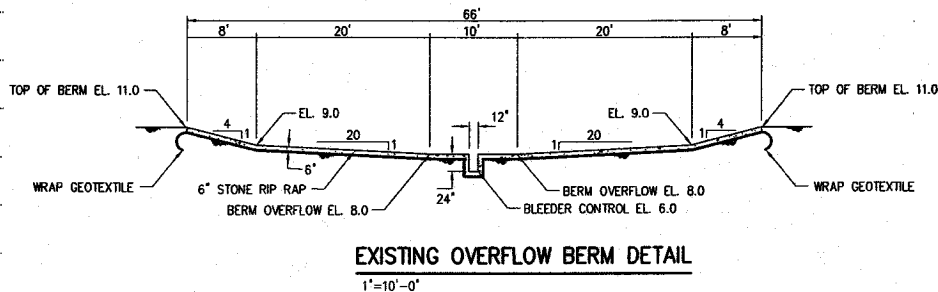
Calculations for Conveyance Swale Adequacy


4/7/08
Robert B. Taylor, Jr., P.E.
Florida P.E. No. 44165

PURPOSE

TO DETERMINE THE ADEQUACY OF THE PROPOSED
OUTLET SWALE

SKETCH



APPROACH

- ① DETERMINE THE FLOW THROUGH THE OUTLET SWALE UNDER VARIOUS CONDITIONS
- ② CALCULATE NORMAL AND CRITICAL DEPTHS AT VARIOUS FLOWS
- ③ DETERMINE FREEBOARD REQUIREMENTS
- ④ COMPARE WATER DEPTHS WITH OUTLET SWALE TO ENSURE ADEQUACY

CALCULATIONS

- ① THE EXISTING OVERFLOW BERMS WILL DICTATE THE AMOUNT OF FLOW RECEIVED BY THE OUTLET SWALE. TO DETERMINE THAT FLOW THE ORIFICE EQUATION WILL BE USED.

①

SCENARIO 1:

CHANNEL FLOW, MANNING EQN (CHIN)

$$Q = \frac{1.486}{n} A R^{2/3} S^{1/2} \quad \text{where} \quad \begin{array}{l} n = \text{roughness coefficient} \\ A = \text{channel area} \\ R = \text{hydraulic radius} \\ S = \text{slope} \end{array}$$

$n = 0.03$ for vegetal channel (Chin)

$$A = 2 \left(\frac{1}{2} (4 \text{ ft})(1 \text{ ft}) \right) + 2 \left(\frac{1}{2} (20 \text{ ft})(1 \text{ ft}) \right) + 2 (20 \text{ ft})(1 \text{ ft}) + (10 \text{ ft})(2 \text{ ft}) + (2 \text{ ft})(1 \text{ ft})$$

$$= 86 \text{ ft}^2$$

$$P = 2 \sqrt{4^2 + 1^2} + 2 \sqrt{20^2 + 1^2} + 10 + 2(2)$$

$$= 62.3 \text{ ft}$$

$$R = A/P = 86 \text{ ft}^2 / 62.3 \text{ ft} = 1.38$$

$$S = \frac{\Delta h}{L} = \frac{1 \text{ ft}}{140 \text{ ft}} = 0.0071 \text{ ft/ft}$$

$$Q_{10 \text{ ft N6VD}} = \frac{1.486}{0.03} (86 \text{ ft}^2) (1.38 \text{ ft})^{2/3} (0.0071 \frac{\text{ft}}{\text{ft}})^{1/2}$$

$$= 445 \text{ cfs}$$

There are two overflow berms

$$\underline{Q_{10 \text{ ft N6VD, CHANNEL}} = 89.0 \text{ cfs}}$$

SCENARIO 2:
WEIR FLOW (EQN FROM CHIN)

$$Q = C_w b H^{2/3}$$

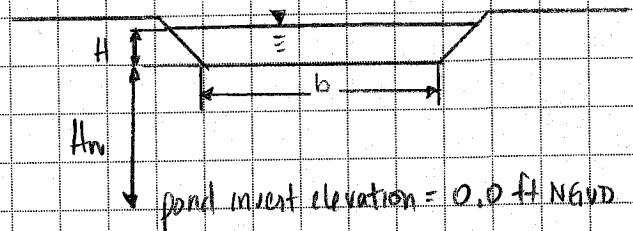
where C_w - weir coefficient
 b - bottom width
 H - water depth above weir

$$C_w = \frac{2}{3} C_d \sqrt{2g}$$

where

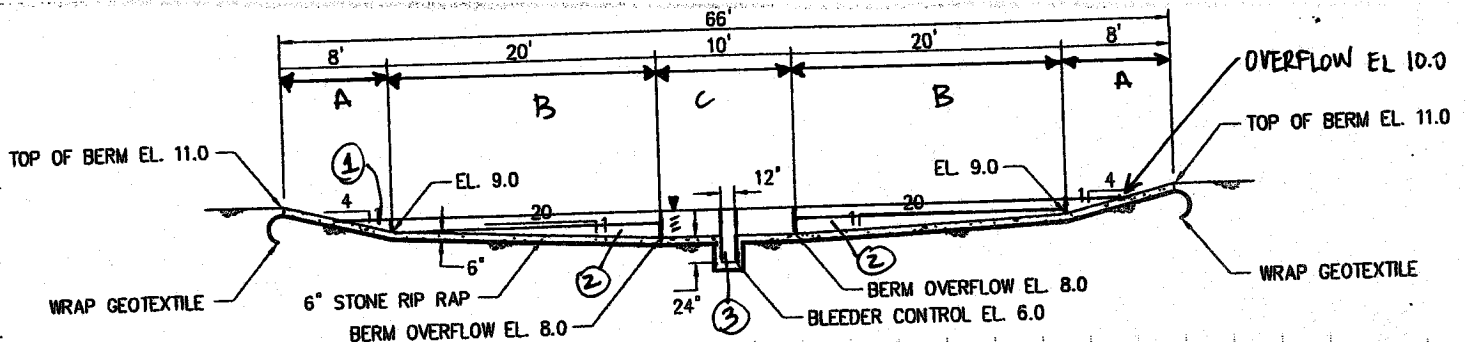
$$C_d = 0.611 + 0.075 \sqrt{H_w}$$

where H_w - height of weir above detention pond invert



To find Q_{diff} NGVD:

use weighted centroid to account for sloped bottom of over-flow berm



①

$$\text{Centroid ①} = \frac{\Delta h}{3} = \frac{12''}{3} = 4''$$

$$\Rightarrow 9'-4'' = 9.33 \text{ ft} = \text{Centroid A}$$

$$\text{Centroid ②} = \frac{\Delta h}{3} = \frac{12''}{3} = 4''$$

$$\Rightarrow 8'-4'' = 8.33 \text{ ft}$$

$$\text{Centroid ③} = 8.0 \text{ ft}$$

$$\text{Centroid A} = 9.33 \text{ ft}$$

$$\text{Centroid B} = \frac{8.33 \text{ ft} + 9.5 \text{ ft}}{2} = 8.915 \text{ ft}$$

$$\text{Centroid C} = \frac{(9 \text{ ft})(9.0 \text{ ft NGVD}) + (1 \text{ ft})(8.0 \text{ ft NGVD})}{10 \text{ ft}} = 8.9 \text{ ft}$$

$$\begin{aligned} \text{weighted Centroid} &= \frac{(16 \text{ ft})(9.33 \text{ ft}) + (40 \text{ ft})(8.915 \text{ ft}) + (10 \text{ ft})(8.9 \text{ ft})}{66 \text{ ft}} \\ &= 9.01 \text{ ft NGVD} \end{aligned}$$

$$H = 9.01 \text{ ft} - 8 \text{ ft} = 1.01 \text{ ft}$$

$$H_w = 8.0 \text{ ft}$$

$$C_d = 0.611 + 0.075 \left(\frac{1.01 \text{ ft}}{8.0 \text{ ft}} \right) = 0.620$$

$$C_w = \frac{2}{3} (0.620) (\sqrt{2 \times 32.2'}) = 3.32$$

$$\begin{aligned} Q &= (3.32)(66 \text{ ft})(1.01 \text{ ft})^{3/2} \\ &= 222.3 \text{ cfs} \end{aligned}$$

There are two overflow berms

$$Q_{10 \text{ ft NGVD, weir}} = 444 \text{ cfs}$$

①

SCENARIO 3:

PEAK RAIN FALL FLOW

$$\begin{aligned} \text{Rainfall} &= 3''/\text{hr} \\ \text{Area} &= 16 \text{ acres} \end{aligned}$$

$$Q_{\text{RAIN}} = \frac{3''}{\text{hr}} \times 16 \text{ acres} \left(\frac{\text{hr}}{3600 \text{ s}} \right) \left(\frac{43560 \text{ ft}^2}{\text{acre}} \right) \left(\frac{\text{ft}}{12 \text{ in}} \right) = 43.4 \text{ cfs}$$

MAXIMUM FLOW FROM PUMP STATION (CFS)

$$Q_{\text{P.S.}} = 170 \text{ cfs}$$

see original application for addition information

FLOW RESULTING FROM RAINFALL EVENT

$$Q_{\text{EVENT}} = Q_{\text{RAIN}} + Q_{\text{P.S.}} = 43 + 170$$

$$Q_{\text{EVENT}} = 213 \text{ cfs}$$

CALCULATION SUMMARY

SCENARIO	DESCRIPTION	MAXIMUM FLOW
1	CHANNEL CAPACITY	890 cfs
2	WEIR CAPACITY	444 cfs
3	RAINFALL EVENT	213 cfs

THE OVERFLOW BERMS CAN CONVEY 890 cfs OR 444 cfs IF ASSUMED THEY ACT AS CHANNELS OR WEIRS, RESPECTIVELY. HOWEVER, THE FLOW IS LIMITED TO 213 cfs BECAUSE THAT IS THE CAPACITY OF A RAINFALL EVENT.

TRAPEZOIDAL CHANNEL HYDRAULIC CHARACTERISTICS

File Name: **Platts Creek Outlet Swale**

Date: **April 7, 2008**

	Flow	Bottom Width	Slope	Mannings	Slope Right	Slope Left
	CFS	MGD	FT	FT/FT	n	
Outlet Swale	220	142.14	8	0.0018	0.05	4
Outfall	220	142.14	6	0.03	0.05	8

CRITICAL DEPTH CALCULATION

	Critical Depth	Area	Bredth	Q ² /g	Ac ³ /T	Fr No.
	FT	SF	FT			
Outlet Swale	2.21	32.91	23.72	1503.11	1502.59	1.00
Outfall	1.82	37.53	35.17	1503.11	1502.87	1.00

	Critical Depth	Area	Bredth	Wetted Perimeter	V _{normal}
	FT	SF	FT	FT	FPS
Outlet Swale	2.21	32.91	23.72	24.26	6.69
Outfall	1.82	37.53	35.17	35.40	5.86

NORMAL DEPTH CALCULATION

	(Q*n) ³ 1.486*S ^{1/2}	Area(n) ⁵	Perimeter (n) ²	A ⁵ /P ²	Normal Depth	Critical Depth	Hydraulic Classification of Slope
	FT ⁸	FT ¹⁰	FT ²	FT ⁸	FT	FT	
Outlet Swale	5,311,447	8,954,701,116	1,686	5,311,447	4.25	2.21	Mild
Outfall	78,062	104,476,066	1,338	78,062	1.90	1.82	Mild

	Normal Depth	Area	Bredth	Wetted Perimeter	V _{normal}
	FT	SF	FT	FT	FPS
Outlet Swale		97.82	40.01	41.06	2.25
Outfall		40.16	36.35	36.58	5.48

Legend:

input
calculated
goalseek input
goalseek output

VELOCITY

$$v = \frac{1.486}{n} \left(\frac{A}{P} \right)^{2/3} S^{1/2}$$

Equations

CRITICAL DEPTH

$$\frac{Q^2}{g} = \frac{A_c^3}{T_c}$$

$$Fr_c = \frac{Q^2 T_c}{g A_c^3} = 1$$

NORMAL DEPTH

$$Q = \frac{1.486}{n} \left(\frac{A_n}{R_n} \right)^{2/3} S^{1/2}$$

$$\frac{A_n^5}{P_n^2} = \left(\frac{Q \times n}{1.486 \times S^{1/2}} \right)^3$$

$$A_n = (b + m \times y_n) y_n$$

$$P_n = b + 2(1 + m^2) y_n$$

solve for y_n

③
Freeboard Calculation

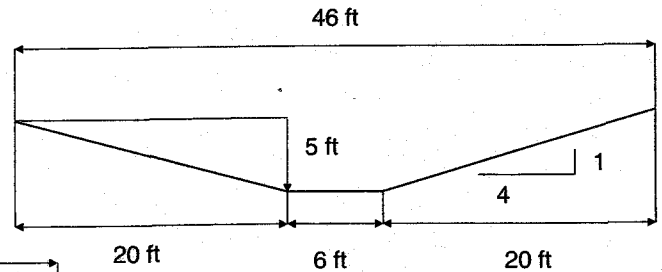
Equation

$$F = 0.152 + \frac{v^2}{2g} \quad (SI \text{ units})$$

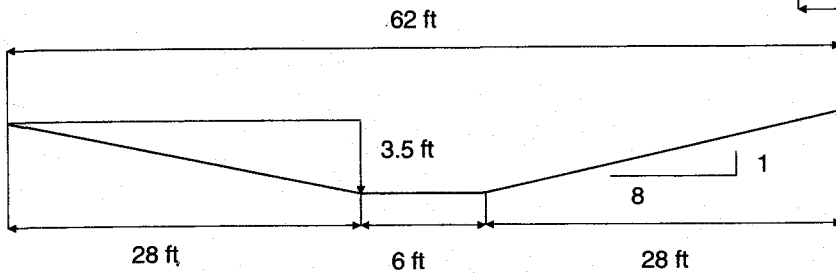
Parameter	unit	Outlet Swale	Outfall
Flow	cfs	220	220
Bottom width	ft	6	6
Slope	ft/ft	0.0018	0.03
n	--	0.05	0.05
side slope	--	4	8
yn	ft	4.25	1.90
vn	fps	2.25	5.48
Freeboard	ft	0.58	0.97
Swale depth	ft	4.83	2.87

④ PROPOSED OUTLET SWALE SKETCHES

NTS



PROPOSED OUTLET SWALE CROSS SECTION



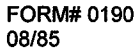
PROPOSED OUTFALL CROSS SECTION

CONCLUSION

THE OUTLET SWALE PROVIDES ADEQUATE CONVEYANCE
OF THE TREATED RUNOFF FROM THE STORMWATER
PUMP STATION.

RESOURCES

- ① SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE PERMIT INFORMATION
MANUAL, VOLUME IV.
- ② CHIN, DAVID. WATER RESOURCES ENGINEERING.
PRENTICE HALL, NJ 2000.



Name: St. Lucie County Public Works
(Platt's Creek Extension)

Application No. 080410-9

☐ Original Application ☐ Permit ☐ Special Condition Sheet(s)
☐ Staff Calculation Sheet(s) ☐ Drawing(s) ☐ Staff Report

[illegible]

**SOUTH FLORIDA WATER
MANAGEMENT DISTRICT**

MAPS FOR

PERMIT NUMBER:

56-00003-M

APPLICATION NUMBER:

080410-9

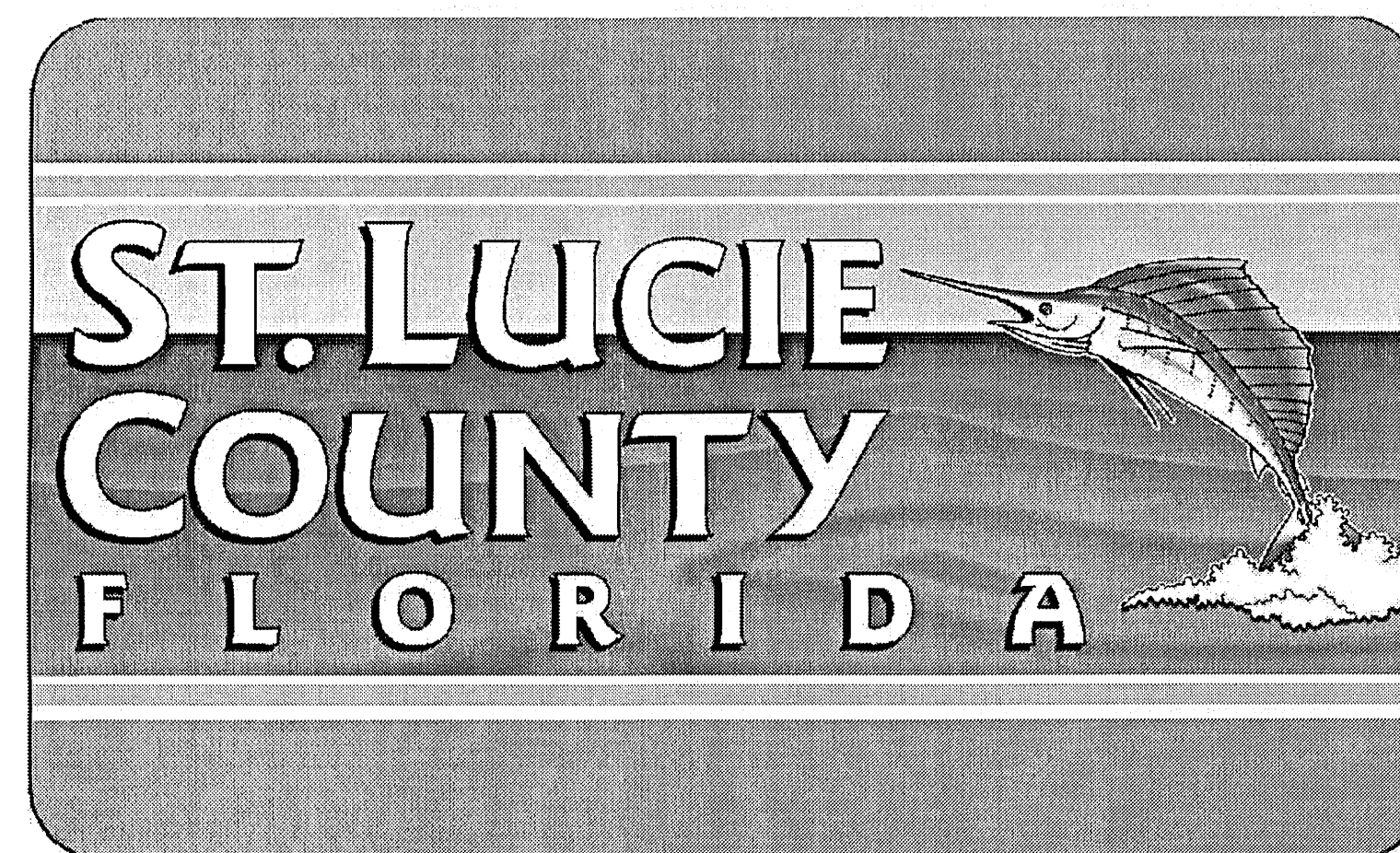
ST. LUCIE COUNTY

PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS

ST. LUCIE COUNTY PROJ. NO. 0307



LOCATION MAP
N.T.S.



BOARD OF COUNTY COMMISSIONERS

JOE SMITH	DISTRICT 1
DOUG COWARD	DISTRICT 2
PAULA A. LEWIS	DISTRICT 3
CHARLES GRANDE	DISTRICT 4
CHRIS CRAFT	DISTRICT 5

COUNTY ADMINISTRATION

DOUGLAS M. ANDERSON ADMINISTRATOR

DRAWING LIST

<u>SHEET No.</u>	<u>DRAWING No.</u>	<u>TITLE</u>
GENERAL		
1	G-1	TITLE SHEET, LIST OF DRAWINGS AND LOCATION MAP
2	G-2	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES
CIVIL		
3	C-1	EXISTING SITE PLAN
4	C-2	PROPOSED SITE PLAN - OUTLET SWALE MODIFICATIONS
5	C-3	MISCELLANEOUS DETAILS

080410-9

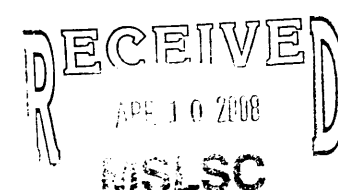
ORIGINAL SUBMITTAL

APR 10 2008

M/SL

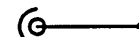
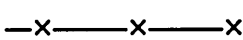
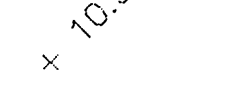
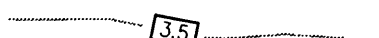
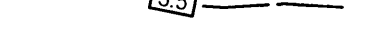
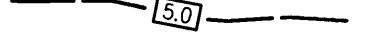
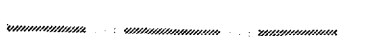
HAZEN AND SAWYER
Environmental Engineers & Scientists

MARDI EXECUTIVE CENTER
1905 SOUTH 25TH STREET
FORT PIERCE, FL. 34947
CERTIFICATE OF AUTHORIZATION NUMBER: 2771

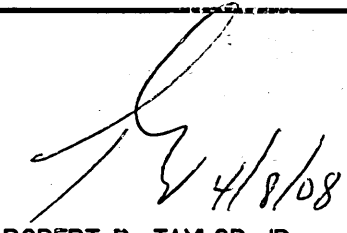
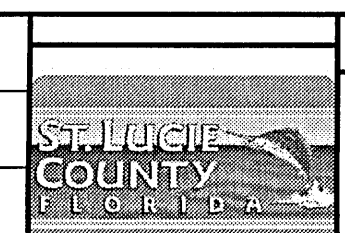


MARCH 2008

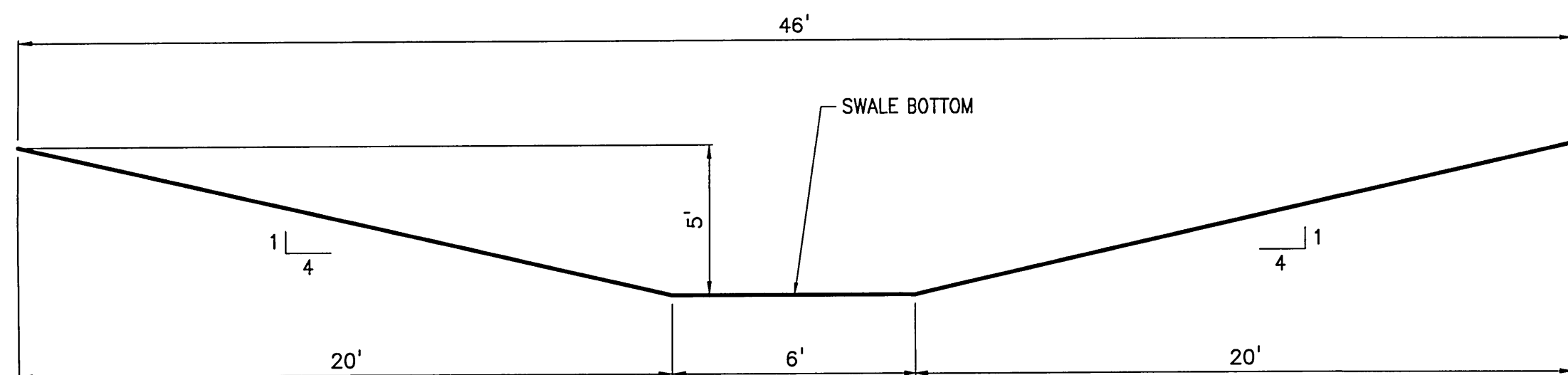
TITLE SHEET,
LIST OF DRAWINGS
AND LOCATION MAP
SHEET 1 OF 5
DRAWING No. G-1

SYMBOLS		ABBREVIATIONS							
	FIRE HYDRANT	VALVES, FITTINGS, ETC.							
	GUY WIRE	B.F.(BLD. FLG.)	BLIND FLANGE	BOTT.	BOTTOM	M.O.	MASONRY OPENING	THD.	THREADED
	POWER POLE	F.H.	FIRE HYDRANT	BLDG.	BUILDING	MAX.	MAXIMUM	THK.	THICK
	LIGHT POLE	FTG.	FITTING	BLVD	BOULEVARD	MISC.	MISCELLANEOUS	T.O.	THROUGHOUT
	SECTION CORNER	FLG.	FLANGE	B.M.	BENCH MARK	MIN.	MINIMUM	T.O.S.	TOP OF SLAB
	FENCE	M.J.	MECHANICAL JOINT	C.B.	CATCH BASIN	N.A.D.	NORTH AMERICAN DATUM	TYP.	TYPICAL
	EXISTING BENCH MARK	NPT	NATIONAL PIPE THREAD	CL.	CENTER LINE	N.A.V.D.	NORTH AMERICAN VERTICAL DATUM	VERT.	VERTICAL
	EXISTING ELEVATION	P.E.	PLAIN END	C.C.	CENTER TO CENTER	N.G.S.	NATIONAL GEODETIC SURVEY	WTR.	WATER
	EXISTING INTERVAL CONTOUR	R.D.	ROOF DRAIN	C.M.U.	CONCRETE MASONRY UNIT	N.G.V.D.	NATIONAL GEODETIC VERTICAL SURVEY	W/L	WATER LEVEL
	EXISTING INDEX CONTOUR	THD.	THREADED	CLR.	CLEAR			W.	WIDE
	EXISTING CHANNEL CONTOUR	V.C.	GROOVED COUPLING	COL.	COLUMN			W/	WITH
	EXISTING SWALE	PIPING						XFMR	TRANSFORMER
	PROPOSED SWALE	CIP	CAST IRON PIPE	CO.	COMPANY	N.I.C.	NOT IN CONTRACT		
	FUTURE INTERVAL CONTOUR	CISP	CAST IRON SOIL PIPE	CONN.	CONNECTION	N.T.S.	NOT TO SCALE		
	FUTURE INDEX CONTOUR	CMP	CORRUGATED METAL PIPE	CONST.	CONSTRUCTION	NO.	NUMBER		
	FUTURE SWALE	D.I.P.	DUCTILE IRON PIPE	CONT.	CONTINUOUS	OPNG.	OPENING		
	FUTURE BERM	F.M.	FORCE MAIN	CONTR.	CONTRACT	OPP.	OPPOSITE		
	PROPOSED SILT FENCE	FRP	FIBERGLASS REINFORCED PLASTIC	DET.	DETAIL	PAVT.	PAVEMENT		
	PROPOSED TURBIDITY BARRIER	I.P.S.	IRON PIPE SIZE	DIAG.	DIAGONAL	P/L	PROPERTY LINE		
		PVC	POLYVINYLCHLORIDE	DIA.	DIAMETER	PS	PUMP STATION		
		P.C.C.P.	PRESTRESSED CONCRETE CYLINDER PIPE	DIM.	DIMENSION	QTY.	QUANTITY		
		RCP	REINFORCED CONCRETE PIPE	DISCH.	DISCHARGE	RAD., R.	RADIUS		
				DR.	DRAIN	REQ'D.	REQUIRED		
				DWG.	DRAWING	R/W	RIGHT OF WAY		
				EA.	EACH	R.W.	REUSE WATER		
				ELEC.	ELECTRIC	SCH.	SCHEDULE		
				EL., ELEV.	ELEVATION	SECT.	SECTION		
				ENGR.	ENGINEER	SHT.	SHEET		
				EQUIP.	EQUIPMENT	SOL.	SOLUTION		
				EXIST.	EXISTING	SPEC.	SPECIFICATION		
				FT.	FEET	SQ.	SQUARE		
				FIG.	FIGURE	STA.	STATION		
				FIN.	FINISH	S.S.	STAINLESS STEEL		
				GR.	GRADE	STL.	STEEL		
				HORIZ.	HORIZONTAL	STM.	STORM		
				INV.	INVERT	SUCT.	SUCTION		
				LG.	LONG	SYMM.	SYMMETRICAL		
				M.H.	MANHOLE	TEMP.	TEMPORARY		

- GENERAL NOTES:
- ALL ELEVATIONS REFER TO NGVD (1929).
 - LOCATION, SIZE, MATERIAL, ALIGNMENT AND ELEVATIONS OF EXISTING UTILITIES HAVE BEEN DETERMINED FROM AVAILABLE RECORDS. THE INFORMATION IS FURNISHED AS A GUIDE FOR THE CONTRACTOR. THE ENGINEER AND COUNTY DO NOT GUARANTEE THE ACCURACY OR THE INCLUSIVENESS OF THE DATA. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR DETERMINING THE TYPE, LOCATION AND PROTECTION OF ALL EXISTING UTILIZE AND STRUCTURES ENCOUNTERED DURING THE COURSE OF OPERATION ON THIS PROJECT.
 - THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ELIMINATE DAMAGE TO THE EXISTING UTILITIES OR REPAIR TO PRECONSTRUCTION CONDITIONS AT HIS EXPENSE. PRIOR TO THE START OF THIS PROJECT, THE CONTRACTOR SHALL ESTABLISH COMMUNICATIONS WITH RESPONSIBLE REPRESENTATIVES OF THE UTILITIES TO BE ENCOUNTERED.
 - THE CONTRACTOR SHALL ACCURATELY RECORD THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES AND STRUCTURES ENCOUNTERED AS SPECIFIED.
 - ALL SODDED AREAS, SHRUBBERY, TREES, FENCES, MAILBOXES, DRIVEWAYS ETC. DAMAGED DURING CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION BY THE CONTRACTOR.
 - THE CONTRACTOR SHALL EMPLOY A LAND SURVEYOR IN THE STATE OF FLORIDA. THE CONTRACTOR SHALL LOCATE AND PROTECT SURVEY CONTROL AND REFERENCE POINTS. THE CONTRACTOR SHALL SUBMIT A COPY OF REGISTERED SITE DRAWING AND CERTIFICATE SIGNED BY THE LAND SURVEYOR THAT THE ELEVATIONS AND LOCATIONS OF THE WORK ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
 - SURVEY OF EXISTING CONDITIONS WAS COMPLETED BY CULPEPPER AND TURPENING, INC.
 - WATER LEVELS INDICATED ON THE DRAWINGS ARE WATER LEVELS AT THE TIME OF SURVEY AND MAY DIFFER FROM LEVELS AT THE TIME OF CONSTRUCTION.
 - THE CONTRACTOR SHALL PROVIDE TEMPORARY FENCING AS REQUIRED BY AGENCIES HAVING JURISDICTION OVER THE PROJECT AND/ OR WHEN REQUIRED FOR PUBLIC SAFETY.
 - PRIOR TO EXCAVATION IN THE VICINITY OF ANY EXISTING UNDER GROUND FACILITIES, CONTRACTOR SHALL NOTIFY THE RESPECTIVE OWNERS OR AGENCIES RESPONSIBLE FOR SUCH FACILITY SO THAT A REPRESENTATIVE CAN BE PRESENT DURING SUCH WORK IF THEY SO DESIRE. THE CONTRACTOR SHALL ALSO NOTIFY SUNSHINE ONE-CALL NOTIFICATION SERVICE AT LEAST 2 DAYS PRIOR TO SUCH EXCAVATION.
 - ALL OPEN TRENCHES AND HOLES ADJACENT TO ROADWAY OR WALKWAY SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
 - THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.
 - THE CONTRACTOR SHALL MAINTAIN NATURAL DRAINAGE FLOW FROM ADJACENT PROPERTIES AND PLATT'S CREEK DURING ALL PHASES OF CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEIR SELF WITH THE CONTRACT PLANS AND SPECIFICATIONS. ST. LUCIE COUNTY ENGINEERING STANDARDS ARE HEREBY INCORPORATED INTO THE CONTRACT. IN THE EVENT OF A CONFLICT BETWEEN STANDARDS THE CONTRACTOR SHALL USE THE MOST SEVERE STANDARD.
 - THE CONTRACTOR SHALL MAINTAIN ELECTRICAL POWER SERVICE TO THE PLATT'S CREEK SITE AT ALL TIMES. ST. LUCIE COUNTY ENGINEERING STAFF SHALL BE NOTIFIED OF POWER SERVICE INTERRUPTIONS A MINIMUM OF 72 HOURS IN ADVANCE. ALL POWER SERVICE INTERRUPTIONS SHALL BE TEMPORARY AND SERVICE SHALL BE RESTORED AT THE END OF THE EACH WORKING DAY.
 - AT THE CONCLUSION OF THE WORK THE CONTRACTOR SHALL SUBMIT A COPY OF REGISTERED SITE DRAWINGS AND CERTIFICATE SIGNED BY THE REGISTERED LAND SURVEYOR THAT THE ELEVATIONS AND LOCATIONS OF THE WORK ARE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
 - THE CONTRACTOR SHALL SOD AND SEED DISTURBED AREAS AS REQUIRED TO PROVIDE STABLE GROUND COVER. SOD AND SEED TO BE APPROVED BY COUNTY STAFF.

				DESIGNED <u>C.T.F.</u>	 ROBERT B. TAYLOR JR. P.E. No. 44165	HAZENAND SAWYER Environmental Engineers & Scientists MARO EXECUTIVE CENTER 1905 SOUTH 25TH STREET FORT PIERCE, FL 34947 CERTIFICATE OF AUTHORIZATION NUMBER: 2771	SCALE AS NOTED	CONTRACT: <u>—</u>		ST. LUCIE COUNTY	PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	SYMBOLS, ABBREVIATIONS AND GENERAL NOTES	DATE : <u>MARCH 2008</u>
				DRAWN <u>J.R.M.</u>				CLIENTS PROJECT: <u>0307</u>		SHEET : <u>2</u> OF <u>5</u>			
				CHECKED <u>F.R.H.</u>				ENGINEERS PROJECT: <u>40259.001</u>		DRAWING : <u>G-2</u>			
				PROJ. ENGR. <u>R.B.T.</u>				CAD REFERENCE: <u>40259.001</u>					
NO.	DATE	ISSUED FOR		BY	PLOT DATE 04/07/08 4:56pm FILE= C:\40259-001-FPC\Drawings\Amendment 2\40259G02 by JMACLEAN XREF=Drawings\Amendment 2\40259TB.								

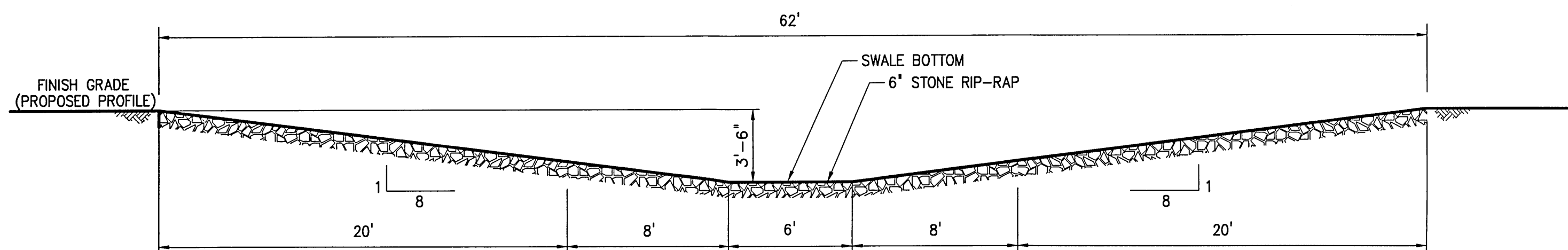




NOTE: ENTIRE CROSS SECTION TO BE SODDED UNLESS OTHERWISE INDICATED.

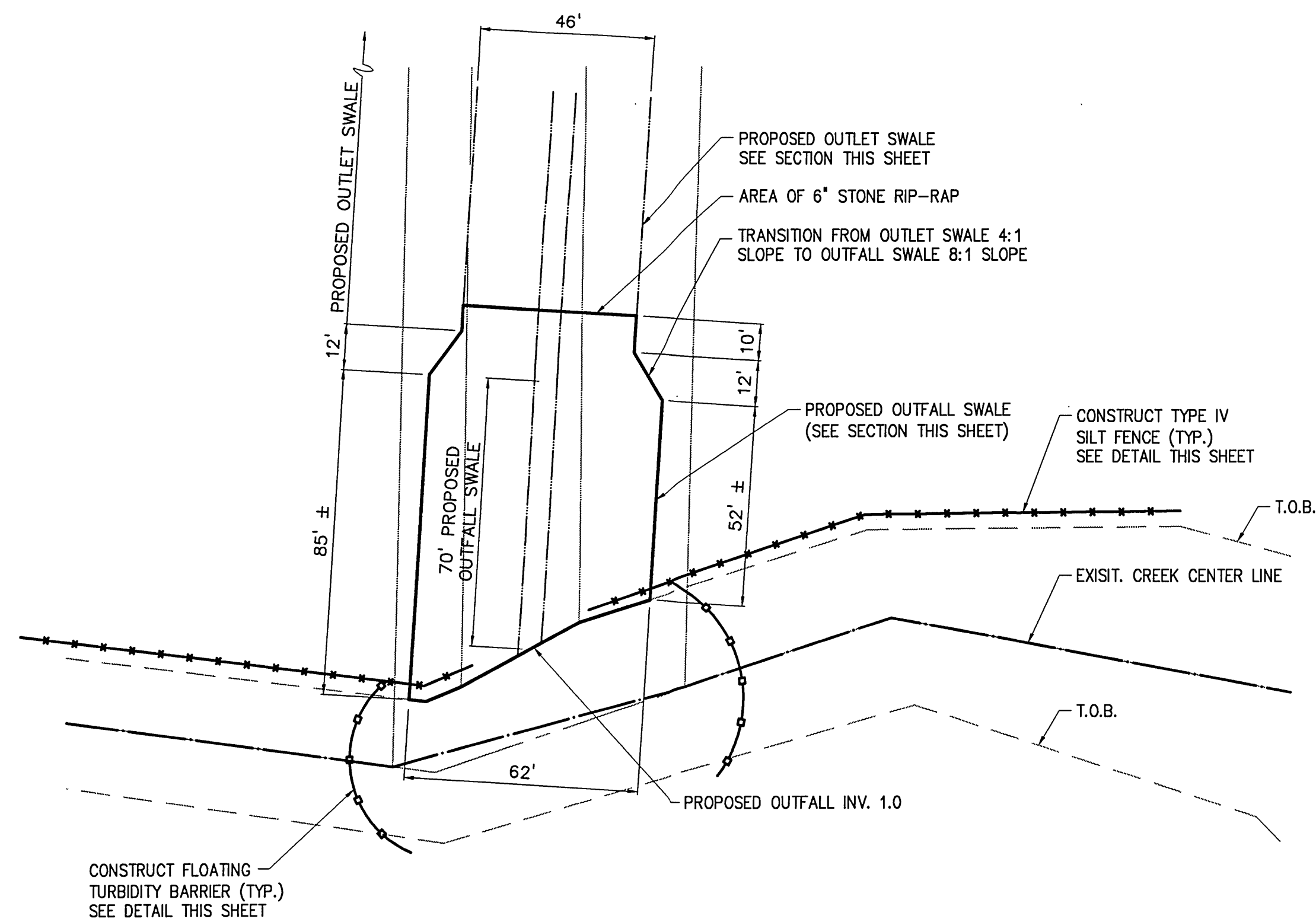
PROPOSED OUTLET SWALE CROSS SECTION

N.T.S.



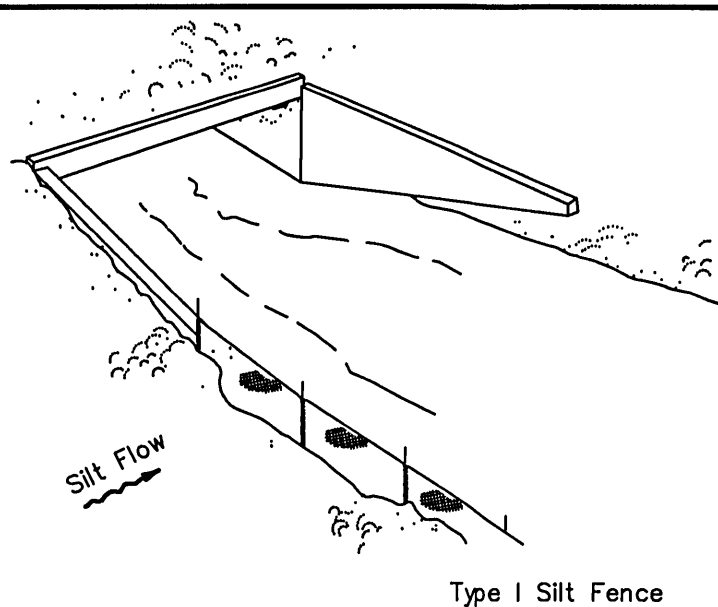
PROPOSED OUTFALL SWALE CROSS SECTION

N.T.S.

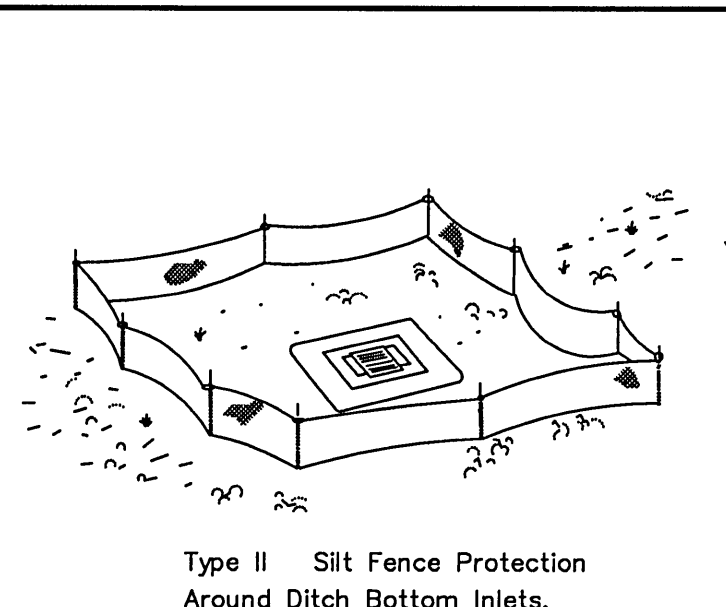


OUTFALL SWALE

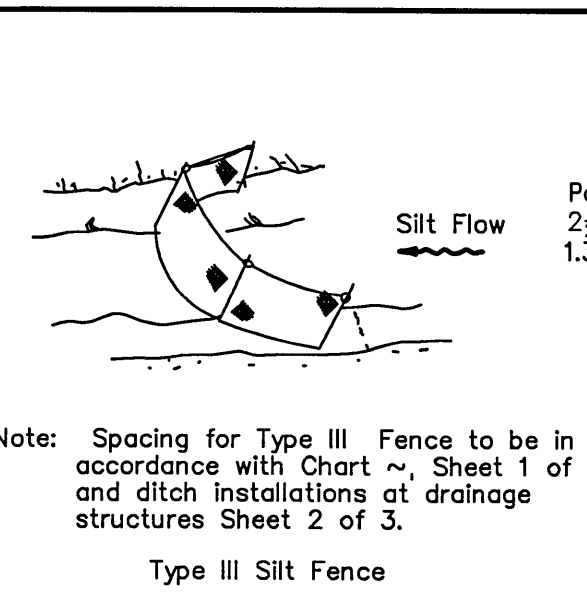
DETAIL	1
1"=30'-0"	C-2



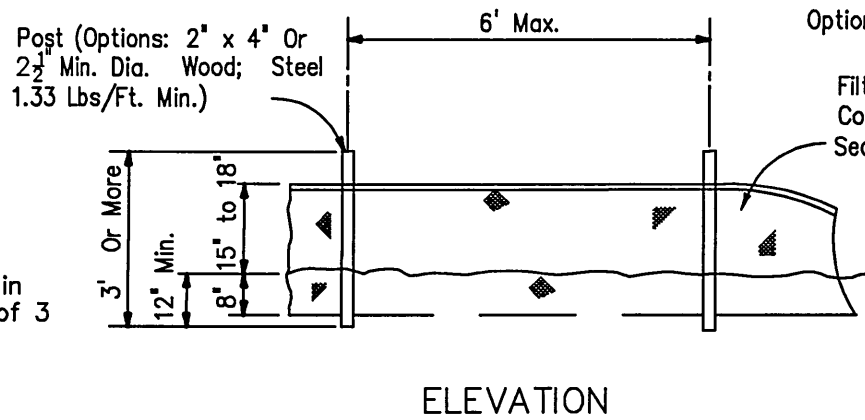
Type I Silt Fence



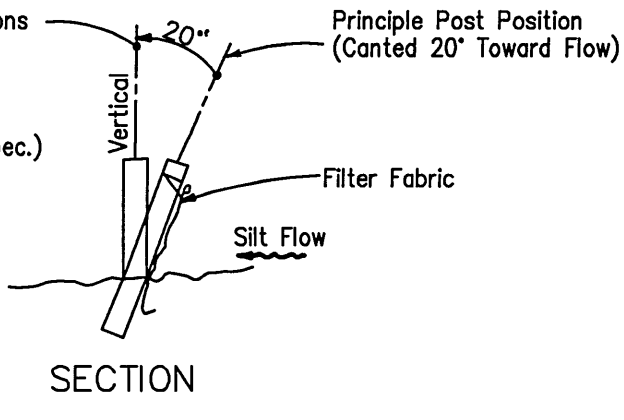
Type II Silt Fence Protection Around Ditch Bottom Inlets.



Type III Silt Fence



ELEVATION



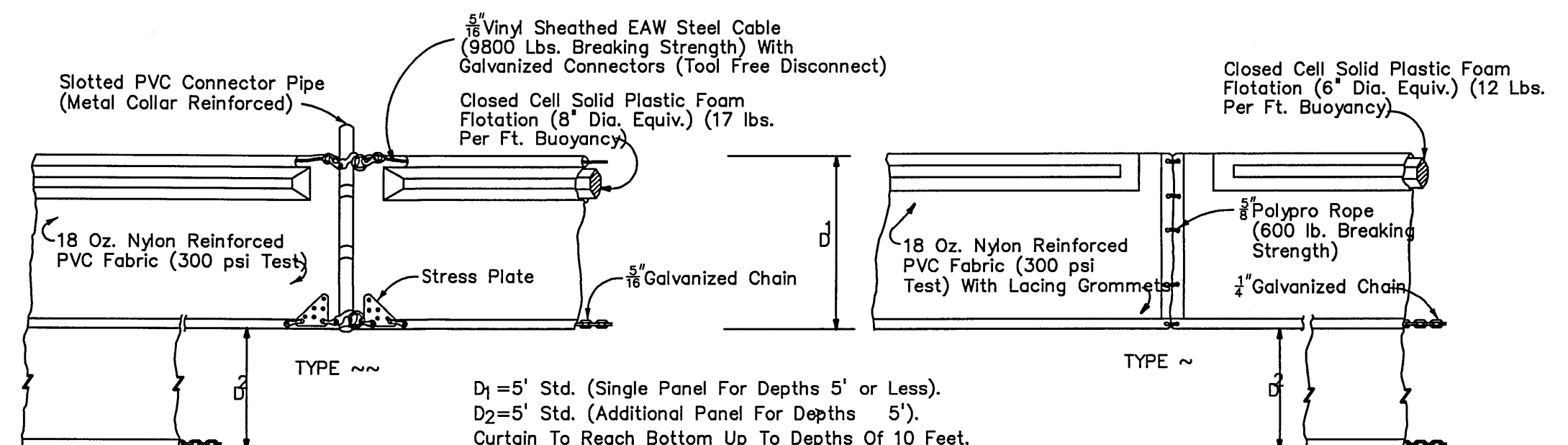
SECTION

Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF).

TYPE IV SILT FENCE

SILT FENCE APPLICATIONS

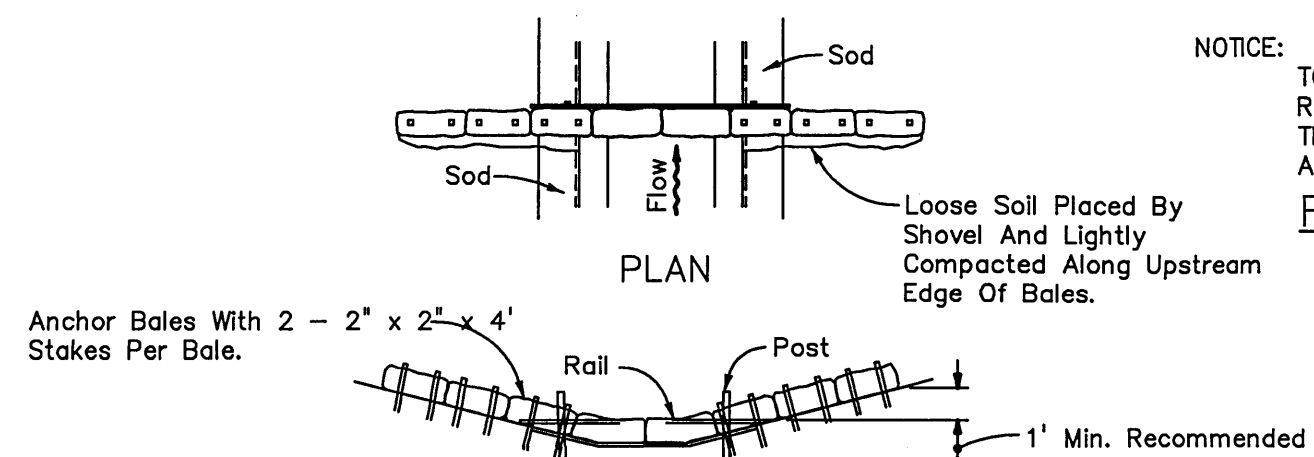
Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.



DI=5' Std. (Single Panel For Depths 5' or Less).
D2=5' Std. (Additional Panel For Depths 5').
Curtain To Reach Bottom Up To Depths Of 10 Feet.
Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES ~ AND ~ MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES ~ AND ~ SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS

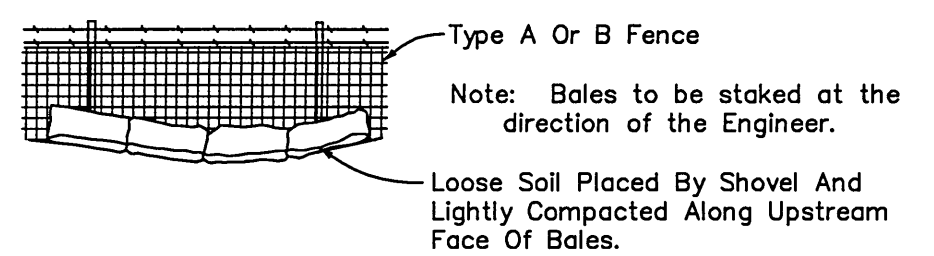


PLAN

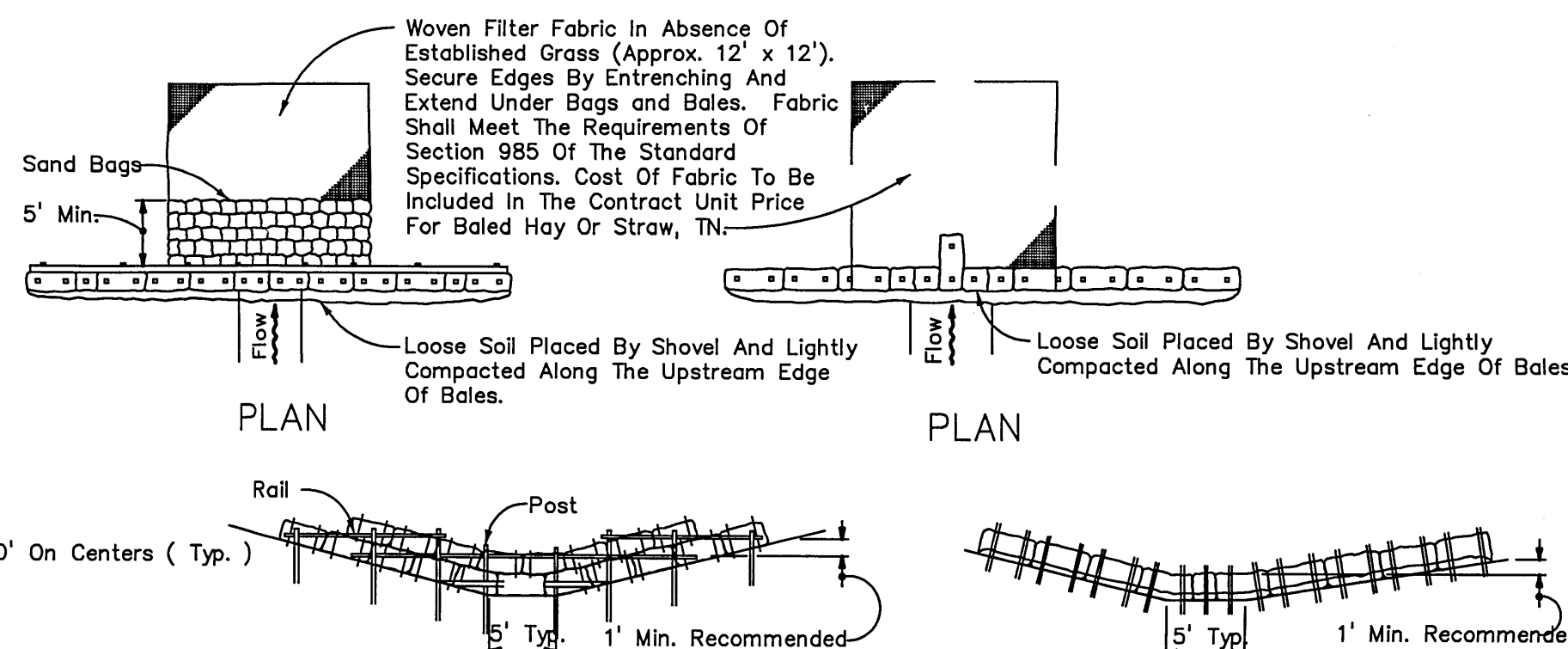
ELEVATION

Spacing: Bale barriers for paved ditches should be spaced in accordance with Chart J, Sheet 1 of 3, Index No. 102

BARRIER FOR PAVED DITCH



BALES BACKED BY FENCE



PLAN

PLAN

ELEVATION

ELEVATION

TYPE II

TYPE I

BARRIER FOR UNPAVED DITCHES

Application and Spacing: The use of Types I & II bale barriers should be limited to the conditions outlined in Chart I, Sheet 1 of 3, Index No. 102

NOTE: SILT AND TURBIDITY BARRIERS SHOWN ARE NOT SITE SPECIFIC AND SHOWN FOR REFERENCE ONLY.

TYPICAL SILT AND TURBIDITY BARRIERS

DETAIL	STD
N.T.S.	-

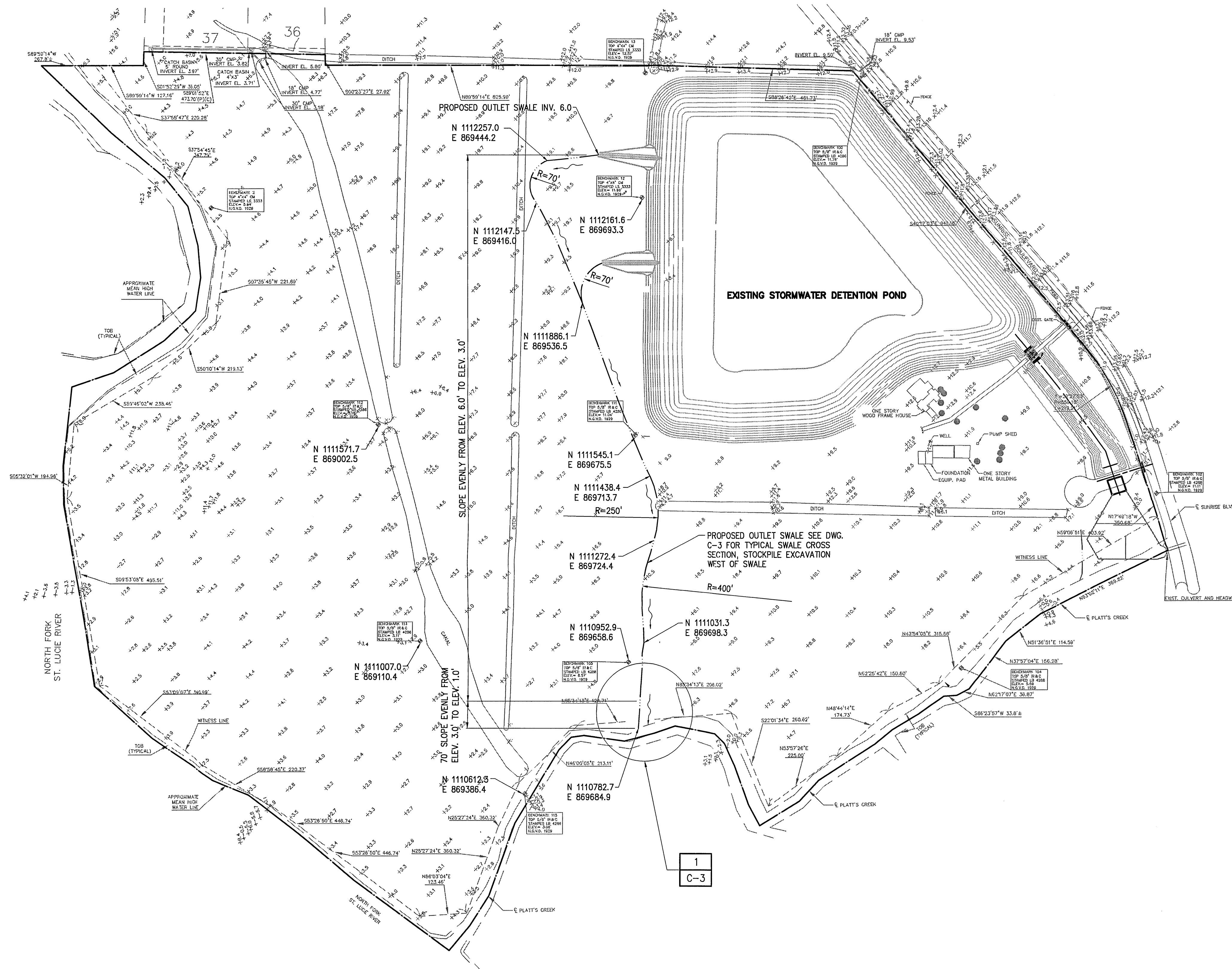
				DESIGNED	C.T.F.	 ROBERT B. TAYLOR No. 44165	P.E.	 HAZEN AND SAWYER Environmental Engineers & Scientists MARDI EXECUTIVE CENTER 1905 SOUTH 25TH STREET FORT PIERCE, FL. 34947 CERTIFICATE OF AUTHORIZATION NUMBER: 2771	SCALE	CONTRACT:	-	 ST. LUCIE COUNTY FLORIDA	ST. LUCIE COUNTY	 PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	MISCELLANEOUS DETAILS	DATE:	MARCH 2008	
				DRAWN	J.R.M.				AS NOTED	CLIENTS PROJECT:	0307		SHEET:			5	OF	5
				CHECKED	F.R.H.				ENGINEERS PROJECT:	40259.001	DRAWING:		C-3					
				PROJ. ENGR.	R.B.T.				CAD REFERENCE:	40259.001								
NO.	DATE	ISSUED FOR	BY															

NOTES:

- 1 EXISTING TOPOGRAPHY PROVIDED BY CULPEPPER AND TERPENING, INC., FT. PIERCE, FLORIDA, FROM SURVEY CONDUCTED ON APRIL 11, 2000.
- 2 EXISTING ELEVATIONS ARE BASED ON F.D.O.T. BENCHMARK '195 85 A 29 RM 2' WITH A PUBLISHED ELEVATION OF 50.157 FEET, BASED ON THE N.G.V. DATUM OF 1929.
- 3 THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.

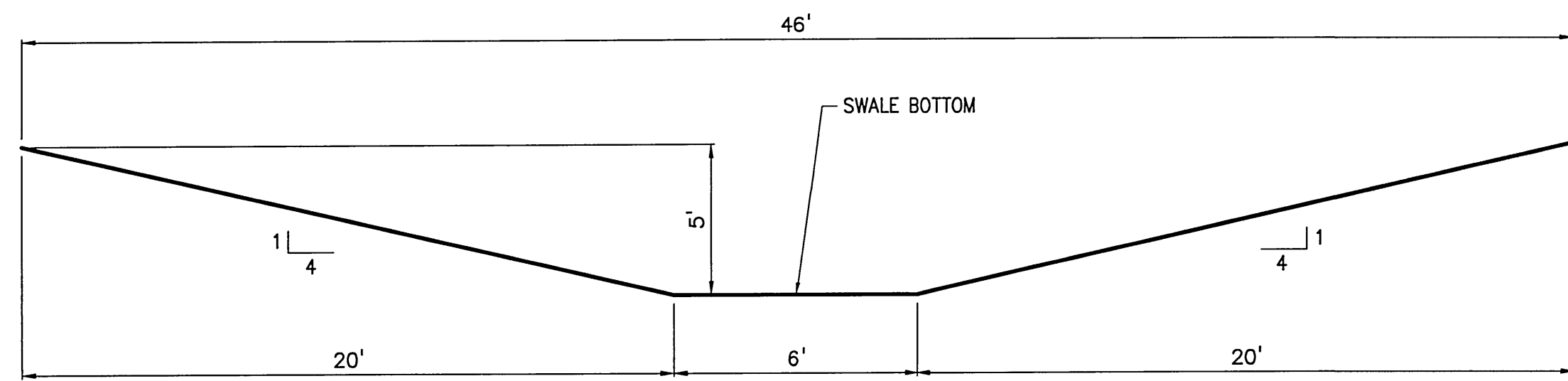
LEGEND

- EXISTING SECTION CORNER
- EXISTING BENCH MARK
- EXISTING ELEVATION
- PROPOSED SWALE



1"=150'-0"

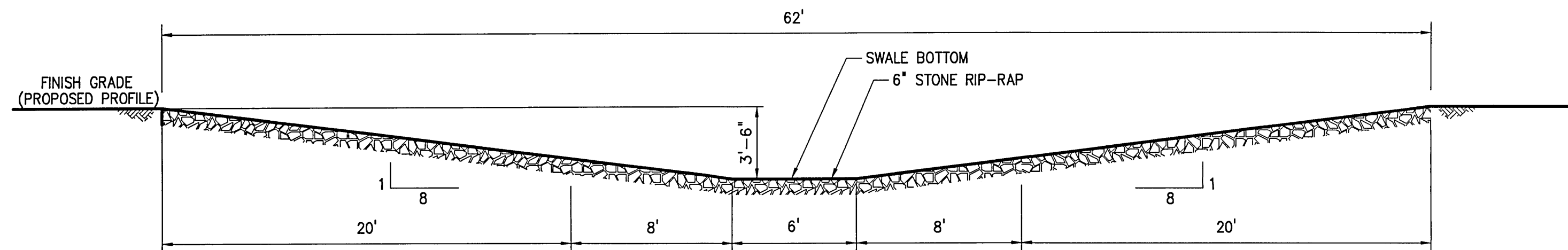
NO. DATE ISSUED FOR BY 04/07/08 5:59pm FILE= 0:\40259-001-PPC\Drawings\Amendment 2\40259002 by JMACLEAN XREF=ppl, tp, 59TB,	DESIGNED C.T.F. DRAWN J.R.M. CHECKED F.R.H. PROJ. ENGR. R.B.T.	ROBERT B. TAYLOR JR. P.E. No. 44165	HAZEN AND SAWYER Environmental Engineers & Scientists MARJO EXECUTIVE CENTER 1905 SOUTH 25TH STREET FORT PIERCE, FL 34947 CERTIFICATE OF AUTHORIZATION NUMBER: 2771	SCALE AS NOTED	CONTRACT: - CLIENTS PROJECT: 0307 ENGINEERS PROJECT: 40259.001 CAD REFERENCE: 40259.001	ST. LUCIE COUNTY PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	PROPOSED SITE PLAN OUTLET SWALE MODIFICATIONS	DATE: MARCH 2008 SHEET: 4 OF 5 DRAWING: C-2
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NOTE: ENTIRE CROSS SECTION TO BE SODDED UNLESS OTHERWISE INDICATED.

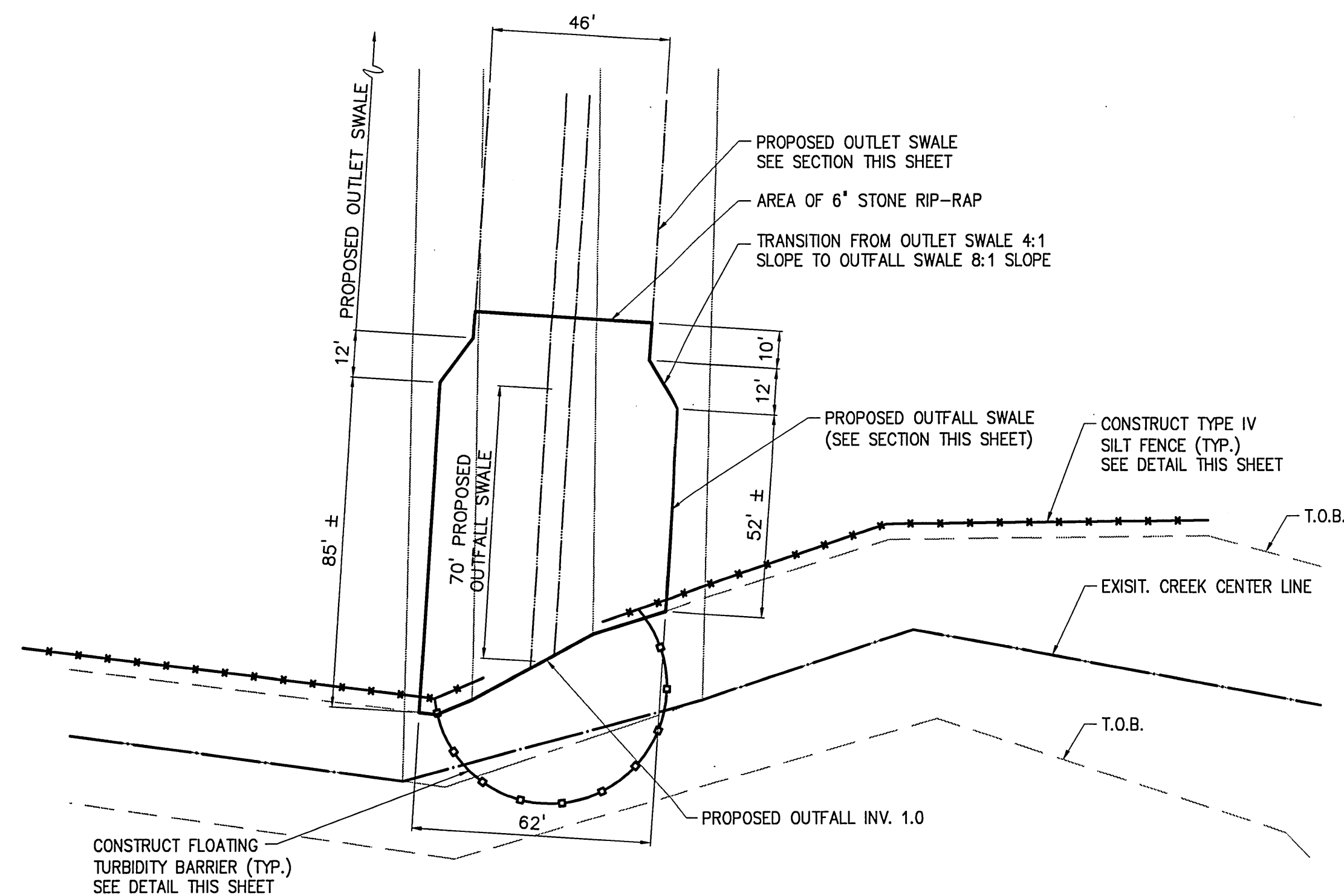
PROPOSED OUTLET SWALE CROSS SECTION

N.T.S.



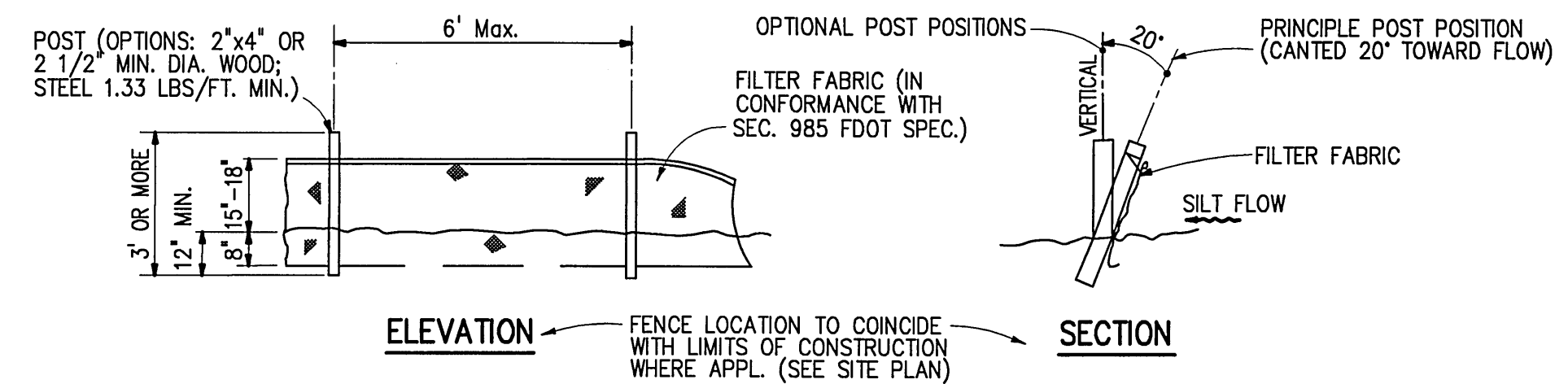
PROPOSED OUTFALL SWALE CROSS SECTION

N.T.S.



OUTFALL SWALE

DETAIL	1
1"=30'-0"	C-2



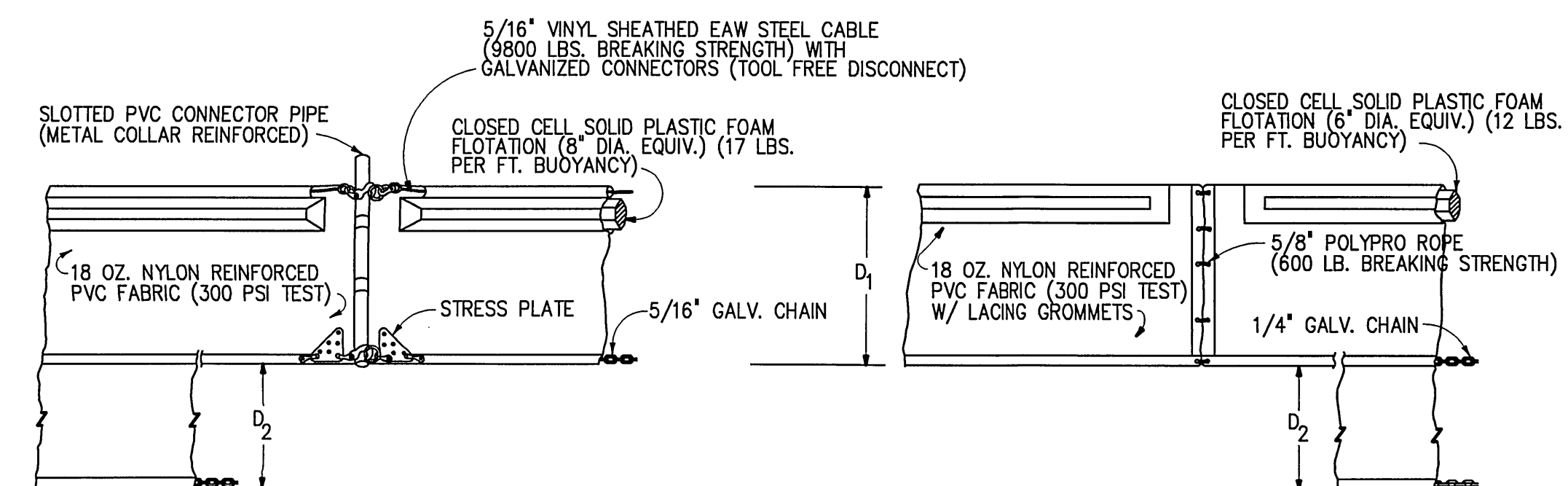
NOTE: SILT FENCE TO BE PAID FOR UNDER THE CONTRACT UNIT PRICE FOR STAKED SILT FENCE (LF).

TYPE IV

DO NOT DEPLOY IN A MANNER THAT SILT FENCES WILL ACT AS A DAM ACROSS PERMANENT FLOWING WATERCOURSES. SILT FENCES ARE TO BE USED AT UPLAND LOCATIONS AND TURBIDITY BARRIERS USED AT PERMANENT BODIES OF WATER.

SILT FENCE DETAIL

N.T.S.



TYPE II

TYPE I

D₁=5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D₂=5' STD. (ADDITIONAL PANEL FOR DEPTHS 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO (2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

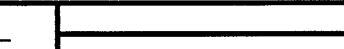
FLOATING TURBIDITY BARRIER DETAIL

N.T.S.

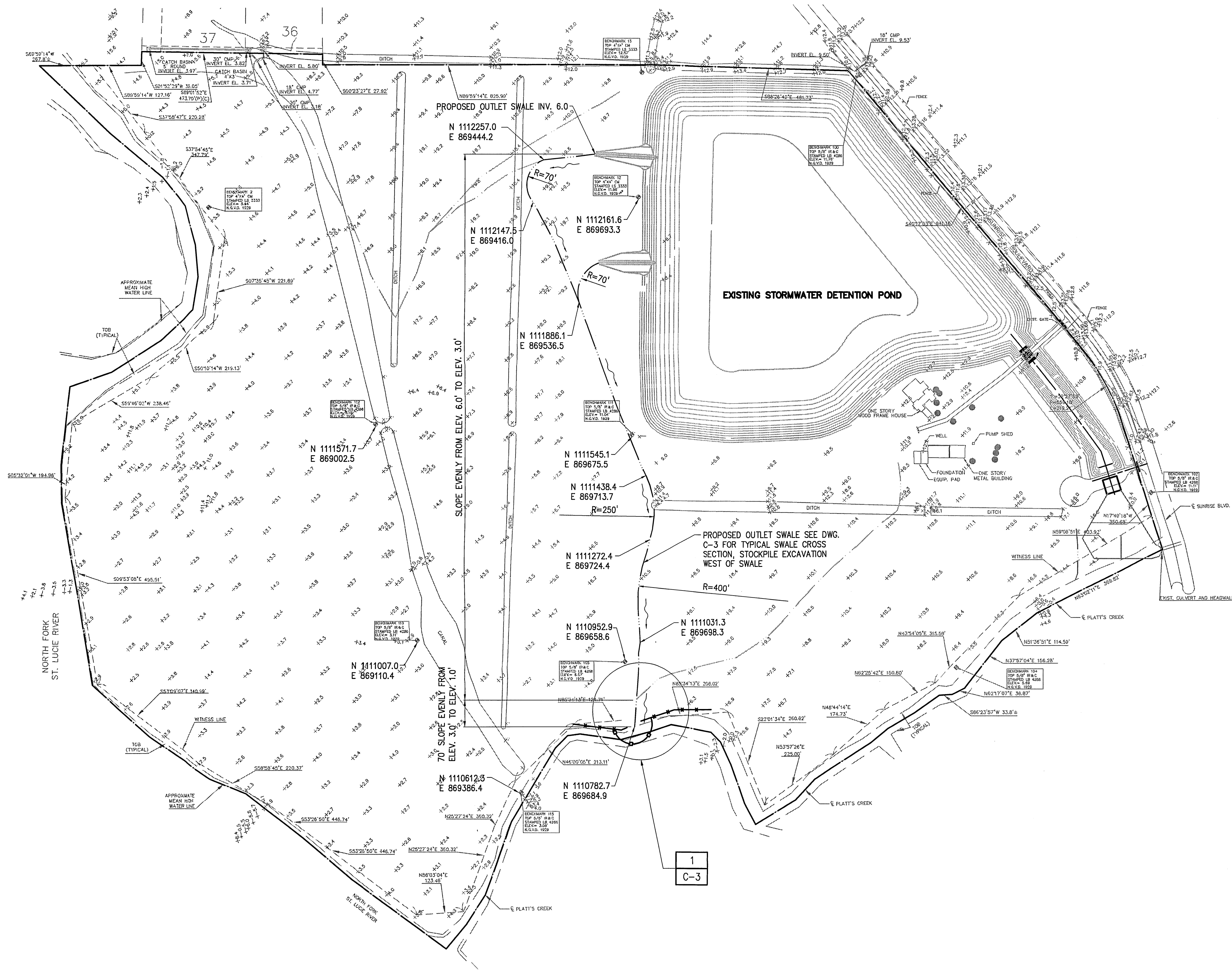
TYPICAL SILT FENCE AND TURBIDITY BARRIERS

DETAIL	STD
N.T.S.	-

ADD/REV
MAY 07 2008

				DESIGNED	C.T.F.	 ROBERT B. TAYLOR, JR. No. 44165 P.E.	HAZEN AND SAWYER Environmental Engineers & Scientists MARIE EXECUTIVE CENTER 1905 SOUTH 25TH STREET FORT PIERCE, FL 34947 CERTIFICATE OF AUTHORIZATION NUMBER: 2771	SCALE	CONTRACT:	—	 ST. LUCIE COUNTY FLORIDA	ST. LUCIE COUNTY	PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	MISCELLANEOUS DETAILS	DATE :	MARCH 2008	
				DRAWN	J.R.M.			AS NOTED	CLIENTS PROJECT:	0307		SHEET:			5	OF	5
				CHECKED	F.R.H.			ENGINEERS PROJECT:	40259.001	DRAWING:		C-3					
				PROJ. ENGR.	R.B.T.			CAD REFERENCE:	40259.001								

APPLICATION 080410-9
EXHIBIT 2.1D



- NOTES:
- 1 EXISTING TOPOGRAPHY PROVIDED BY CULPEPPER AND TERPENING, INC., FT. PIERCE, FLORIDA, FROM SURVEY CONDUCTED ON APRIL 11, 2000.
 - 2 EXISTING ELEVATIONS ARE BASED ON F.D.O.T. BENCHMARK *195 85 A 29 RM 2" WITH A PUBLISHED ELEVATION OF 50.157 FEET, BASED ON THE N.G.V. DATUM OF 1929.
 - 3 THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.

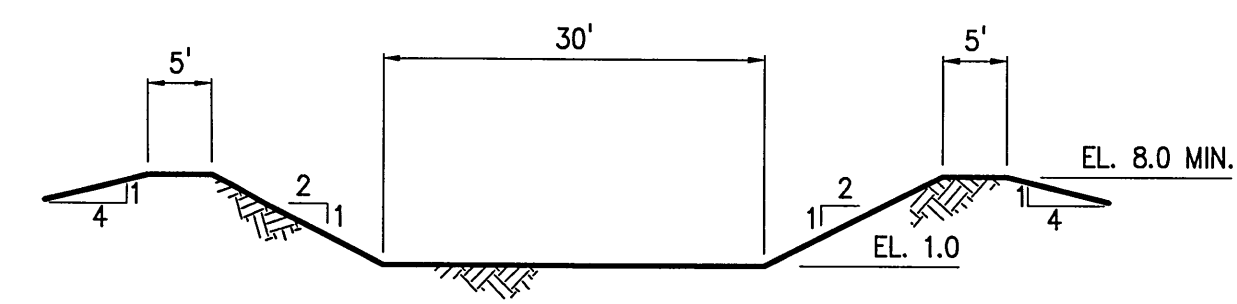
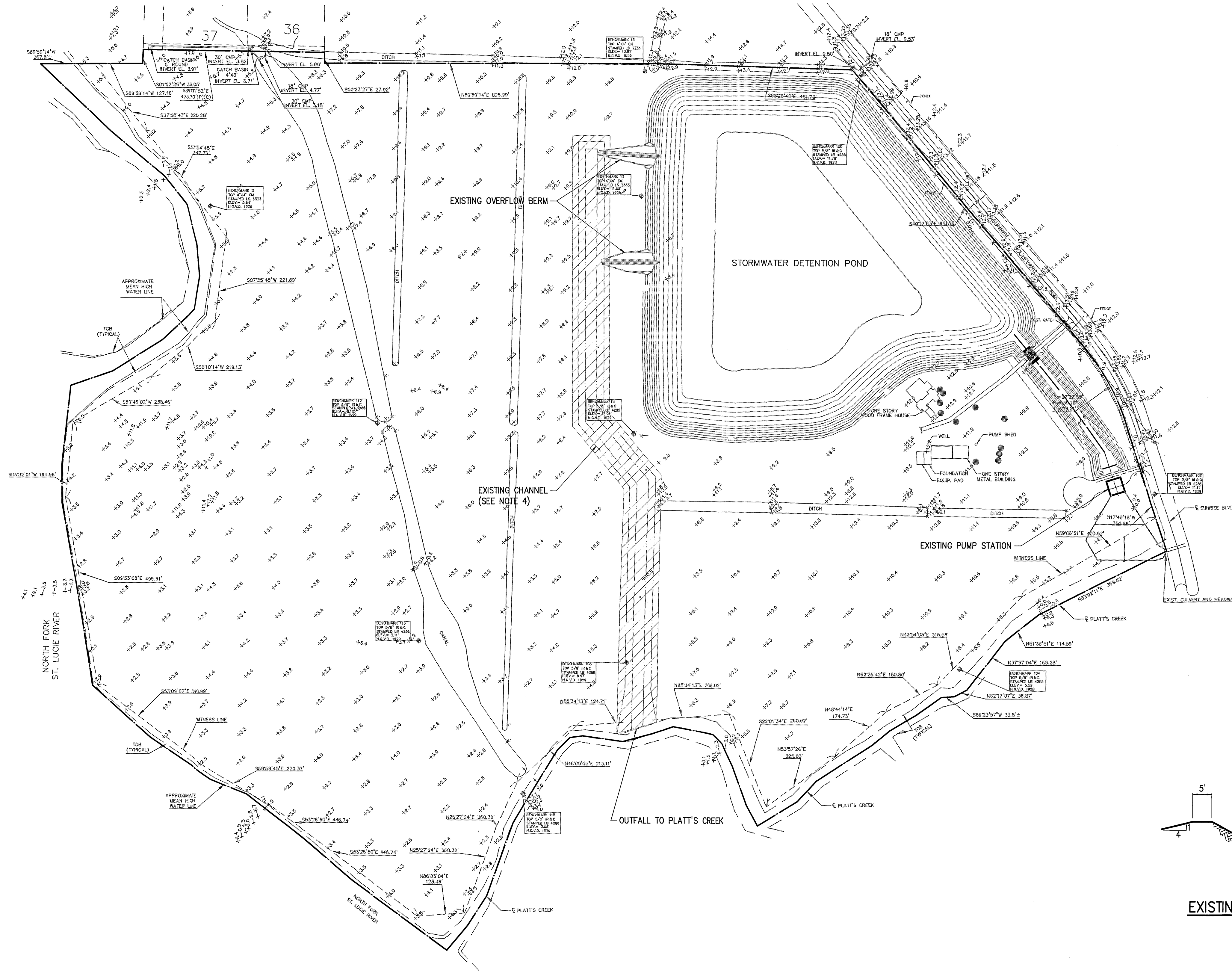
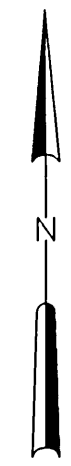
- LEGEND
- EXISTING SECTION CORNER
 - EXISTING BENCH MARK
 - EXISTING ELEVATION
 - PROPOSED SWALE
 - FUTURE SWALE
 - SILT FENCE
 - FLOATING TURBIDITY BARRIER

ADD/REVISED SUBMITTAL
MAY 07 2008

1"=150'-0" 150 75 0 150'

DESIGNED C.T.F.				DRAWN J.R.M.				CHECKED F.R.H.				PROJ. ENGR. R.B.T.			
NO.				DATE				ISSUED FOR				BY			
PLOT DATE 05/02/08 12:09pm				FILE= O:\40259-001-FPC\Drawings\Amendment 2\40259C02				by JMACLEAN XREFS=pgp1, tp, 591B,							
HAZEN AND SAWYER				Environmental Engineers & Scientists				MARDI EXECUTIVE CENTER				1905 SOUTH 25TH STREET			
FORT PIERCE, FL 34947				CERTIFICATE OF AUTHORIZATION NUMBER: 2771				SCALE				CONTRACT: -			
AS NOTED				CLIENTS PROJECT: 0307				ENGINEERS PROJECT: 40259.001				CAD REFERENCE: 40259.001			
ST. LUCIE COUNTY				PLATT'S CREEK STORMWATER				MANAGEMENT FACILITIES AND				WETLAND RESTORATION			
OUTLET SWALE MODIFICATIONS				PROPOSED SITE PLAN				OUTLET SWALE MODIFICATIONS				DATE: MARCH 2008			
SHEET: 4 OF 5				DRAWING: C-2											

APPLICATION 080410-9
EXHIBIT 2.1C



EXISTING STORMWATER OUTLET CHANNEL
TYPICAL SECTION
N.T.S.

NOTES:

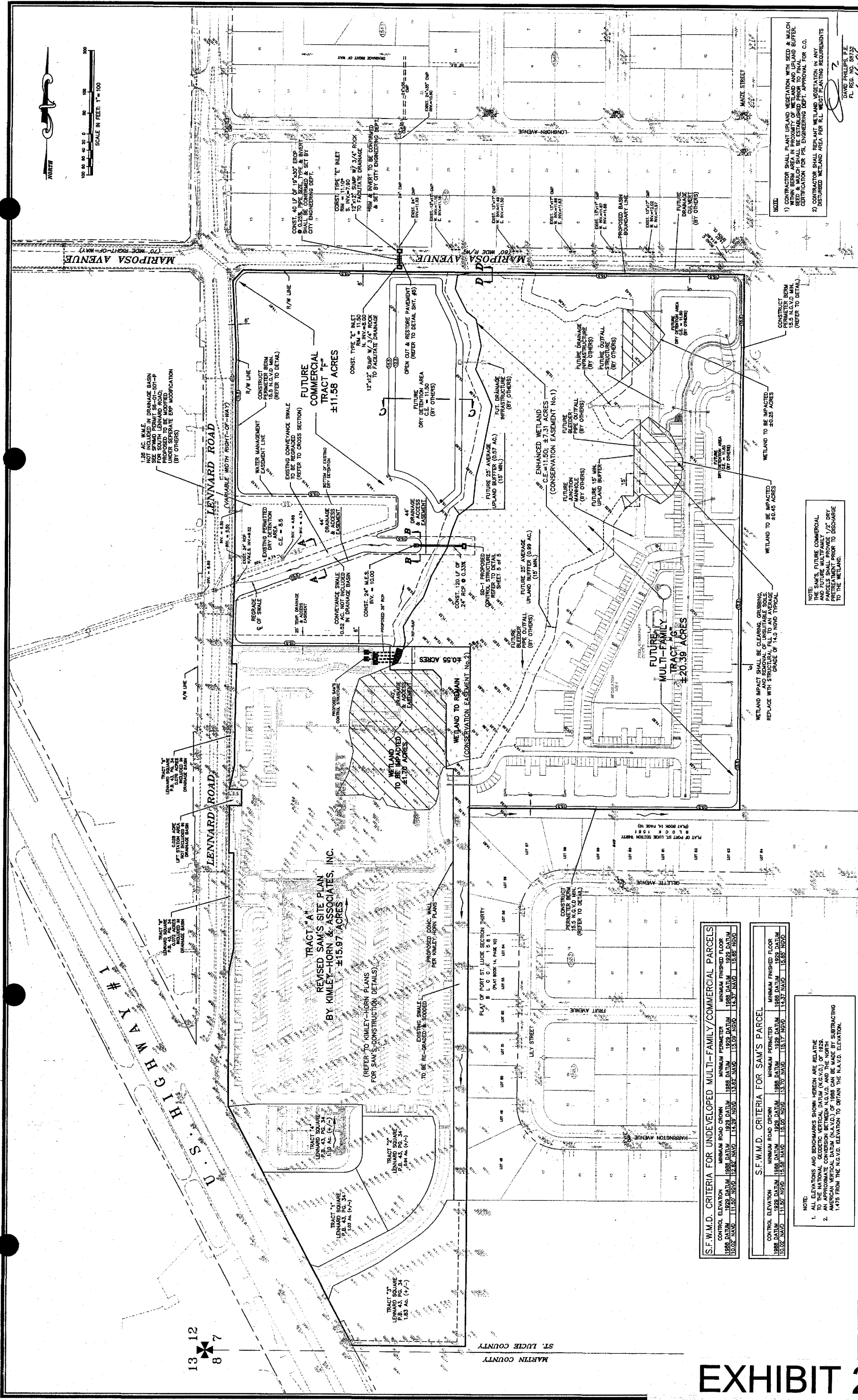
1. EXISTING TOPOGRAPHY PROVIDED BY CULPEPPER AND TERPENING, INC., FT. PIERCE, FLORIDA, FROM SURVEY CONDUCTED ON APRIL 11, 2000.
2. EXISTING ELEVATIONS ARE BASED ON F.D.O.T. BENCHMARK "195 85 A 29 RM 2" WITH A PUBLISHED ELEVATION OF 50.157 FEET, BASED ON THE N.G.V. DATUM OF 1929.
3. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE PROTECTION OF PLATT'S CREEK AND NORTH FORK ST. LUCIE RIVER AND ALL OTHER SURFACE WATERS ADJACENT TO AND INTERSECTING WITH THE PROJECT SITE FROM EROSION AND SEDIMENT DAMAGE DUE TO CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL CONSTRUCT EROSION AND SEDIMENT CONTROL BARRIERS TO PROTECT SURFACE WATER IN AND AROUND THE PROJECT SITE. SEE DWG. C-7 FOR BARRIER DETAILS.
4. PORTIONS OF EXISTING CHANNEL NOT COINCIDING WITH PROPOSED OUTLET SWALE SHALL BE FILLED WITH EXISTING STOCKPILE AS NECESSARY. REFERENCE C-2 AND C-3 FOR THE LOCATION OF THE PROPOSED OUTLET SWALE.
5. EXISTING STOCKPILE IS LOCATED TO THE WEST OF THE EXISTING CHANNEL. THE CONTRACTOR SHALL DETERMINE THE ADEQUACY OF THE STOCKPILE.

LEGEND

- EXISTING SECTION CORNER
- EXISTING BENCH MARK
- EXISTING ELEVATION
- EXISTING INDEX CONTOUR
- EXISTING INTERVAL CONTOUR
- EXISTING CHANNEL CONTOUR
- LIMITS OF CHANNEL FILL (SEE NOTE 4)

1"=150'-0" 150 75 0 150'

DESIGNED C.T.F. DRAWN J.R.M. CHECKED F.R.H. PROJ. ENGR. R.B.T.				HAZEN AND SAWYER Environmental Engineers & Scientists MARDI EXECUTIVE CENTER 1905 SOUTH 25TH STREET FORT PIERCE, FL 34947 CERTIFICATE OF AUTHORIZATION NUMBER: 2771		SCALE AS NOTED	CONTRACT: - CLIENTS PROJECT: 0307 ENGINEERS PROJECT: 40259.001 CAD REFERENCE: 40259.001	ST. LUCIE COUNTY PLATT'S CREEK STORMWATER MANAGEMENT FACILITIES AND WETLAND RESTORATION OUTLET SWALE MODIFICATIONS	EXISTING SITE PLAN		DATE: MARCH 2008 SHEET: 3 OF 5 DRAWING: C-1
NO.	DATE	ISSUED FOR	BY								



DATE: 1/17/06
HORIZ. SCALE: 1"=100'
VERT. SCALE: N/A

JOB No. 00-63
SHEET 4 OF 5

LENNARD SQUARE

MASTER GRADING & DRAINAGE PLAN

- REVISIONS -	
BY	DATE
DESIGNED	5-15-03
DRAWN	5-15-03
CHECKED	5-15-03
APPROVED	1/17/06

- REVISIONS -	
BY	DATE
REVISED PER STWD	TJM 12/19/03
REVISED PER AVE	TJM 7/9/04
REVISED LENNARD RD. DRY DETENTION AREA	TJM 10/25/04
REVISED PER AVE. SAM'S & CONTEX LAYOUT	TJM 5/25/05
ADDED BASIN BOUNDARY LINE & STWD MODIFICATION	JAC 8/24/05
REVISED PER STWD	TJM 12/17/05

CONSULTING ENGINEERS & LAND SURVEYORS
ST. LUCIE COUNTY, FLORIDA
FORT MYERS, FLORIDA 33901
(772) 464-3537

CULPEPPER & TERPENING, INC.
STATE OF FLORIDA, BOARD OF PROFESSIONAL ENGINEERS AUTHORIZATION NO. 4288

COMPUTER FILE REF. FIELD BK./PG.

DATE

BY

REVISIONS -

REVISIONS PER STWD

NOTE:
1. ALL ELEVATIONS AND BENCHMARKS SHOWN HEREON ARE RELATIVE TO THE NATIONAL GEODETIC VERTICAL DATUM (N.G.V.D.) OF 1928.
2. AN APPROXIMATE CONVERSION BETWEEN N.G.V.D. AND THE NORTH AMERICAN VERTICAL DATUM (N.A.V.D.) OF 1988 CAN BE MADE BY SUBTRACTING 1.475 FROM THE N.G.V.D. ELEVATION TO OBTAIN THE N.A.V.D. ELEVATION.

NOTE:
1. CONTRACTOR SHALL PLANT UPLAND VEGETATION WITH SEED & MULCH IN ANY BARE AREA IN PROXIMITY OF WETLAND AND UPLAND BUFFER. SEED & MULCH SHALL BE PLANTED IN ACCORDANCE WITH THE CITY OF LAKELAND CERTIFICATION FOR PSL ENGINEERING DEPT. APPROVAL FOR C.O.
2. CONTRACTOR SHALL REPAIR WETLAND VEGETATION IN ANY DISTURBED WETLAND AREA PER P.L. WETLAND PLANTING REQUIREMENTS.

NOTE:
1. FUTURE COMMERCIAL AND FUTURE MULTI-FAMILY PARCELS SHALL PROVIDE 1/2" DRY PRETREATMENT PRIOR TO DISCHARGE TO THE WETLAND.

NOTE:
WETLAND IMPACT SHALL BE CLOSING, GRUBBING, AND REMOVAL OF UNSUITABLE SOILS. REPLACE WITH GRADE OF 14.0 NOD TYPICAL.

NOTE:
WETLAND TO BE IMPACTED 20.39 ACRES

NOTE:
WETLAND TO BE IMPACTED 11.70 ACRES

NOTE:
WETLAND TO BE IMPACTED 11.58 ACRES

EXHIBIT 2-L4
Application No. 040712-14