



**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
ENVIRONMENTAL RESOURCE PERMIT NO. 43-02364-P
DATE ISSUED: MARCH 29, 2010**

PERMITTEE: MARTIN COUNTY BOARD OF COUNTY COMMISSIONERS
(WARNER CREEK STORM WATER QUALITY RETROFIT)
2401 SE MONTEREY ROAD,
STUART, FL 34996

PROJECT DESCRIPTION: CONSTRUCTION AND OPERATION OF A SURFACE WATER MANAGEMENT SYSTEM KNOWN AS
WARNER CREEK STORMWATER QUALITY RETROFIT TO SERVE AN EXISTING WATERSHED.

PROJECT LOCATION: MARTIN COUNTY, SECTION 27 TWP 38S RGE 41E

PERMIT DURATION: See Special Condition No:1. See attached Rule 40E-4.321, Florida Administrative Code.

This is to notify you of the District's agency action concerning Permit Application No. 090128-6, dated January 29, 2010. This action is taken pursuant to the provisions of Chapter 373, Part IV, Florida Statutes (F.S.), and the Operation Agreement Concerning Regulation Under Part IV, Chapter 373 F.S., between South Florida Water Management District and the Department of Environmental Protection.

Based on the information provided, District rules have been adhered to and an Environmental Resource Permit Modification is in effect for this project subject to:

1. Not receiving a filed request for an administrative hearing pursuant to Section 120.5 and Section 120.569, or request a judicial review pursuant Section 120.68, Florida Statutes.
2. The attached 19 General Conditions.
3. The attached 30 Special Conditions.
4. The attached 5 Exhibits.

Should you object to these conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Should you wish to object to the proposed agency action or file a petition, please provide written objections, petitions and/or waivers to:

Elizabeth Veguilla, Deputy Clerk, MSC2440
South Florida Water Management District
Post Office Box 24680
West Palm Beach, FL 33416-4680

Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights", we will assume that you concur with the District's action.

CERTIFICATION OF SERVICE

I HEREBY CERTIFY that the Staff Report, Conditions and Notice of Rights have been mailed to the Permittee (and the persons listed on the attached staff report distribution list) no later than 5:00 p.m. on this 30th day of March, 2010, in accordance with Section 120.60(3), Florida Statutes, and a copy has been filed and acknowledged with the Deputy District Clerk.

ORIGINAL SIGNED BY

By ELIZABETH VEGUILLA
DEPUTY CLERK
SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Attachments

CERTIFIED MAIL# 70050390000598197919

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on March 29, 2015.
2. Operation of the surface water management system shall be the responsibility of the permittee.
3. Discharge Facilities:

Structure: CS-1

1-135' WIDE SHARP CRESTED weir with crest at elev. 3.75' NGVD 29.

Receiving body : WARNER CREEK
Control elev : 1.5 feet NGVD 29.

Structure: CS-2

2-5' WIDE SHARP CRESTED weirs with crest at elev. 3.75' NGVD 29.
2-4.5' W X 2.25' H RECTANGULAR NOTCHES with invert at elev. 1.5' NGVD 29.

Receiving body : WARNER CREEK
Control elev : 1.5 feet NGVD 29.
4. 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.
5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
6. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
7. Lake side slopes shall be no steeper than 4:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.
8. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
9. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
10. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
11. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
12. The permittee acknowledges, that pursuant to Rule 40E-4.101(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.

13. If prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.
14. Prior to the commencement of construction and pursuant to Subsection 40E-4.101(2), F.A.C., the permittee shall demonstrate ownership of the project area to the District's Environmental Resource Compliance staff at the Martin/St. Lucie Service Center.
15. Portions of the construction and maintenance of the proposed project will require access easement(s) from adjacent property owners. Prior to the commencement of construction and pursuant to Subsection 40E-4.101(2), F.A.C., the permittee shall provide copies of the recorded easements to the District's Environmental Resource Compliance staff at the Martin/St. Lucie Service Center.
16. 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.
17. Future development in the basin shall not rely upon the additional water quality treatment provided by this project in order to meet state water quality standards for any future development activity in the basin.
18. A mitigation program for Warner Creek Stormwater Quality Retrofit shall be implemented in accordance with Exhibit Nos. 3.1 and 3.2. The permittee shall create 0.29 acres of wetlands and enhance 0.13 acres of acres of wetlands.
19. Success of the mitigation activities proposed herein is heavily dependent on proper grading to achieve the design ground elevations necessary to recruit the expected vegetation or to sustain the proper hydrology for the targeted vegetation communities. The permittee shall submit as-built topography of the proposed mitigation area(s) prior to planting. The permittee shall correct any deficiencies in the project grade within 14 days of being notified of such deficiencies by District staff.
20. A monitoring program shall be implemented in accordance with Exhibit No. 3.1. 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.
21. A maintenance program shall be implemented in accordance with Exhibit No. 3.1 for the preserved/created/enhanced wetland areas 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 areas are 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. Maintenance in perpetuity shall also insure that conservation areas, including buffers, maintain the species and coverage of native, desirable vegetation specified in the permit. Coverage of exotic and nuisance plant species shall not exceed 5% 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.
22. Permanent physical markers designating the preserve status of the wetland preservation areas and buffer zones shall

be installed in accordance with Exhibit 3.1. These markers shall be maintained in perpetuity.

23. The wetland preservation/mitigation areas shown on Exhibit(s) 3.1 and 3.2 may in no way be altered from their permitted state. Activities prohibited within the conservation areas include, but are not limited to:
- (a) construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground;
 - (b) dumping or placing soil or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;
 - (c) removal or destruction of trees, shrubs, or other vegetation - with the exception of exotic and nuisance vegetation removal;
 - (d) excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substances in such manner as to affect the surface;
 - (e) surface use except for purposes that permit the land or water area to remain predominantly in its natural condition;
 - (f) activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation, including but not limited to ditching, diking or fencing;
 - (g) acts or uses detrimental to such retention of land or water areas; and
 - (h) acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance.
24. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measures shall be installed prior to the commencement of construction in or adjacent to other surface waters in accordance with Exhibit Nos. 2.0 and 2.1 and shall remain in place until all adjacent construction is completed. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into the surface waters.
25. No mangrove trimming and/or altering activities shall be authorized by this permit.
26. 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.
27. A water quality monitoring program shall be implemented as outlined below:

Turbidity expressed in nephelometric turbidity units (ntu). Background samples shall be taken 200 feet upstream of any construction activity within adjacent surface waters. Compliance samples shall be taken 100 feet downstream. Samples shall be taken twice daily, with at least a four-hour interval, during all work authorized by this permit.

Monitoring shall begin on the first day of construction for all activities within or adjacent to surface waters. The monitoring data must demonstrate that turbidity 100 feet downstream of all proposed activities is less than or equal to 29 NTU's above natural background turbidity and 200 feet upstream of each proposed activity for a period of 7 consecutive days after completion of construction. If monitoring shows such levels to be exceeded, construction shall cease and District compliance staff shall be notified immediately. Work shall not resume until District staff is satisfied that adequate corrective measures have been taken and turbidity has returned to acceptable levels.

All monitoring data shall be maintained on site and be available to District staff during regular business hours. The content of the data shall include:

1) permit and application number; (2) dates of sampling and analysis; (3) statement describing the methods used in collection, handling, storage and analysis of the samples; (4) a map indicating the sampling locations and (5) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.

Monitoring reports shall also include the following information for each sample that is taken:

- (a) time of day samples taken;

- (b) depth of water body;
 - (c) depth of samples;
 - (d) antecedent weather conditions;
 - (e) wind direction and velocity;
 - (f) direction of tide.
28. Activities associated with the implementation of the mitigation, monitoring and maintenance plan(s) shall be completed in accordance with the work schedule attached as Exhibit No. 5. 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.
29. Prior to the commencement of construction, the permittee shall conduct a pre-construction meeting with field representatives, contractors and District staff. The purpose of the meeting will be to discuss construction methods and sequencing, including type and location of turbidity and erosion controls to be implemented during construction, mobilization and staging of contractor equipment, phasing of construction, methods of vegetation clearing, construction dewatering if required, ownership documentation for eminent domain authority, coordination with other entities on adjacent construction projects, wetland/buffer protection methods, and/or endangered species protection with the permittee and contractors. The permittee shall contact District Environmental Resource Compliance staff from the Martin/St. Lucie Service Center at (772) 223-2600 to schedule the pre-construction meeting.
30. Endangered species, threatened species and/or species of special concern have been observed onsite and/or the project contains suitable habitat for these species. It shall be the permittee's responsibility to coordinate with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service for appropriate guidance, recommendations and/or necessary permits to avoid impacts to listed species.

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.
5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.
6. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.
7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved

responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.
9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.
10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.
11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..
12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.
14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal, abandonment or use of any system authorized by the permit.
15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.
16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.

18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.
19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

ENVIRONMENTAL RESOURCE PERMITS CHAPTER 40E-4 (01/07)

40E-4.321 Duration of Permits.

(1) Unless revoked or otherwise modified the duration of an environmental resource permit issued under this chapter or Chapter 40E-40, F.A.C., is as follows:

(a) For a conceptual approval, two years from the date of issuance or the date specified as a condition of the permit, unless within that period an application for an individual or standard general permit is filed for any portion of the project. If an application for an environmental resource permit is filed, then the conceptual approval remains valid until final action is taken on the environmental resource permit application. If the application is granted, then the conceptual approval is valid for an additional two years from the date of issuance of the permit. Conceptual approvals which have no individual or standard general environmental resource permit applications filed for a period of two years shall expire automatically at the end of the two year period.

(b) For a conceptual approval filed concurrently with a development of regional impact (DRI) application for development approval (ADA) and a local government comprehensive plan amendment, the duration of the conceptual approval shall be two years from whichever one of the following occurs at the latest date:

1. The effective date of the local government's comprehensive plan amendment,
2. The effective date of the local government development order,
3. The date on which the District issues the conceptual approval, or 4. The date on which the District issues a final order pertaining to the resolution of any Section 120.57, F.S., administrative proceeding or other legal appeals.

(c) For an individual or standard general environmental resource permit, the construction phase authorizing construction, removal, alteration or abandonment of a system shall expire five years from the date of issuance or such amount of time as made a condition of the permit.

(d) For an individual or standard general environmental resource permit, the operational phase of the permit is perpetual for operation and maintenance.

(e) For a noticed general permit issued pursuant to Chapter 40E-400, F.A.C., five years from the date the notice of intent to use the permit is provided to the District.

(2)(a) Unless prescribed by special permit condition, permits expire automatically according to the timeframes indicated in this rule. If application for extension is made by electronic mail at the District's e-Permitting website or in writing pursuant to subsection (3), the permit shall remain in full force and effect until:

1. The Governing Board takes action on an application for extension of an individual permit, or
2. Staff takes action on an application for extension of a standard general permit.

(b) Installation of the project outfall structure shall not constitute a vesting of the permit.

(3) The permit extension shall be issued provided that a permittee files a written request with the District showing good cause prior to the expiration of the permit. For the purpose of this rule, good cause shall mean a set of extenuating circumstances outside of the control of the permittee. Requests for extensions, which shall include documentation of the extenuating circumstances and how they have delayed this project, will not be accepted more than 180 days prior to the expiration date.

(4) Substantial modifications to Conceptual Approvals will extend the duration of the Conceptual Approval for two years from the date of issuance of the modification. For the purposes of this section, the term "substantial modification" shall mean a modification which is reasonably expected to lead to substantially different water resource or environmental impacts which require a detailed review.

(5) Substantial modifications to individual or standard general environmental resource permits issued pursuant to a permit application extend the duration of the permit for three years from the date of issuance of the modification. Individual or standard general environmental resource permit modifications do not extend the duration of a conceptual approval.

(6) Permit modifications issued pursuant to paragraph 40E-4.331(2)(b), F.A.C. (letter modifications) do not extend the duration of the permit.

(7) Failure to complete construction or alteration of the surface water management system and obtain operation phase approval from the District within the permit duration shall require a new permit authorization in order to continue construction unless a permit extension is granted.

Specific Authority 373.044, 373.113, 668.003, 668.004, 668.50 FS. Law Implemented 373.413, 373.416, 373.419, 373.426, 668.003, 668.004, 668.50 FS. History-New 9-3-81, Amended 1-31-82, 12-1-82, Formerly 16K-4.07(4), Amended 7-1-86, 4-20-94, 10-3-95, 5-28-00, 10-1-06.

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 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: May 2, 2010

INDIVIDUAL ENVIRONMENTAL RESOURCE PERMIT STAFF REPORT

Project Name: Warner Creek Storm Water Quality Retrofit

Permit No.: 43-02364-P

Application No.: 090128-6 090218-3 WU Related

Application Type: Environmental Resource (New Construction/Operation)

Location: Martin County, S27/T38S/R41E

Permittee : Martin County Board Of County Commissioners

Operating Entity : Martin County Board Of County Commissioners

Project Area: 10.50 acres

Project Land Use: Other

Drainage Basin: MIDDLE COASTAL

Sub Basin: WARNER CREEK

Receiving Body: ST. LUCIE RIVER

Class: CLASS III

Special Drainage District: NA

Total Acres Wetland Onsite: .45

Total Acres Wetland Preserved Onsite: .13

Total Acres Impacted Onsite : .32

Total Acres Presv/Mit Compensation Onsite: .42

Conservation Easement To District : No

Sovereign Submerged Lands: No

**FINAL APPROVED BY THE
EXECUTIVE DIRECTOR
MARCH 29, 2010**

PROJECT PURPOSE:

This application is a request for an Environmental Resource Permit to authorize construction and operation of a stormwater treatment area and surface water management system to serve the existing Warner Creek Basin.

PROJECT EVALUATION:**PROJECT SITE DESCRIPTION:**

The stormwater treatment area (STA) site is located in Rio (unincorporated Martin County) between the FEC Railroad and the State Road 707 Bridges over Warner Creek. Please see the enclosed Location Map Exhibit 1.0 and Proposed Activities Map Exhibit 1.1.

North of the STA site between the existing weir and NE 24th Street, built-up sediment will be removed and a sedimentation basin constructed adjacent to Pinelake Village and Leilani Heights developments to trap and remove future sediment.

There are several permitted and unpermitted developments and roadways in the Warner Creek basin. Please see the background discussion for a summary of surface water management facilities within the project area. Adjacent to the proposed STA is an existing wastewater treatment plant and the Beacon 21 multifamily residential development.

Wetlands exist within Warner Creek south of the FEC Railroad bridge. The project will impact 0.32 acres of wetlands and 2.2 acres of surface waters.

PROJECT BACKGROUND:

Warner Creek is a historic connection between the Savannas and the St. Lucie River in the Jensen Beach / Rio area of Martin County. South of Jensen Beach Boulevard to SR 707 in Rio, the natural creek has been rerouted and channelized for urban drainage purposes. Prior to 1970, the creek between Jensen Beach Boulevard and Savannah Road was replaced with the ditch that now runs through the Pinecrest Lakes development. The remainder of the creek has lost much of its natural character and appears to have been maintained for drainage purposes. The contributing watershed area including the Savannas is approximately 5,030 acres. Significant flooding (including residential first floors) has been reported in the Warner Creek Basin after significant rain events including Tropical Storm Barry (1995), Hurricane Erin (2001), and Tropical Storm Fay (2008).

Several roads and residential developments were constructed in the area in the 1960's and 1970's (prior to District permit program implementation) including Tropicallia Mobile Home Park, Lelani Heights residential subdivision, Savannah Road, State Road 707, and Jensen Beach Boulevard. All of these projects resulted in road crossings of Warner Creek via bridge or culvert. During this same period, a weir was constructed in Warner Creek by Martin County just north of the Tropicallia Mobile Home Park. It is believed that the weir was constructed to recharge ground water and conserve fresh water resources.

On August 10, 1978 SFWMD Permit No. 43-00110-S (app no. 04178-B) authorized the Pinecrest Lakes residential subdivision in the vicinity of Warner Creek from Jensen Beach Boulevard to Savannah Road.

On July 9, 1981, SFWMD permit 43-00073-S (app no. X000011926) authorized the construction of Phase 4 of the Pinelake Village Mobile Home Park. Phases 1-3 were existing at the time of application and believed to have been constructed in the early 1970's. Phase 1-3 were issued an operational permit. The project entrance included a road crossing over Warner Creek using twin 60 inch CMP culverts that appear to have been installed in the 1970's. It is not clear what criteria were used to size these culverts. The capacity of these two culverts does not appear adequate based on the upstream contributing area.

On September 20, 1989 SFWMD permit no. 88-00063-S (app no. 04138-2-2) authorized improvements to Jensen Beach Boulevard.

On December 29, 2004, SFWMD Permit No. 43-01669-P (app no 041213-13) authorized the replacement of the existing FEC railroad bridge over Warner Creek.

PROPOSED PROJECT:

A primary purpose of the proposed project is to divert flows in Warner Creek into a stormwater storage and treatment area (STA). Please see the construction plans on Exhibit 2.0. The STA will be located adjacent to Warner Creek south of the FEC railroad bridge and north of the Beacon 21 development. The project will provide additional stormwater treatment and ground water recharge for stormwater runoff that would otherwise flow directly to the St. Lucie River. The portion of Warner Creek in the vicinity of the proposed diversion weir and STA appear to be a tidal mixing zone during part of the year. The project includes construction activities in 2.2 acres of other surface waters and 0.32 acres of wetlands located within Warner Creek. The control elevation of the STA was selected based on surveyed peak tidal elevations and biological indicators in the vicinity of the proposed STA.

The proposed work between Samaritan Street and 24th Street includes the construction of a sedimentation basin to trap sediment for future removal and the construction of a dry retention pond with an overflow structure to provide additional treatment for a portion of the adjacent Pinelake Village and Lelani Heights developments (please see Exhibit 2.1). The project is also replacing the two existing 60 inch culverts in Warner Creek at the Pinelake Village entrance with two 10 ft x 7 ft box culverts. The system analysis indicates the culvert replacement will reduce up stream flood stages and road overtopping without impacting downstream properties. Please see the existing and proposed flood profiles (Exhibit 2.3) for additional detailed information.

South of the railroad bridge the project includes removal of exotic/nuisance vegetation and accumulated sediment, accompanied by minor regrading within the creek. A copy of the USACOE permit for these activities is located in the permit file.

To construct the STA, a wastewater treatment plant serving the Beacon 21 development will be abandoned. Replacement of existing water and wastewater utility lines under and over Warner Creek is required to facilitate connections to Martin County Utility facilities. A portion of the existing utility lines are hung under an existing wooden pedestrian bridge over Warner Creek set on 8 inch concrete pilling. The wooden pedestrian bridge will be replaced with an aluminum bridge. A copy of the FDEP water and wastewater permit for these activities is located in the permit file.

The existing 24th Street road crossing includes three 91 inch x 54 inch elliptical concrete culverts. The center culvert is plugged. This plug in the center culvert will be removed.

Martin County has not obtained easements and/or ownership of all the areas necessary to complete construction of the project at the time of permit issuance. Prior to the commencement of construction and pursuant to Subsection 40E-4.101(2), F.A.C., the permittee shall demonstrate ownership of the project area to the District's Environmental Resource Compliance staff.

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.

Future development in the basin can not rely upon the additional water quality treatment provided by this project in order to meet state water quality standards for any future development activity in the basin.

WATER QUANTITY :

Discharge Rate :

Tropical Storm Barry (1995), Hurricane Erin (2001), and Tropical Storm Fay (2008) were used to calibrate the computer model of the system. The analysis of the existing system indicated first floor flooding was predicted to occur in certain areas during a 25 year storm. The proposed project will reduce the predicted flooding. The post project design storm peak rate is consistent with the unit discharge rate (per acre

basis) for the permitted projects in the Warner Creek watershed. The peak discharge rates of the permitted projects are not impacted by the proposed work.

Control Elevation :

Basin	Area (Acres)	Ctrl Elev (ft, NGVD 29)	WSWT Ctrl Elev (ft, NGVD 29)	Method Of Determination
WARNER CREEK	5029.00	1.5	1.50	Mean Higher High Tide

Receiving Body :

Basin	Str.#	Receiving Body
Warner Creek	CS-1	WARNER CREEK
Warner Creek	CS-2	WARNER CREEK

Discharge Structures: Note: The units for all the elevation values of structures are (ft, NGVD 29)

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev.
WARNER CREEK	CS-1	1	Sharp Crested	135'				3.75 (crest)

Water Quality Structures: Note: The units for all the elevation values of structures are (ft, NGVD 29)

Bleeders:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Invert Angle	Invert Elev.
WARNER CREEK	CS-2	2	Rectangular Notch	4.5'	2.25'				1.5

Weirs:

Basin	Str#	Count	Type	Width	Height	Length	Dia.	Elev.
WARNER CREEK	CS-2	2	Sharp Crested	5'				3.75 (crest)

WATER QUALITY :

No adverse water quality impacts are anticipated as a result of the proposed project. The project is proposing to construct a stormwater treatment area (STA), a sedimentation basin, and removing existing sediment to improve water quality discharging from Warner Creek to the St Lucie River.

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.

The applicant has provided reasonable assurance that water quality standards will not be violated during construction of the proposed work. Best Management Practices (BMPs) will be implemented including placing barriers to contain erosion and turbidity during construction of the proposed project. In addition, a turbidity monitoring plan will be in place during all proposed construction and dredging activities (refer to Exhibit No. 2.0 and 2.1 and Special Conditions). All erosion and turbidity control measures shall remain in place until the completion of onsite construction.

WETLANDS:

The onsite portions of Warner Creek located south of the FEC railroad bridge and north of State Road 707 contain jurisdictional wetland areas. Please refer to Exhibits 2 and 3.1. The onsite portions of Warner Creek located north of the FEC railroad bridge do not contain wetlands and are classified as other surface waters.

Wetland habitat types within onsite portions of Warner Creek include wetland hardwood forest (FLUCCS 610), vegetated non-forested wetland (FLUCCS 640), and mangroves (FLUCCS 612). Recently, these wetland areas and adjacent uplands were dominated by exotic and nuisance vegetation such as Brazilian pepper (*Schinus terebinthifolius*). Recent maintenance activities performed by Martin County have resulted in a significant reduction of exotic and nuisance vegetation in the creek. Water elevations within the wetlands are primarily governed by tide, and the onsite wetlands are currently in moderate ecological condition.

Wetland Impacts:

As part of this project, the applicant proposes to construct a diversion weir, remove accumulated sediment, and perform minor regrading in portions of Warner Creek located south of the FEC railroad bridge and north of State Road 707. In addition, the applicant proposes to replace an existing wooden bridge across Warner Creek with an aluminum bridge. Please refer to Exhibit 2. The proposed construction activities will result in 0.32 acres of direct impacts to wetlands within Warner Creek. Please refer to Exhibit 3.1, Page 12 of 22. It is important to note that impacts to mangrove wetlands are not proposed with this project; therefore, no mangrove trimming and/or altering activities are authorized by this permit. Please refer to the special conditions.

Mitigation Proposal:

Mitigation for the proposed wetland impacts will be provided onsite and will consist of 0.29 acres of wetland creation adjacent to Warner Creek and 0.13 acres of wetland enhancement within Warner Creek.

The wetland creation and enhancement activities will be performed in accordance with Exhibit 3.1. The proposed wetland creation areas will be graded to achieve ground elevations that will provide viable wetland habitat. The proposed ground elevations within the wetland restoration and creation areas are based on surrounding topographic elevations within Warner Creek. Success of the mitigation activities proposed herein is heavily dependent on proper grading to achieve the design ground elevations necessary to recruit the expected vegetation or to sustain the proper hydrology for the targeted vegetative communities. Therefore, the permittee will submit as-built topography of the proposed mitigation areas prior to planting. In addition, the permittee will correct any deficiencies in the project grade within 14 days of being notified of such deficiencies by District staff. After doing so, wetland creation areas will be planted in accordance with Exhibit 3.2.

The applicant has provided reasonable assurances that the current hydrologic regimes of the wetlands will be maintained in the post development condition. In addition, the applicant will install permanent signs designating the preserve status of the wetland preservation/mitigation areas (please refer to Exhibit 3.1 and the Special Conditions).

The proposed activities have been evaluated for potential cumulative impacts to the St. Lucie River Basin. The applicant proposes to provide sufficient onsite mitigation to offset the proposed wetland impacts. Therefore, Staff has determined that the proposed project will not result in a net loss of wetland function within the St. Lucie River Basin nor will the project result in unacceptable cumulative impacts to the basin.

Monitoring and maintenance of the proposed wetland preservation/mitigation areas will take place in accordance with the Environmental Monitoring Report included in this permit as Exhibit 3.1. Reports will be sent to the District's Environmental Resource Compliance staff for five years or until the mitigation area reaches success. The vegetative success criteria for the mitigation areas include the requirement for 80 percent coverage of desirable vegetation by the end of the second year, and areal coverage of invasive exotic vegetation at zero percent with nuisance vegetation limited to 5 percent or less. After 5 years, the preservation/mitigation areas will meet the vegetative success criteria of 80 percent coverage of desirable vegetation and areal coverage of exotic vegetation at zero percent with nuisance vegetation limited to 5 percent or less. Maintenance of the wetland preservation/mitigation areas will be performed in perpetuity. Please refer to the Special Conditions.

Wetland Inventory :

CONSTRUCTION NEW -Warner Creek

Site Id	Site Type	Pre-Development				Post-Development						
		Pre Fluc cs	AA Type	Acreage (Acres)	Current Wo Pres	With Project	Time Lag (Yrs)	Risk Factor	Pres. Adj. Factor	Post Fluccs	Adj Delta	Functional Gain / Loss
I	ON	610	Direct	.32	.37	.00					-.370	-.118
M1	ON	612	Enhancement	.11	.37	.67	3	1.25		612	.224	.025
M2	ON	422	Restoration/Creation	.28	.00	.63	5	1.75		610	.316	.088
M3	ON	414	Restoration/Creation	.01	.00	.63	5	1.75		610	.316	.003
M4	ON	610	Enhancement	.02	.37	.67	3	1.25		610	.224	.004
OSW	ON	510	Direct	2.20							.000	.000
Total:				2.94								.00

<u>Flucss Code</u>	<u>Description</u>
414	Pine - Mesic Oak
422	Brazilian Pepper- Upland
422	Brazilian Pepper- Wetland (Ff)
422	Brazilian Pepper- Wetland (Fh)
422	Brazilian Pepper- Wetland (Sf)
510	Streams And Waterways
610	Wetland Hardwood Forests
612	Mangrove Swamps

Wildlife Issues:

The project site contains preferred habitat for wetland-dependent endangered/threatened species or species of special concern. While wetland impacts are proposed, it is anticipated that the proposed onsite wetland preservation/mitigation areas will continue to provide sufficient habitat for wetland-

dependent endangered/threatened species or species of special concern. Therefore, no adverse impacts to wetland-dependent endangered/threatened species or species of special concern are anticipated as a result of the proposed project. This permit does not relieve the applicant from complying with all applicable rules and any other agencies' requirements in accordance with the Special Conditions.

LEGAL ISSUES:

The applicant is responsible for the successful completion of the mitigation program and the continued preservation and maintenance of the onsite preservation/mitigation areas in perpetuity in accordance with Exhibit 3.1 and the Special Conditions.

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-4.361(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.

SOVEREIGN/SUBMERGED LANDS:

On February 12, 2009, documentation was received from the Division of State Lands Title and Land Records Section (DSL) indicating that DSL staff was unable to determine whether or not the submerged lands of Warner Creek within the vicinity of the proposed activity are State-owned. Therefore, DSL staff recommends that proprietary requirements normally applied to State-owned lands not apply to this project. Please refer to Exhibit 4.

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

The applicant has indicated that dewatering is required for construction of this project. Water use application 090218-3 for short term dewatering is being reviewed concurrently for this project. The applicant has indicated that irrigation water is not required for the project.

This permit does not release the permittee from obtaining all necessary Water Use authorization(s) prior to the commencement of activities which will require such authorization, including construction dewatering and irrigation, unless the work qualifies for a No-Notice Short-Term Dewatering permit pursuant to Chapter 40E-20.302(3) or is exempt pursuant to Section 40E-2.051, FAC.

CERP:

The proposed project is not located within or adjacent to a Comprehensive Everglades Restoration Project component.

Potable Water Supplier:

Potable water is not required

Waste Water System/Supplier:

Wastewater treatment is not required.

Right-Of-Way Permit Status:

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

DRI Status:

This project is not a DRI.

Historical/Archeological Resources:

No information has been received that indicates the presence of archaeological or historical resources or that the proposed activities could cause adverse impacts to archaeological or historical resources.

DCA/CZM Consistency Review:

The District has not received a finding of inconsistency from the Florida Department of Environmental Protection 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 TO EXECUTIVE DIRECTOR:

The Staff recommends that the following be issued :

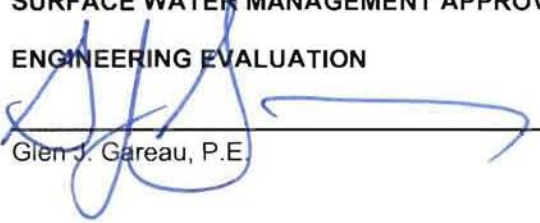
Construction and operation of a surface water management system known as Warner Creek Stormwater Quality Retrofit to serve an existing watershed.

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

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

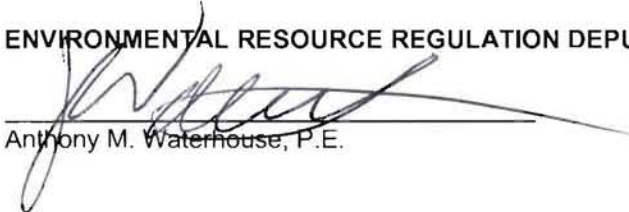
STAFF REVIEW:**NATURAL RESOURCE MANAGEMENT APPROVAL****ENVIRONMENTAL EVALUATION**

Ryan Bond**SUPERVISOR**

Melinda Parrott**SURFACE WATER MANAGEMENT APPROVAL****ENGINEERING EVALUATION**

Glen J. Gareau, P.E.**SUPERVISOR**

Hugo A. Carter, P.E.**ENVIRONMENTAL RESOURCE PERMITTING DIVISION DIRECTOR :**

Anita R. BainDATE: 3/19/10**ENVIRONMENTAL RESOURCE REGULATION DEPUTY DEPARTMENT DIRECTOR :**

Anthony M. Waterhouse, P.E.DATE: 3/22/10

GENERAL CONDITIONS

1. All activities authorized by this permit shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit and Part IV, Chapter 373, F.S.
2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by District staff. The permittee shall require the contractor to review the complete permit prior to commencement of the activity authorized by this permit.
3. Activities approved by this permit shall be conducted in a manner which does not cause violations of State water quality standards. The permittee shall implement best management practices for erosion and pollution control to prevent violation of State water quality standards. Temporary erosion control shall be implemented prior to and during construction, and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. All practices shall be in accordance with the guidelines and specifications described in Chapter 6 of the Florida Land Development Manual; A Guide to Sound Land and Water Management (Department of Environmental Regulation, 1988), incorporated by reference in Rule 40E-4.091, F.A.C. unless a project-specific erosion and sediment control plan is approved as part of the permit. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.
4. The permittee shall notify the District of the anticipated construction start date within 30 days of the date that this permit is issued. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the District an Environmental Resource Permit Construction Commencement Notice Form Number 0960 indicating the actual start date and the expected construction completion date.
5. When the duration of construction will exceed one year, the permittee shall submit construction status reports to the District on an annual basis utilizing an annual status report form. Status report forms shall be submitted the following June of each year.
6. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a professional engineer or other individual authorized by law, utilizing the supplied Environmental Resource/Surface Water Management Permit Construction Completion/Certification Form Number 0881A, or Environmental Resource/Surface Water Management Permit Construction Completion Certification - For Projects Permitted prior to October 3, 1995 Form No. 0881B, incorporated by reference in Rule 40E-1.659, F.A.C. The statement of completion and certification shall be based on onsite observation of construction or review of as-built drawings for the purpose of determining if the work was completed in compliance with permitted plans and specifications. This submittal shall serve to notify the District that the system is ready for inspection. Additionally, if deviation from the approved drawings are discovered during the certification process, the certification must be accompanied by a copy of the approved permit drawings with deviations noted. Both the original and revised specifications must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. All surveyed dimensions and elevations shall be certified by a registered surveyor.
7. The operation phase of this permit shall not become effective: until the permittee has complied with the requirements of condition (6) above, and submitted a request for conversion of Environmental Resource Permit from Construction Phase to Operation Phase, Form No. 0920; the District determines the system to be in compliance with the permitted plans and specifications; and the entity

GENERAL CONDITIONS

approved by the District in accordance with Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit Applications within the South Florida Water Management District, accepts responsibility for operation and maintenance of the system. The permit shall not be transferred to such approved operation and maintenance entity until the operation phase of the permit becomes effective. Following inspection and approval of the permitted system by the District, the permittee shall initiate transfer of the permit to the approved responsible operating entity if different from the permittee. Until the permit is transferred pursuant to Section 40E-1.6107, F.A.C., the permittee shall be liable for compliance with the terms of the permit.

8. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the initiation of the permitted use of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of the phase or portion of the system to a local government or other responsible entity.
9. For those systems that will be operated or maintained by an entity that will require an easement or deed restriction in order to enable that entity to operate or maintain the system in conformance with this permit, such easement or deed restriction must be recorded in the public records and submitted to the District along with any other final operation and maintenance documents required by Sections 9.0 and 10.0 of the Basis of Review for Environmental Resource Permit applications within the South Florida Water Management District, prior to lot or units sales or prior to the completion of the system, whichever comes first. Other documents concerning the establishment and authority of the operating entity must be filed with the Secretary of State, county or municipal entities. Final operation and maintenance documents must be received by the District when maintenance and operation of the system is accepted by the local government entity. Failure to submit the appropriate final documents will result in the permittee remaining liable for carrying out maintenance and operation of the permitted system and any other permit conditions.
10. Should any other regulatory agency require changes to the permitted system, the permittee shall notify the District in writing of the changes prior to implementation so that a determination can be made whether a permit modification is required.
11. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations prior to the start of any activity approved by this permit. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40E-4 or Chapter 40E-40, F.A.C..
12. The permittee is hereby advised that Section 253.77, F.S. states that a person may not commence any excavation, construction, or other activity involving the use of sovereign or other lands of the State, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
13. The permittee must obtain a Water Use permit prior to construction dewatering, unless the work qualifies for a general permit pursuant to Subsection 40E-20.302(3), F.A.C., also known as the "No Notice" Rule.
14. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, alteration, operation, maintenance, removal,

GENERAL CONDITIONS

abandonment or use of any system authorized by the permit.

15. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding, unless a specific condition of this permit or a formal determination under Section 373.421(2), F.S., provides otherwise.
16. The permittee shall notify the District in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of a permitted system or the real property on which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of Rules 40E-1.6105 and 40E-1.6107, F.A.C.. The permittee transferring the permit shall remain liable for corrective actions that may be required as a result of any violations prior to the sale, conveyance or other transfer of the system.
17. Upon reasonable notice to the permittee, District authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with the plans and specifications approved by the permit.
18. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the appropriate District service center.
19. The permittee shall immediately notify the District in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on March 29, 2015.
2. Operation of the surface water management system shall be the responsibility of the permittee.
3. Discharge Facilities:

Structure: CS-1

1-135' WIDE SHARP CRESTED weir with crest at elev. 3.75' NGVD 29.

Receiving body : WARNER CREEK
Control elev : 1.5 feet NGVD 29.

Structure: CS-2

2-5' WIDE SHARP CRESTED weirs with crest at elev. 3.75' NGVD 29.
2-4.5' W X 2.25' H RECTANGULAR NOTCHES with invert at elev. 1.5' NGVD 29.

Receiving body : WARNER CREEK
Control elev : 1.5 feet NGVD 29.
4. 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.
5. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in the receiving water.
6. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
7. Lake side slopes shall be no steeper than 4:1 (horizontal:vertical) to a depth of two feet below the control elevation. Side slopes shall be nurtured or planted from 2 feet below to 1 foot above control elevation to insure vegetative growth, unless shown on the plans.
8. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
9. A stable, permanent and accessible elevation reference shall be established on or within one hundred (100) feet of all permitted discharge structures no later than the submission of the certification report. The location of the elevation reference must be noted on or with the certification report.
10. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
11. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
12. The permittee acknowledges, that pursuant to Rule 40E-4.101(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.

SPECIAL CONDITIONS

13. If prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures, or early colonial or American settlement are encountered at any time within the project site area, the permitted project should cease all activities involving subsurface disturbance in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at (850) 245-6333 or (800) 847-7278, as well as the appropriate permitting agency office. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.
14. Prior to the commencement of construction and pursuant to Subsection 40E-4.101(2), F.A.C., the permittee shall demonstrate ownership of the project area to the District's Environmental Resource Compliance staff at the Martin/St. Lucie Service Center.
15. Portions of the construction and maintenance of the proposed project will require access easement(s) from adjacent property owners. Prior to the commencement of construction and pursuant to Subsection 40E-4.101(2), F.A.C., the permittee shall provide copies of the recorded easements to the District's Environmental Resource Compliance staff at the Martin/St. Lucie Service Center.
16. 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.
17. Future development in the basin shall not rely upon the additional water quality treatment provided by this project in order to meet state water quality standards for any future development activity in the basin.
18. A mitigation program for Warner Creek Stormwater Quality Retrofit shall be implemented in accordance with Exhibit Nos. 3.1 and 3.2. The permittee shall create 0.29 acres of wetlands and enhance 0.13 acres of wetlands.
19. Success of the mitigation activities proposed herein is heavily dependent on proper grading to achieve the design ground elevations necessary to recruit the expected vegetation or to sustain the proper hydrology for the targeted vegetation communities. The permittee shall submit as-built topography of the proposed mitigation area(s) prior to planting. The permittee shall correct any deficiencies in the project grade within 14 days of being notified of such deficiencies by District staff.
20. A monitoring program shall be implemented in accordance with Exhibit No. 3.1. 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.
21. A maintenance program shall be implemented in accordance with Exhibit No. 3.1 for the preserved/created/enhanced wetland areas 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 areas are 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. Maintenance in perpetuity shall also insure that conservation areas, including buffers, maintain the species and coverage of native, desirable vegetation specified in the permit. Coverage of exotic and nuisance plant species shall not exceed 5% of total cover between maintenance

SPECIAL CONDITIONS

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.

22. Permanent physical markers designating the preserve status of the wetland preservation areas and buffer zones shall be installed in accordance with Exhibit 3.1. These markers shall be maintained in perpetuity.
23. The wetland preservation/mitigation areas shown on Exhibit(s) 3.1 and 3.2 may in no way be altered from their permitted state. Activities prohibited within the conservation areas include, but are not limited to:
 - (a) construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground;
 - (b) dumping or placing soil or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;
 - (c) removal or destruction of trees, shrubs, or other vegetation - with the exception of exotic and nuisance vegetation removal;
 - (d) excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substances in such manner as to affect the surface;
 - (e) surface use except for purposes that permit the land or water area to remain predominantly in its natural condition;
 - (f) activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation, including but not limited to ditching, diking or fencing;
 - (g) acts or uses detrimental to such retention of land or water areas; and
 - (h) acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance.
24. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measures shall be installed prior to the commencement of construction in or adjacent to other surface waters in accordance with Exhibit Nos. 2.0 and 2.1 and shall remain in place until all adjacent construction is completed. All areas shall be stabilized and vegetated immediately after construction to prevent erosion into the surface waters.
25. No mangrove trimming and/or altering activities shall be authorized by this permit.
26. 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.
27. A water quality monitoring program shall be implemented as outlined below:

Turbidity expressed in nephelometric turbidity units (ntu). Background samples shall be taken 200 feet upstream of any construction activity within adjacent surface waters. Compliance samples shall be taken 100 feet downstream. Samples shall be taken twice daily, with at least a four-hour interval, during all work authorized by this permit.

Monitoring shall begin on the first day of construction for all activities within or adjacent to surface waters. The monitoring data must demonstrate that turbidity 100 feet downstream of all proposed activities is less than or equal to 29 NTU's above natural background turbidity and 200 feet upstream of each proposed activity for a period of 7 consecutive days after completion of construction. If monitoring shows such levels to be exceeded, construction shall cease and District compliance staff shall be notified immediately. Work shall not resume until District staff is satisfied that adequate corrective measures have been taken and turbidity has returned to acceptable levels.

All monitoring data shall be maintained on site and be available to District staff during regular

SPECIAL CONDITIONS

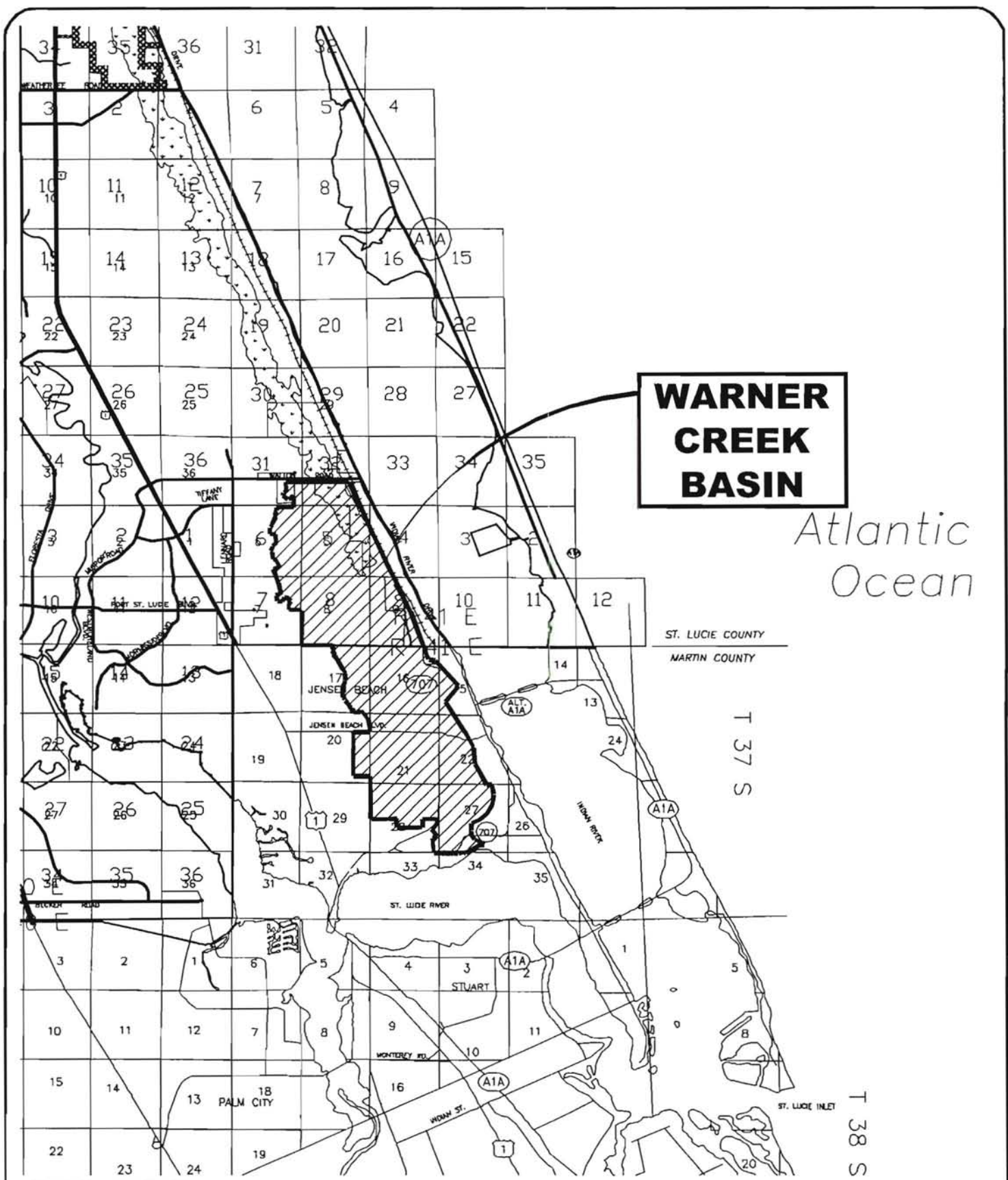
business hours. The content of the data shall include:

1) permit and application number; (2) dates of sampling and analysis; (3) statement describing the methods used in collection, handling, storage and analysis of the samples; (4) a map indicating the sampling locations and (5) a statement by the individual responsible for implementation of the sampling program concerning the authenticity, precision, limits of detection and accuracy of the data.

Monitoring reports shall also include the following information for each sample that is taken:

- (a) time of day samples taken;
- (b) depth of water body;
- (c) depth of samples;
- (d) antecedent weather conditions;
- (e) wind direction and velocity;
- (f) direction of tide.

- 28. Activities associated with the implementation of the mitigation, monitoring and maintenance plan(s) shall be completed in accordance with the work schedule attached as Exhibit No. 5. 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.
- 29. Prior to the commencement of construction, the permittee shall conduct a pre-construction meeting with field representatives, contractors and District staff. The purpose of the meeting will be to discuss construction methods and sequencing, including type and location of turbidity and erosion controls to be implemented during construction, mobilization and staging of contractor equipment, phasing of construction, methods of vegetation clearing, construction dewatering if required, ownership documentation for eminent domain authority, coordination with other entities on adjacent construction projects, wetland/buffer protection methods, and/or endangered species protection with the permittee and contractors. The permittee shall contact District Environmental Resource Compliance staff from the Martin/St. Lucie Service Center at (772) 223-2600 to schedule the pre-construction meeting.
- 30. Endangered species, threatened species and/or species of special concern have been observed onsite and/or the project contains suitable habitat for these species. It shall be the permittee's responsibility to coordinate with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service for appropriate guidance, recommendations and/or necessary permits to avoid impacts to listed species.



**WARNER
CREEK
BASIN**

Atlantic
Ocean

ST. LUCIE COUNTY
MARTIN COUNTY

T 37 S

T 38 S



* Joseph W. Capra
301 N.W. Flagler Ave
Stuart, Florida 34994
P.E. No. 37638
Phone: (772) 692-4344
Fax: (772) 692-4341

Engineering Business
No. EB-0007657

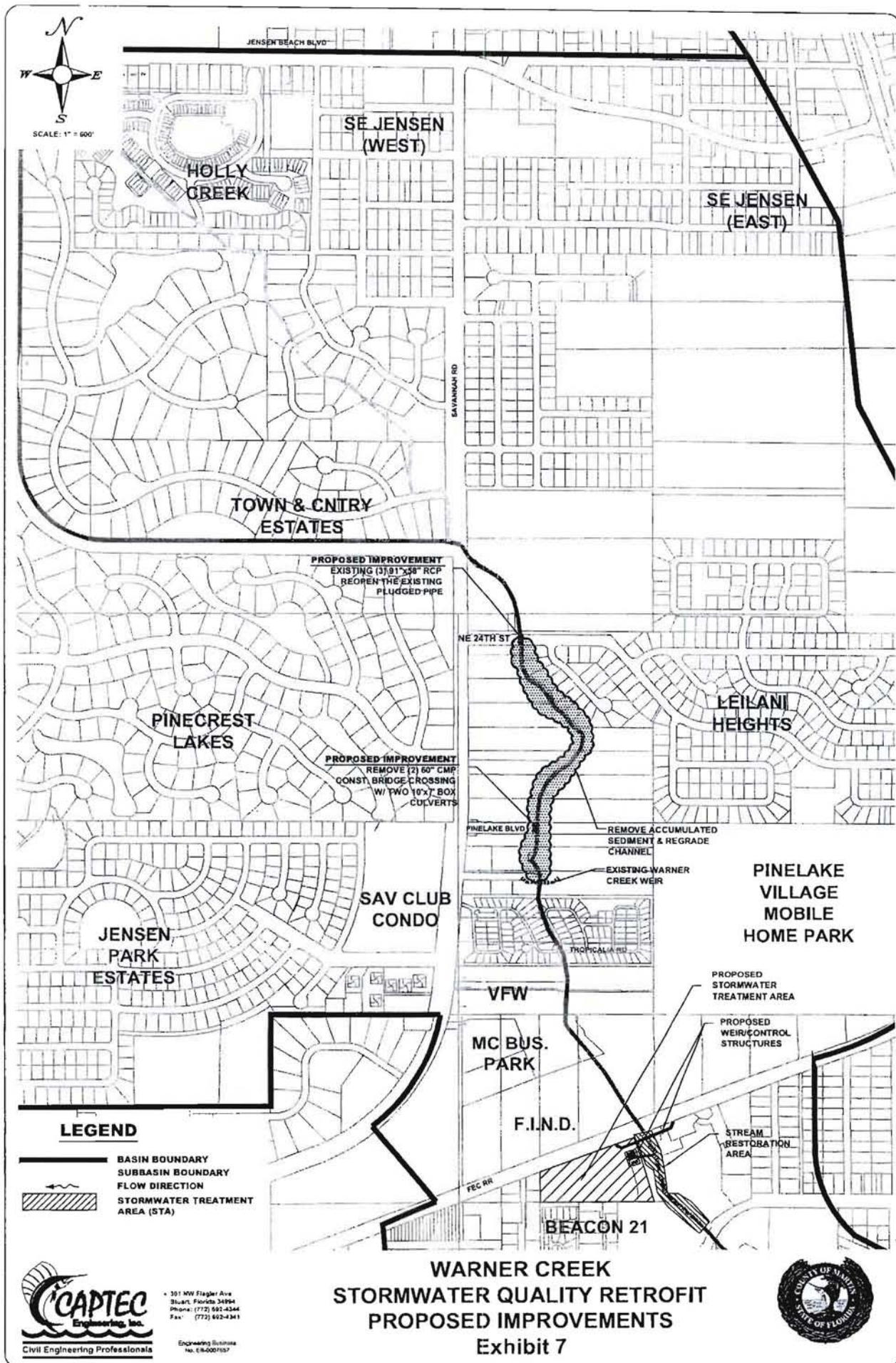
DATE: 07-19-07
DRAWN BY: DHR
DESIGNED BY:
CHECKED BY: JMC
PROJECT No.: 830.8
HORZ. SCALE: N.T.S.
VERT. SCALE: N.T.S.
CADD FILE:

**WARNER CREEK
STORMWATER QUALITY RETROFIT**
MARTIN COUNTY, FLORIDA
**EXHIBIT 1
LOCATION MAP**

**SCALE
VERIFICATION**
1" = 0.5'
SOLID BAR IS EQUAL TO
HALF AN INCH ON ORIGINAL
DRAWING, ADJUST ALL
SCALED DIMENSIONS
ACCORDINGLY

Sheet No. 1 of 1

PCANNED 03/30/2010 13:13 64



**WARNER CREEK
STORMWATER QUALITY RETROFIT
PROPOSED IMPROVEMENTS
Exhibit 7**





Location Map

Construction Plans and Specifications Of **WARNER CREEK** Stormwater Quality Retrofit For **Martin County** Lying In **Section 27, Township 37 S. , Range 41 E.** **Martin County, Florida**



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PATRICK HAYES	DISTRICT 3
SARAH HEARD	DISTRICT 4
ED CIAMPI	DISTRICT 5

Engineer

MR. JOSEPH W. CAPRA, P.E.
CAPTEC ENGINEERING, INC.
301 N.W. FLAGLER AVENUE
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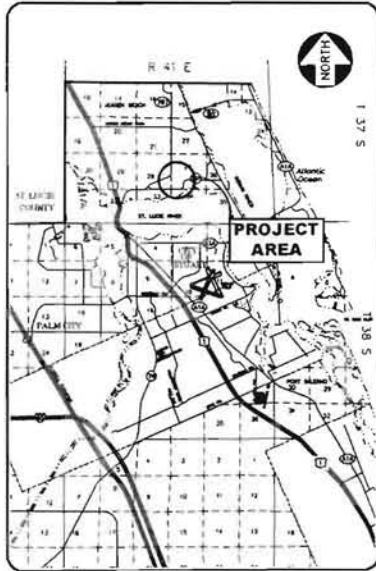


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Vicinity Map

N.T.S.



Site Map

N.T.S.

SHEET INDEX

SHEET NUMBER	SHEET TITLE/DESCRIPTION
1	COVER
2	CLEARING AND GRUBBING PLAN
3	DEMOLITION PLAN
4	DEWATERING PLAN
5	WET DETENTION AREA PLAN
6	WARNER CREEK PLAN AND CROSS SECTIONS
7	UTILITIES PLAN
8	DETAILS
9	UTILITIES DETAILS
10	GENERAL NOTES



1. WATER QUALITY SAMPLES SHALL BE TAKEN A MINIMUM OF TWICE DAILY WITH AT LEAST A FOUR-HOUR INTERVAL AT THE LOCATION SHOWN ON THE PLANS.
2. BACKGROUND SAMPLES TO BE TAKEN 200 FT. UPSTREAM AND 100' DOWNSTREAM OF THE PROPOSED WORK.
3. MONITORING SHALL START THE FIRST DAY OF CONSTRUCTION ACTIVITIES AND END WHEN LAKE EXCAVATION & CHANNEL SLOPE REPAIR HAS ENDED.
4. MONITORING DATA MUST DEMONSTRATE COMPLIANCE WITH TURBIDITY SAMPLES LESS THAN 20 NTUS ABOVE NATURAL BACKGROUND TURBIDITY LEVELS.
5. ALL MONITORING DATA SHALL BE MAINTAINED ON SITE AND BE AVAILABLE TO DISTRICT STAFF DURING REGULAR BUSINESS HOURS.
6. IF WATER QUALITY MONITORING TURBIDITY LEVELS DOWNSTREAM OF THE SITE EXCEED 20 NTUS ABOVE NATURAL BACKGROUND TURBIDITY LEVELS, DREDGING ACTIVITIES SHALL CEASE AND DISTRICT STAFF SHALL BE NOTIFIED IMMEDIATELY. WORK SHALL NOT RESUME UNTIL DISTRICT STAFF ARE SATISFIED THAT TURBIDITY HAS RETURNED TO ACCEPTABLE LEVELS.
7. MONITORING REPORTS SHALL BE SUBMITTED TO THE DISTRICT ENVIRONMENTAL RESOURCE COMPLIANCE STAFF.

1. PROPERTY CORNERS SHALL BE LOCATED BY A LICENSED LAND SURVEYOR AND CLEARLY MARKED IN THE FIELD PRIOR TO CLEARING INSPECTION.
2. ALL CONSTRUCTION BARRICADES AND SILT FENCES WILL REMAIN IN PLACE AND BE MONITORED FOR COMPLIANCE BY PERMIT HOLDER DURING DEVELOPMENT ACTIVITIES.
3. PERIMETER BERM MAY BE USED IN LIEU OF SILT FENCE.
4. SOIL STABILIZATION SHALL BE COMPLETED WITHIN 30 DAYS OF FINAL GRADING.
5. FOLLOWING CERTIFICATION OF CONSTRUCTION, ALL BARRICADES AND EROSION CONTROL DEVICES SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.

JOB No. 830.6
SHEET
2 OF 10

DEMOLITION AND ALTERATIONS

- DEMOLISH AND ALTER EXISTING FACILITIES AS INDICATED ON DRAWINGS, AS SPECIFIED, AND AS DIRECTED BY ENGINEER.
- SUBMIT TO ENGINEER FOR REVIEW, A DEMOLITION PLAN DESCRIBING PROPOSED SEQUENCE, METHODS, AND EQUIPMENT FOR DEMOLITION AND DISPOSAL OF EACH STRUCTURE.
- REMOVE AND REMOVE EXISTING CONSTRUCTION UTILITIES, EQUIPMENT, AND APPURTENANCES WITHOUT DAMAGING INTEGRITY OF EXISTING STRUCTURES, EQUIPMENT, AND APPURTENANCES THAT ARE TO REMAIN.
- REPAIR OR REINFORCE ITEMS THAT ARE DAMAGED FROM PROPOSED WORK, REPAIR AND INSTALL DAMAGED ITEMS AT NO ADDITIONAL COMPENSATION AND TO A CONDITION AT LEAST EQUAL TO THAT WHICH EXISTED PRIOR TO START OF WORK.
- EXERCISE ALL NECESSARY PRECAUTIONS FOR FIRE PREVENTION. MAKE ACCEPTABLE FIRE EXTINGUISHERS AVAILABLE AT ALL TIMES IN AREAS WHERE DEMOLITION WORK IS BEING DONE. DO NOT BURN DEMOLITION DEBRIS ON OR NEAR SITE.
- PROTECT PERSONS AND PROPERTY THROUGHOUT PROGRESS OF WORK. PROCEED IN SUCH MANNER AS TO MINIMIZE SPREAD OF DUST AND FLYING PARTICLES AND TO PROVIDE SAFE WORKING CONDITIONS FOR PERSONNEL.
- MAINTAIN CIRCULATION OF TRAFFIC WITHIN AREA AT ALL TIMES DURING DEMOLITION OPERATIONS.
- OBTAIN PERMISSION FROM ENGINEER BEFORE ABANDONING OR REMOVING ANY EXISTING STRUCTURES, MATERIALS, EQUIPMENT, AND APPURTENANCES.
- MAKE NECESSARY ARRANGEMENTS WITH AND PERFORM WORK REQUIRED BY UTILITY COMPANIES AND MUNICIPAL DEPARTMENTS FOR DISCONTINUANCE OR INTERRUPTION OF UTILITY SERVICES DUE TO DEMOLITION WORK.
- PROVIDE THREE REFERENCE POINTS FOR EACH SURVEY MARKER AND MONUMENT REMOVED. ESTABLISHED BY A FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR AND RECORD LOCATIONS AND DESIGNATIONS OF SURVEY MARKERS AND MONUMENTS PRIOR TO REMOVAL.
- STORE REMOVED MARKERS AND MONUMENTS DURING DEMOLITION WORK, AND REPLACE UPON COMPLETION OF WORK. REESTABLISH SURVEY MARKERS AND MONUMENTS IN CONFORMANCE WITH RECORDED REFERENCE POINTS. FORWARD LETTERS TO ENGINEER SIGNED BY FLORIDA LICENSED PROFESSIONAL LAND SURVEYOR VERIFYING REESTABLISHMENT OF SURVEY MARKERS AND MONUMENTS.
- WET DOWN WORK DURING DEMOLITION OPERATIONS TO PREVENT DUST FROM ARISING. PROVIDE MAXIMUM PRACTICABLE PROTECTION FROM INCIDENT WEATHER FOR MATERIALS, EQUIPMENT, AND PERSONNEL LOCATED IN PARTIALLY DEMOLISHED STRUCTURES. PROVIDE SHORING OR BRACING WHERE NECESSARY TO PREVENT SETTLEMENT OR DISPLACEMENT OF EXISTING OR NEW STRUCTURES. DO NOT OVERLOAD FLOORS. COMPLETE DEMOLITION WORK ON UPPER LEVELS BEFORE DESTROYING SUPPORTING MEMBERS ON LOWER LEVELS.
- CLEAN TANKS OF MATERIALS UNSUITABLE FOR FILL WHERE BELOW-GRADE PORTIONS OF STRUCTURES ARE NOT INDICATED TO BE REMOVED. DEMOLISH FOUNDATION WALLS TO A DEPTH OF NOT LESS THAN TWO FEET BELOW EXISTING GROUND LEVEL. BREAK THIN FLOORS INTO PIECES HAVING AREA NOT MORE THAN FOUR SQUARE FEET WITH WELL-DEFINED CRACKS THROUGH FULL DEPTH OF FLOOR. PROVIDE HOLES HAVING AREA AT LEAST ONE SQUARE FOOT THROUGH FLOORS AT INTERVALS OF TEN FEET LENGTHWISE AND CROSSWISE.
- MATERIALS, EQUIPMENT, AND APPURTENANCES REMOVED THAT ARE NOT DESIGNATED FOR RELOCATION OR SALVAGE, BECOME PROPERTY OF CONTRACTOR. HAUL FROM SITE AND DISPOSE OF AT NO ADDITIONAL COMPENSATION.

INACTIVATION AND REMOVAL OF WASTEWATER TREATMENT PLANT PIPING AND EQUIPMENT

THIS CONTRACTOR SHALL PERFORM THE FOLLOWING ACTIONS TO INSURE THE SAFE DISPOSITION OF SELECTIVE WASTEWATER TREATMENT PLANT PIPING, EQUIPMENT, AND APPURTENANCES AS SHOWN ON THE DRAWINGS AND AS SPECIFIED HEREIN:

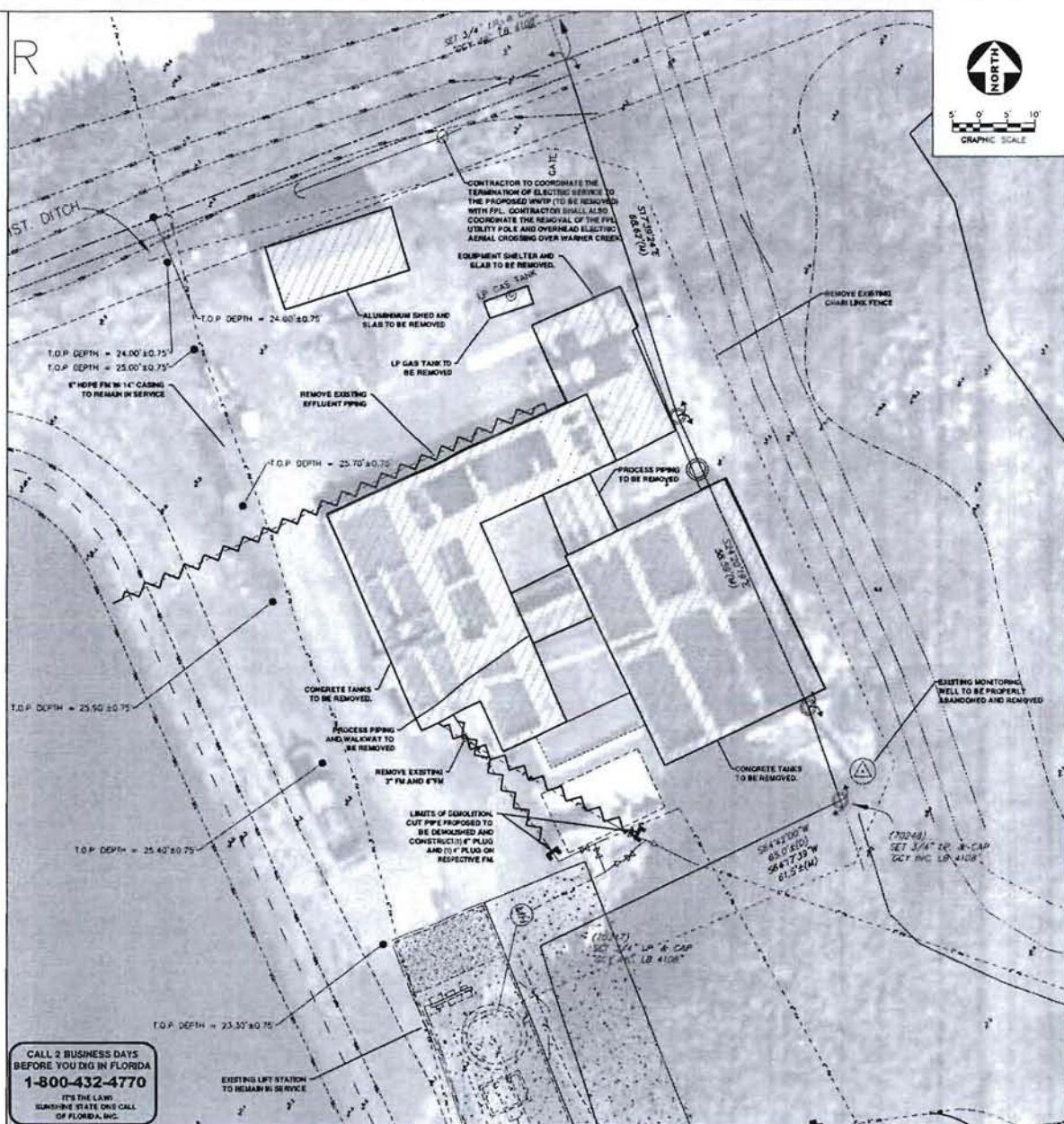
- REMOVE REMAINING LIQUID AND SLUDGE FROM THE WASTEWATER TREATMENT PLANT PIPING, EQUIPMENT, AND APPURTENANCES AND DISPOSE OF THE MATERIAL AS DIRECTED BY THE WASTEWATER TREATMENT PLANT OPERATOR.
- CLEAN AND DISINFECT PIPING, VALVES, FITTINGS AND APPURTENANCES SCHEDULED FOR REMOVAL OR ABANDONMENT.
- PROVIDE DISPOSITION AND SECURITY OF THE PIPING COMPONENTS TO ASSURE AGAINST HAZARDOUS CONDITIONS.
- CLEAN AND DISINFECT THE PIPES, VALVES, FITTINGS AND APPURTENANCES WITH CHLORINATION SO THAT A CHLORINE RESIDUAL OF AT LEAST 1.0 PPM IS PRESENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL FACILITIES SAFE IN TERMS OF PUBLIC HEALTH AND SAFETY AT ALL TIMES, INCLUDING PERIODS OF INACTIVATION OR ABANDONMENT.
- THE CONTRACTOR SHALL GIVE THE OWNER AND ENGINEER AT LEAST 30 DAYS WRITTEN NOTICE BEFORE INACTIVATION AND/OR ABANDONMENT OF ANY WASTEWATER TREATMENT PLANT PIPING, EQUIPMENT, AND APPURTENANCES AND SHALL SPECIFY WHAT STEPS WILL BE TAKEN TO SAFEGUARD PUBLIC HEALTH AND SAFETY.
- THE CONTRACTOR SHALL EXERCISE PRECAUTIONARY MEASURES TO MINIMIZE DUST EMISSIONS AS NECESSARY, WHICH MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, PERIODIC SPRINKLING OR WETTING OF THE SITE, AND SHALL MOOPY MEASURES TO BE IMPLEMENTED AS NECESSARY, TO SATISFY JURISDICTIONAL AGENCY REQUIREMENTS INCLUDING BUT NOT LIMITED TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE MARTIN COUNTY DEPARTMENT OF HEALTH AT NO ADDITIONAL EXPENSE TO THE OWNER.

NOTE:
EXISTING LIFT STATION AND FORCE MAIN TO REMAIN IN OPERATION SHALL NOT BE INTERRUPTED. CONTRACTOR IS NOT AUTHORIZED TO OPERATE ANY VALVES LOCATED ON THE BEACON 21 SITE WITHOUT AUTHORIZATION FROM MCU.

CONTRACTOR SHALL ACQUIRE WRITTEN AUTHORIZATION FROM MCU PRIOR TO USE OF THEIR LIFT STATION DRIVEWAY. ANY DAMAGES TO THE DRIVEWAY OR LIFT STATION COMPONENTS SHALL BE REPAIR TO PRESENT CONDITION OR BETTER.

LEGEND

- EXISTING CHAIN LINK FENCE
- EXISTING 4" FORCE MAIN
- EXISTING 6" FORCE MAIN
- EXISTING OVERHEAD UTILITY
- EXISTING OVERHEAD UTILITY
- EXISTING UTILITY TO BE REMOVED
- EXISTING TOE OF SLOPE
- EXISTING EASEMENT LINE
- EXISTING EDGE OF PAVEMENT
- PROPERTY LINE
- ⊕ EXISTING MONITORING WELL
- ⊕ EXISTING LIFT STATION
- ⊕ EXISTING UTILITY VALVE
- ⊕ TO BE DEMOLISHED



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Fax: 772-555-0001

DATE	BY	REVISION

NO.	DATE	BY	REVISION

SCALE VERIFICATION
FOOT BAR IS EQUAL TO ONE INCH ON DRAWING. VERIFY ALL SCALES AGAINST ALL SCALES ACCORDING TO DRAWING.

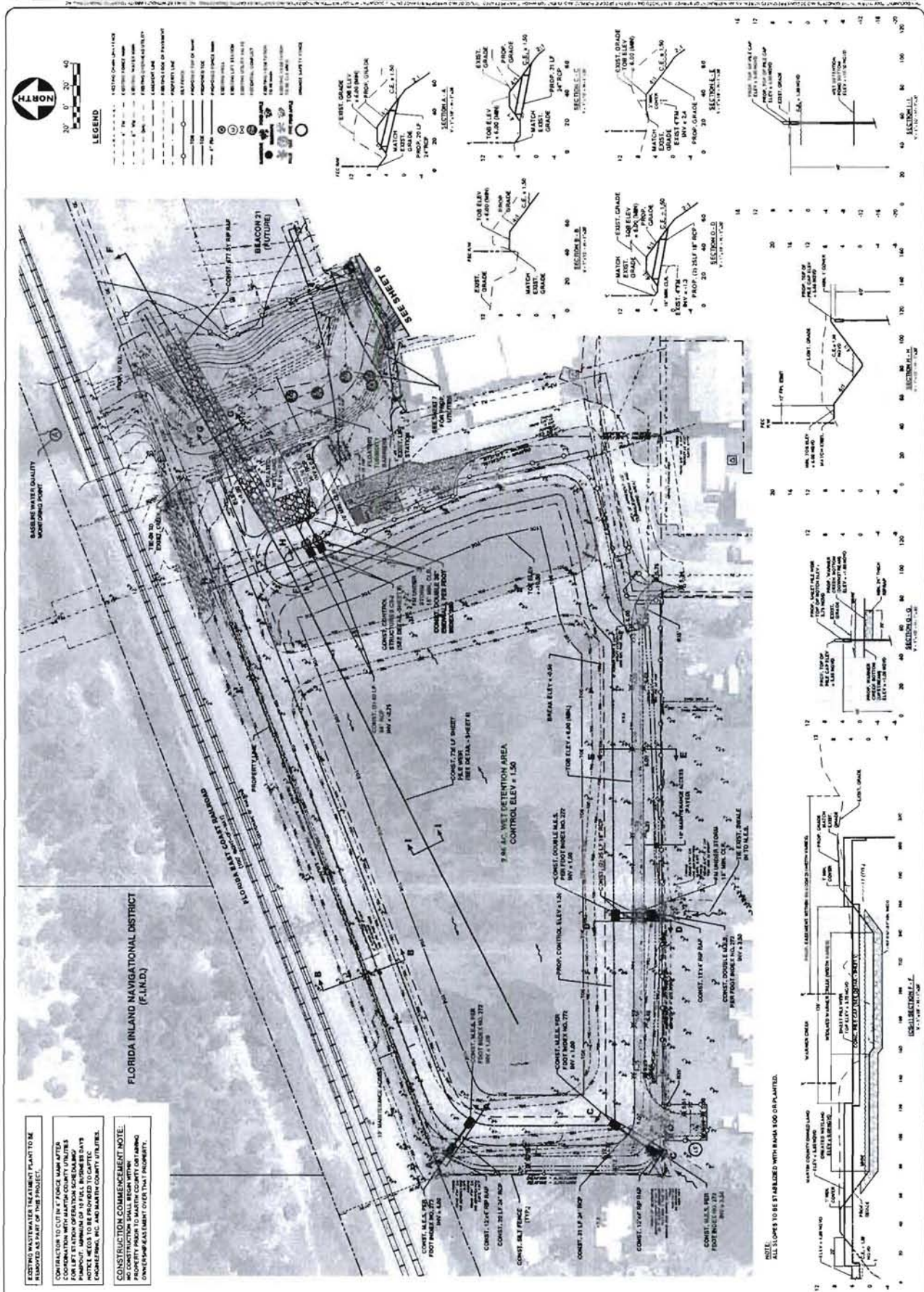
WARNER CREEK STORMWATER QUALITY RETROFIT
MARTIN COUNTY, FLORIDA
BEACON 21 WWTP DEMOLITION PLAN

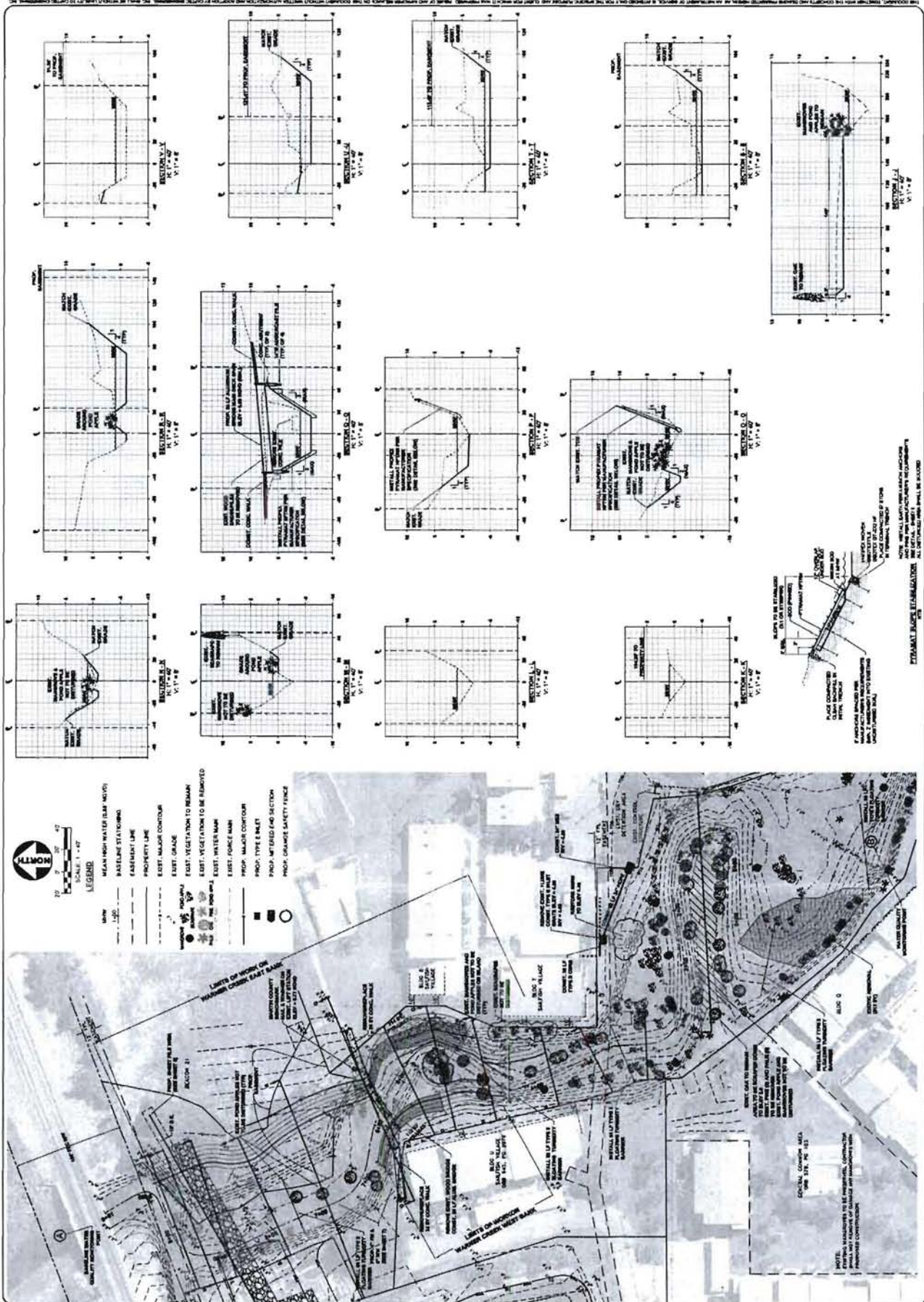
Joseph M. Capra
301 NW Flagler Ave., Ste. 201
Stuart, Florida 34994
P.E. No. 37628

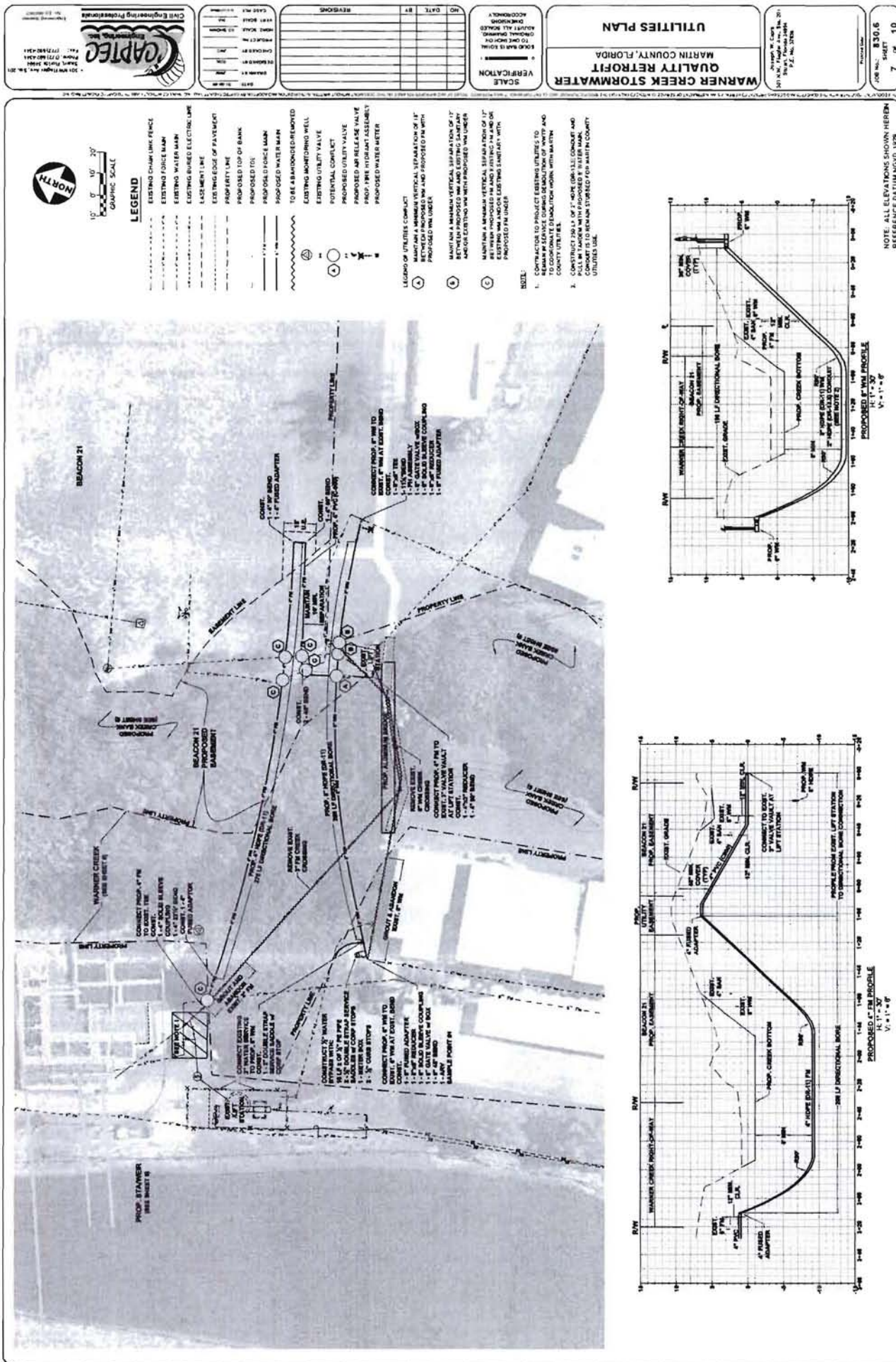
Job No. **830.6A**
SHEET **3** OF **10**

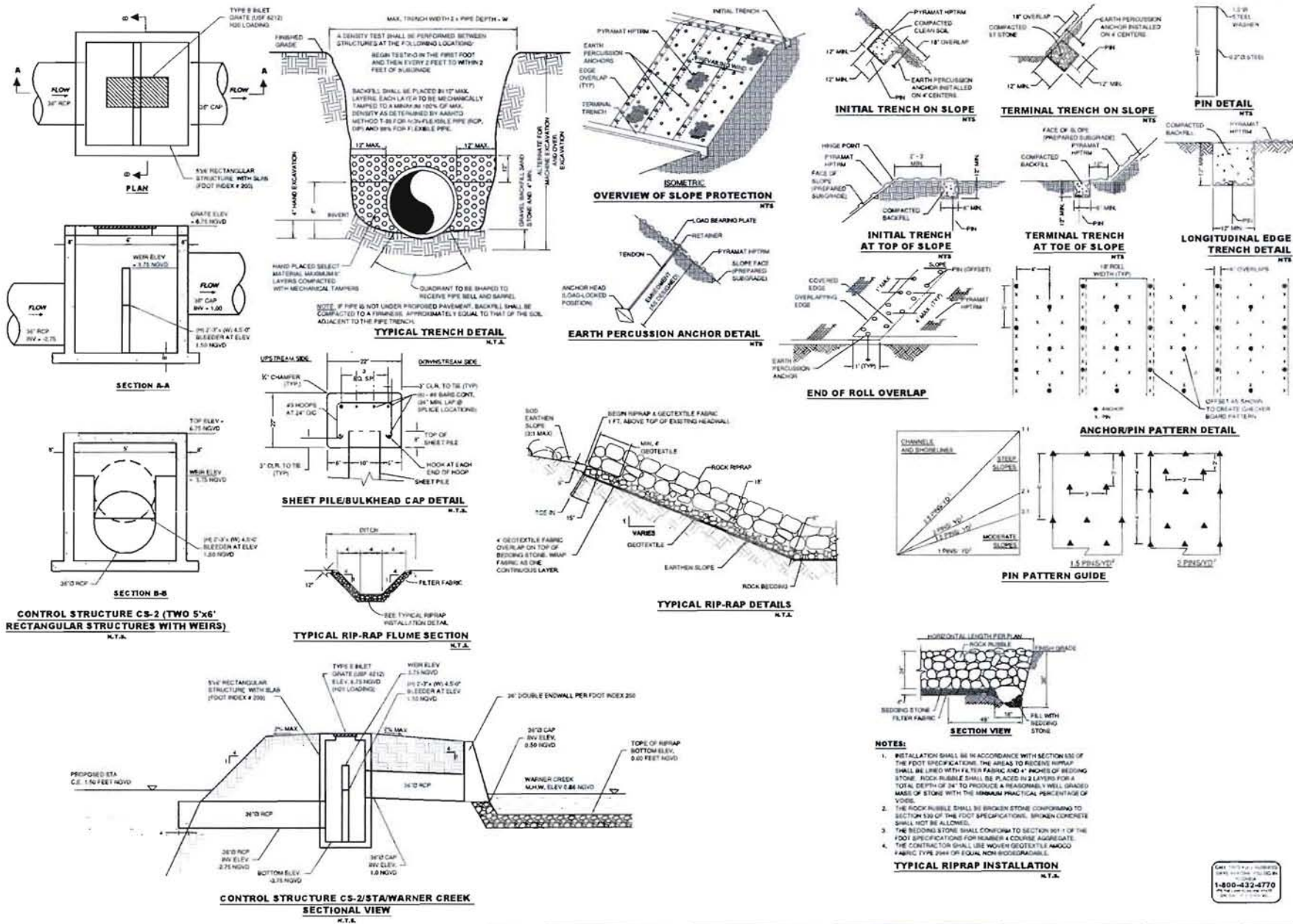


TYPICAL WET DETENTION AREA BANK SLOPE DETAIL









DATE	REVISION	BY	CHKD	APP'D
09/01/2010	1	J. W. COOPER		
09/01/2010	2	J. W. COOPER		
09/01/2010	3	J. W. COOPER		
09/01/2010	4	J. W. COOPER		
09/01/2010	5	J. W. COOPER		

NO.	DATE	REVISION
1	09/01/2010	ISSUED FOR CONSTRUCTION
2	09/01/2010	NO CHANGES TO BE MADE TO THIS DRAWING
3	09/01/2010	NO CHANGES TO BE MADE TO THIS DRAWING
4	09/01/2010	NO CHANGES TO BE MADE TO THIS DRAWING
5	09/01/2010	NO CHANGES TO BE MADE TO THIS DRAWING

SCALE	VERIFICATION
AS SHOWN	AS SHOWN
AS SHOWN	AS SHOWN
AS SHOWN	AS SHOWN
AS SHOWN	AS SHOWN

WARNER CREEK STORMWATER QUALITY RETROFIT
MARTIN COUNTY, FLORIDA

DETAILS

Joseph W. Cooper
301 N.W. 10th Ave., Suite 200
Fort Lauderdale, FL 33304
P.E. No. 17138

JOB NO.	830.6
SHEET	10

**LOCATION MAP**

**CONSTRUCTION PLANS AND SPECIFICATIONS
OF
WARNER CREEK
STORMWATER QUALITY RETROFIT
N.E. 24TH STREET TO
N.E. SAMARITAN STREET
FOR
MARTIN COUNTY
LYING IN
SECTION 27, TOWNSHIP 37 S. , RANGE 41 E.
MARTIN COUNTY, FLORIDA**



WARNER CREEK STORMWATER QUALITY RETROFIT NO. 1207.7

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SUSAN L. VALLIERE
PATRICK HAYES
SARAH HEARD
ED CIAMPI

DISTRICT 1
DISTRICT 2
DISTRICT 3
DISTRICT 4
DISTRICT 5

ENGINEER

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**VICINITY MAP**

N.T.S.

**SITE MAP**

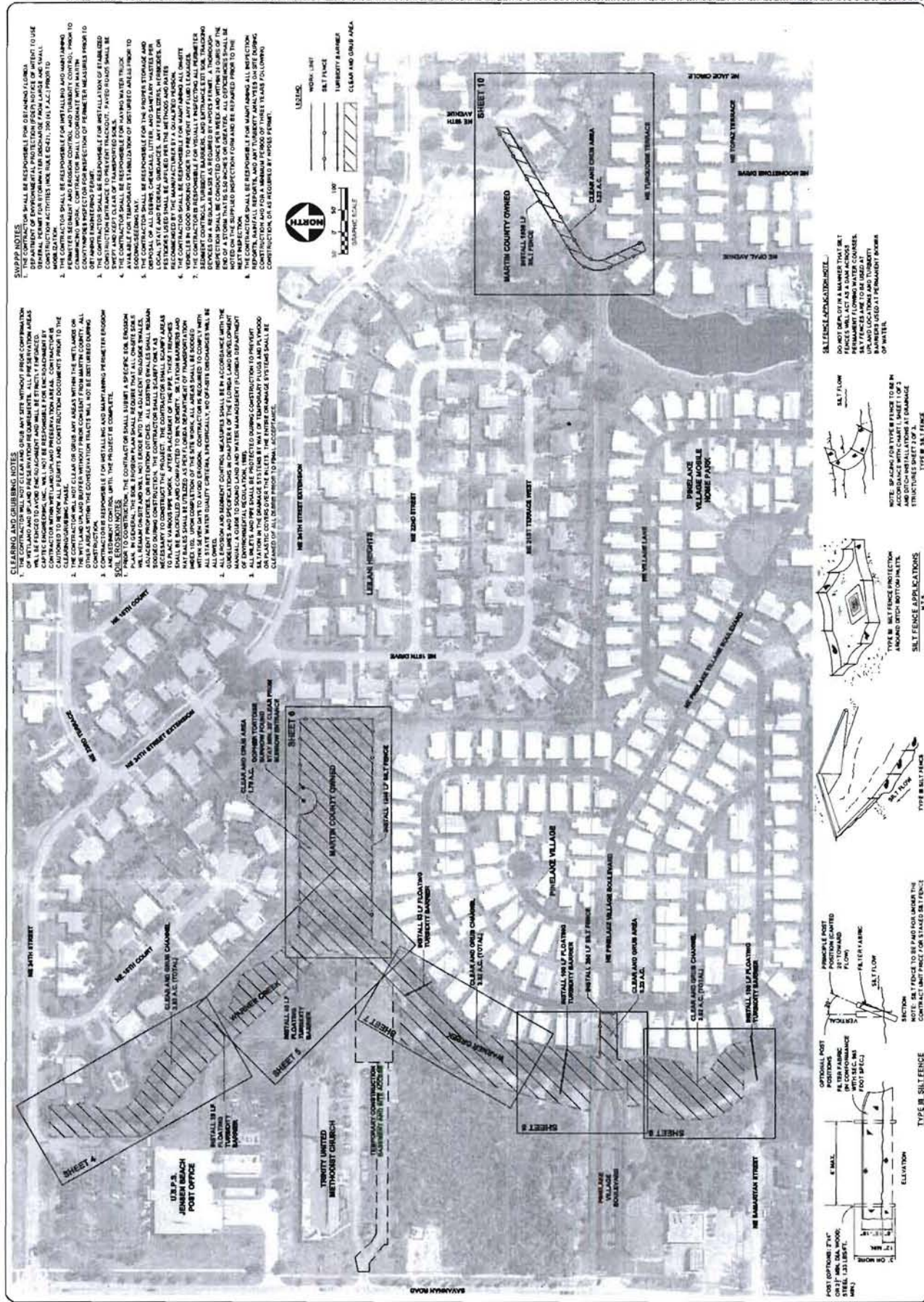
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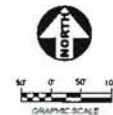
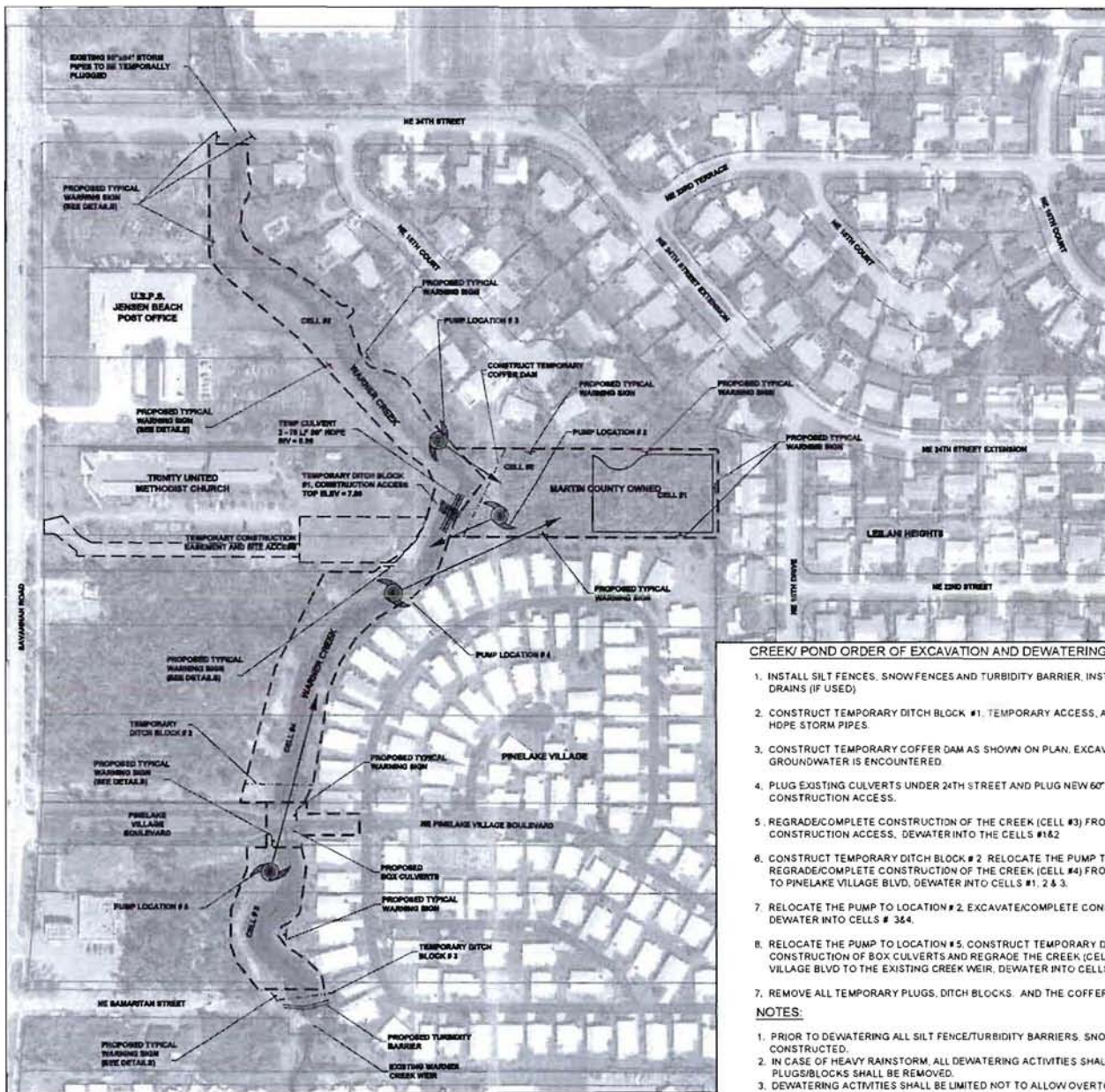
SHEET INDEX

SHEET NUMBER	SHEET TITLE/DESCRIPTION
1	COVER
2	KEY SHEET, CLEARING AND GRUBBING PLAN
3	DEWATERING PLAN
4 - 9	WARNER CREEK - PLAN AND CROSS SECTIONS
10	SECONDARY ACCESS PLAN
11	UTILITY DIVERSION PLAN
12	DETAILS
13	UTILITIES NOTES
14	GENERAL NOTES

ELEVATIONS SHOWN HEREIN REFERENCED NATIONAL
GEODETIC VERTICAL DATUM 1929 (NGVD 29)

WARNER CREEK STORMWATER QUALITY RETROFIT NO. 1207.7





PUMPING OPERATIONS

AVERAGE DAILY PUMPAGE
2,500 GPM, 8" DISCHARGE PUMP OPERATING
AT 85% MAXIMUM CAPACITY FOR AN
AVERAGE PUMPING RATE OF
3,500 GPM $\pm$ 40% = 1,800 GPM
TOTAL AVERAGE DAILY PUMPING RATE
= 1,800 GPM $\pm$ 40% = 840 MGD

MAXIMUM DAILY PUMPAGE
2,500 GPM, 8" DISCHARGE PUMP OPERATING
AT 85% MAXIMUM CAPACITY FOR A MAXIMUM
PUMPING RATE OF
3,500 GPM $\pm$ 40% = 2,800 GPM
TOTAL MAXIMUM DAILY PUMPING RATE
= 2,800 GPM $\pm$ 40% = 1,248 MGD

LEGEND

WARNING SIGN LOCATIONS
DEWATERING PUMP AND DIRECTION OF FLOW

CHANNEL GRADING WIDENING, AND BOX CULVERT
DEWATERING PUMPING OPERATIONS

AVERAGE DAILY PUMPAGE
A SINGLE (1) 2,500 GPM, 8" DISCHARGE PUMP OPERATING
AT 85% MAXIMUM CAPACITY FOR AN AVERAGE PUMPING
RATE OF
3,500 GPM $\pm$ 40% = 1,800 GPM
FOR A TOTAL OF 1,800 MGD

MAXIMUM DAILY PUMPAGE
A SINGLE (1) 2,500 GPM, 8" DISCHARGE PUMP OPERATING
AT 85% MAXIMUM CAPACITY FOR A
MAXIMUM PUMPING RATE OF
3,500 GPM $\pm$ 40% = 2,800 GPM
FOR A TOTAL OF 2,800 MGD

TOTAL PUMPAGE = AVG DAILY $\times$ 180 DAYS
= 1.88 MGD $\times$ 180 DAYS
= 338,400 GALLONS



CREEK/ POND ORDER OF EXCAVATION AND DEWATERING

1. INSTALL SILT FENCES, SNOWFENCES AND TURBIDITY BARRIER. INSTALL UNDERGROUND SOCK DRAINS (IF USED)
2. CONSTRUCT TEMPORARY DITCH BLOCK #1, TEMPORARY ACCESS, AND TEMPORARY (2) 60" HDPE STORM PIPES.
3. CONSTRUCT TEMPORARY COFFER DAM AS SHOWN ON PLAN. EXCAVATE CELLS #1, #2 UNTIL GROUNDWATER IS ENCOUNTERED.
4. PLUG EXISTING CULVERTS UNDER 24TH STREET AND PLUG NEW 60" HDPE UNDER CONSTRUCTION ACCESS.
5. REGRADE/COMPLETE CONSTRUCTION OF THE CREEK (CELL #3) FROM 24TH STREET TO CONSTRUCTION ACCESS. DEWATER INTO THE CELLS #1&2
6. CONSTRUCT TEMPORARY DITCH BLOCK #2 RELOCATE THE PUMP TO LOCATION #4. REGRADE/COMPLETE CONSTRUCTION OF THE CREEK (CELL #4) FROM CONSTRUCTION ACCESS TO PINELAKE VILLAGE BLVD. DEWATER INTO CELLS #1, 2 & 3.
7. RELOCATE THE PUMP TO LOCATION #2. EXCAVATE/COMPLETE CONSTRUCTION OF CELL #3 DEWATER INTO CELLS #1 & 2.
8. RELOCATE THE PUMP TO LOCATION #5. CONSTRUCT TEMPORARY DITCH BLOCK #3 COMPLETE CONSTRUCTION OF BOX CULVERTS AND REGRADE THE CREEK (CELL #5) FROM PINELAKE VILLAGE BLVD TO THE EXISTING CREEK WEIR. DEWATER INTO CELLS #1, 2 & 4.
7. REMOVE ALL TEMPORARY PLUGS, DITCH BLOCKS, AND THE COFFER DAM.

NOTES:

1. PRIOR TO DEWATERING ALL SILT FENCE/TURBIDITY BARRIERS, SNOW FENCE SHALL BE CONSTRUCTED.
2. IN CASE OF HEAVY RAINSTORM, ALL DEWATERING ACTIVITIES SHALL CEASE AND ALL PLUGS/BLOCKS SHALL BE REMOVED.
3. DEWATERING ACTIVITIES SHALL BE LIMITED NOT TO ALLOW OVERTOPPING OF EXISTING ROADWAYS BY PUMPED WATER.

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4	01/11/01	JAC	ISSUED FOR PERMIT
5	01/11/01	JAC	ISSUED FOR PERMIT

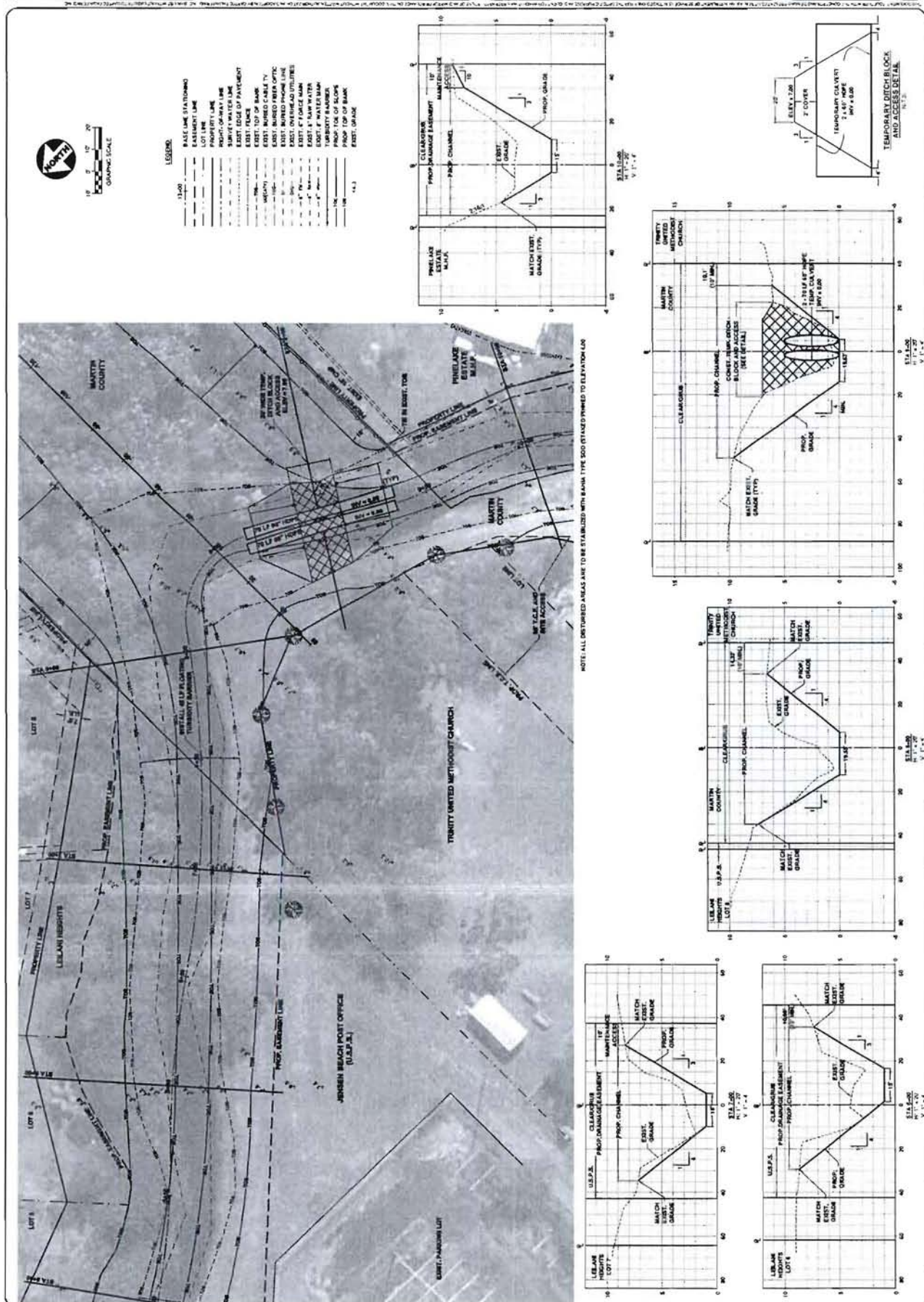
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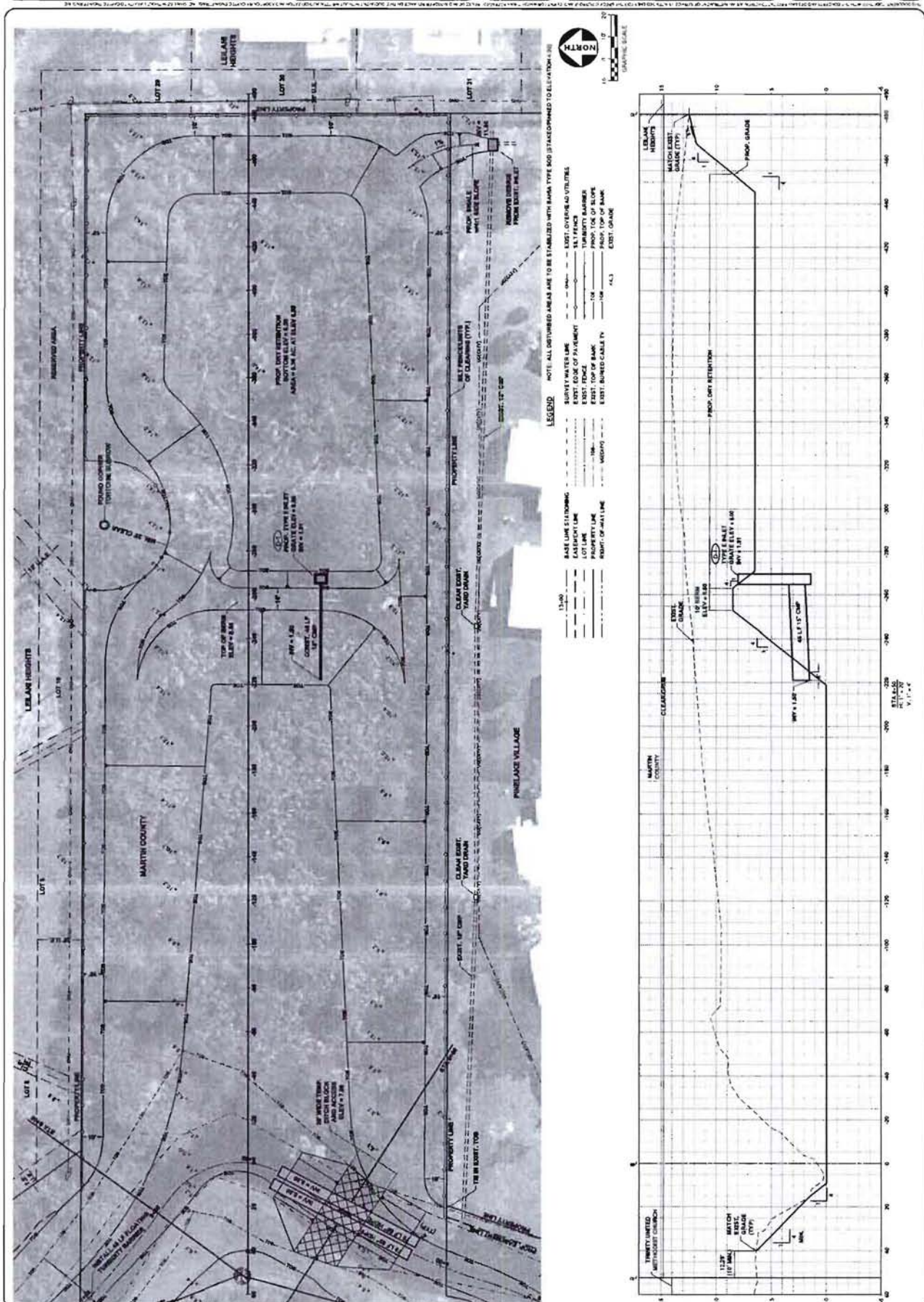
**WARNER CREEK
STORMWATER QUALITY RETROFIT**
MARTIN COUNTY, FLORIDA

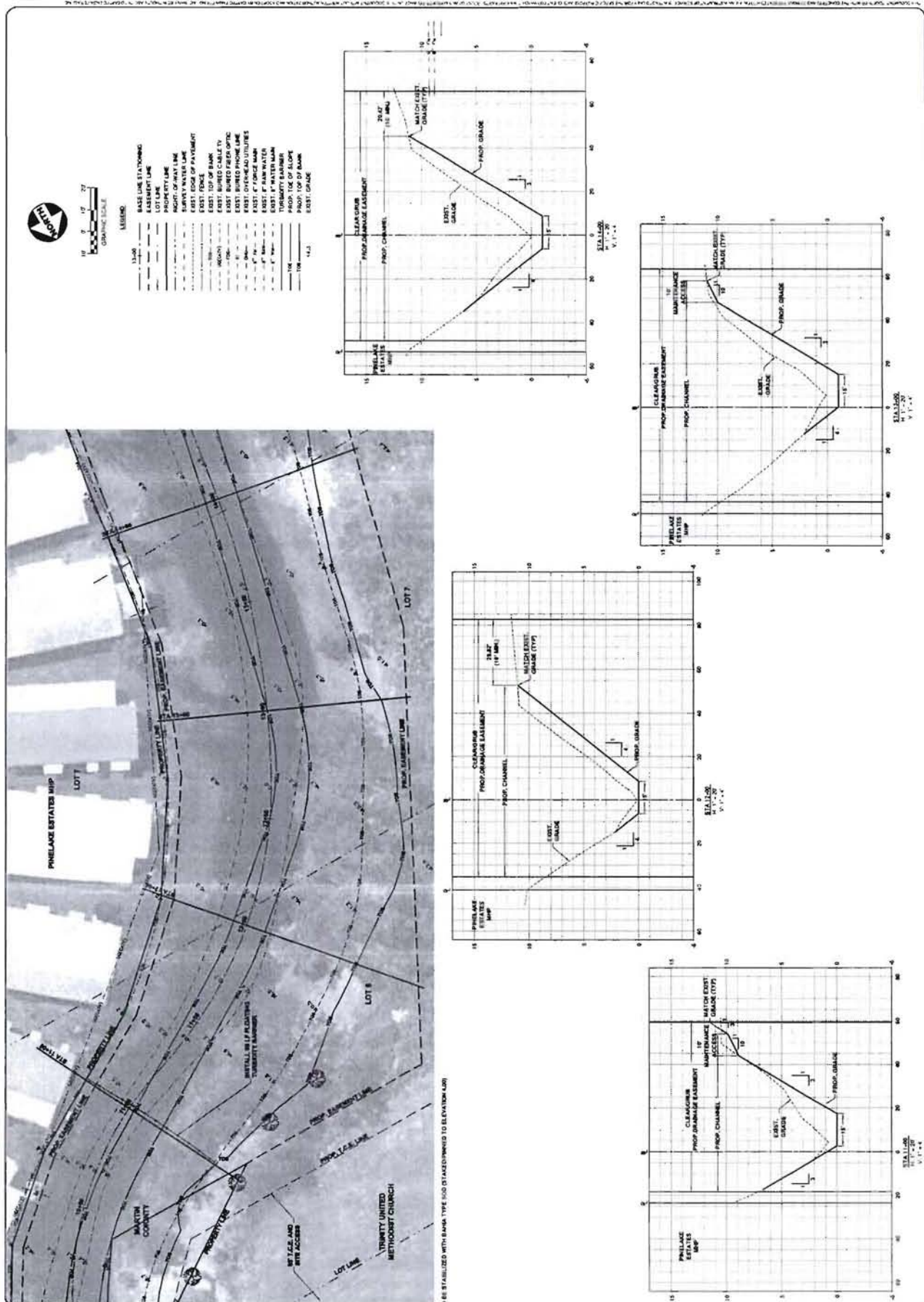
Prepared By: James W. Capen
01/11/01, JAC, Project No. 01-01
Shaw, Florida 32094
P.E. No. 37128

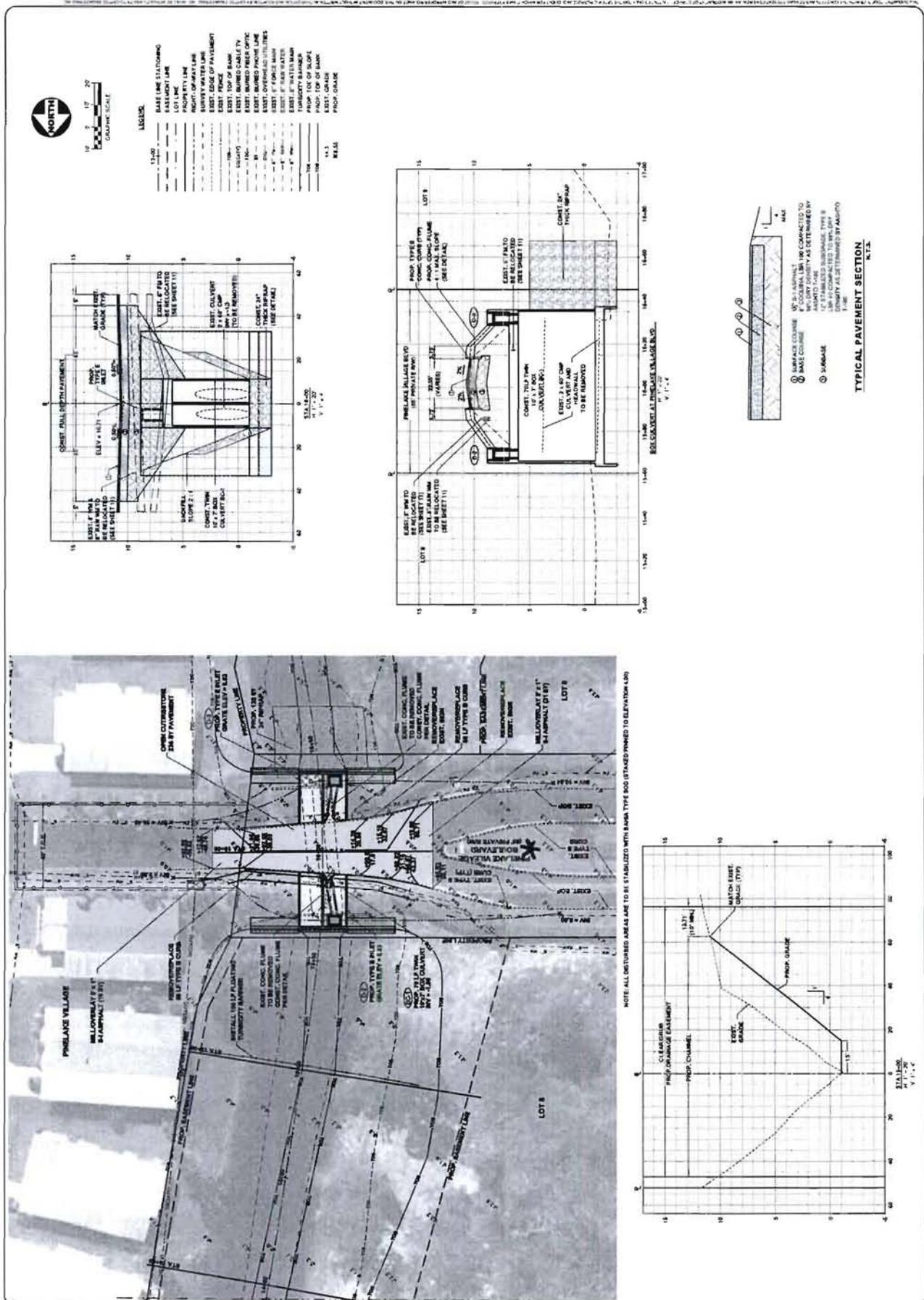
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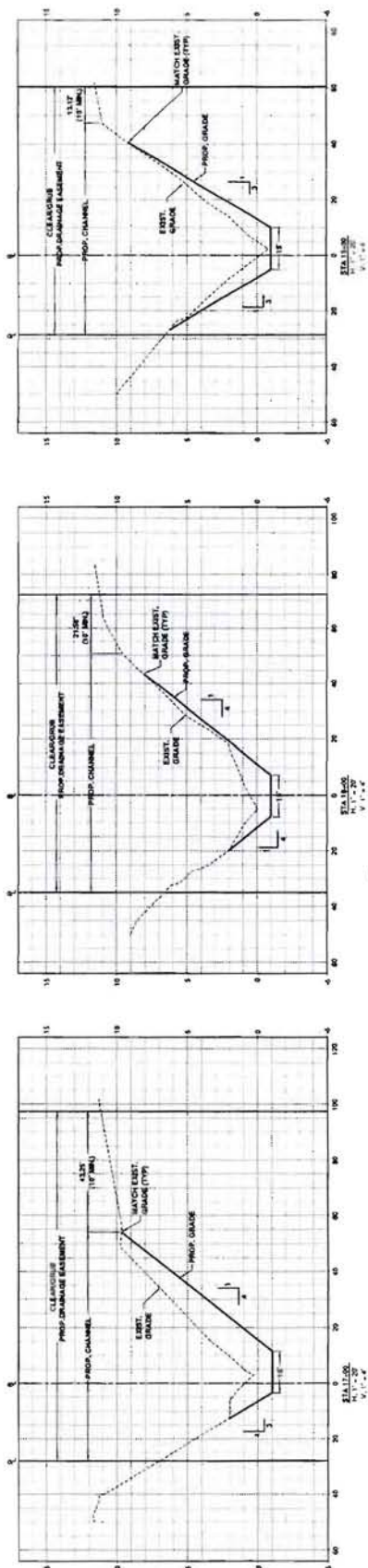


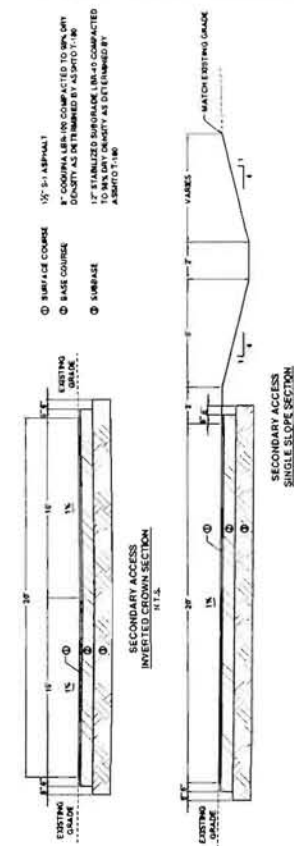
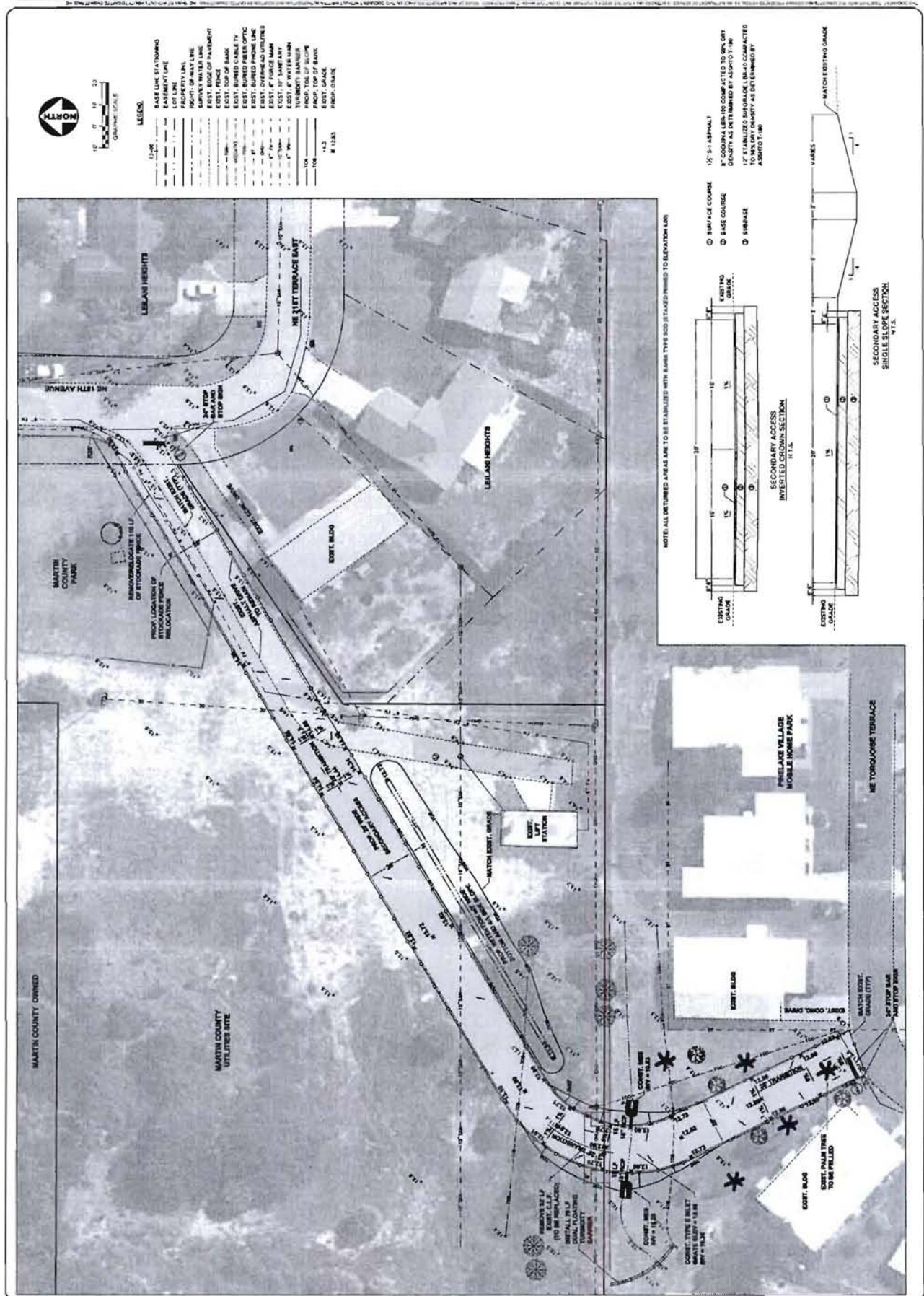


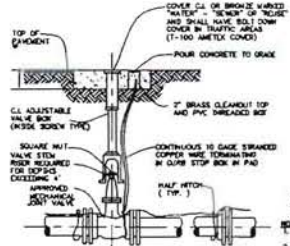
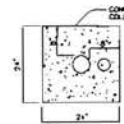
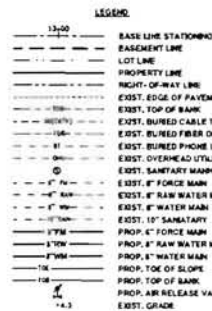




NOTE: ALL DISTRIBUTED AREAS ARE TO BE STABILIZED WITH BANDA TYPE SOD MIXTURES DUE TO ELUVIATION LOSS







ELEVATION
VALVE SETTING DETAIL

MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED

(SOURCE: U.S.ARMY BARRIAGE LIFTING CALCULATION PROGRAM FOR PMC RELEASE 3.1, AND SHARP BARRIAGE PROGRAM FOR DUCTILE URM, RELEASE 3.1)

PITTING TYPE	4"	6"	8"	10"	12"	16"	20"	24"
10" HORIZ. BOND	14	20	28	30	35	43	54	67
11" HORIZ. BOND	4	6	11	13	15	9	23	31
12" HORIZ. BOND	4	6	11	13	15	9	23	31
11.55" HORIZ. BOND	1	2	3	4	4	5	4	5
NO. VERT. OFFSET	29	41	53	64	74	83	119	134
UPPER LOWER BOND	10	10	13	18	19	23	30	36
45° VERT. OFFSET	12	18	24	29	34	38	48	56
UPPER LOWER BOND	3	4	6	7	8	12	15	15
12.5° VERT. OFFSET	6	8	12	14	17	19	23	27
UPPER LOWER BOND	1	2	4	4	4	6	8	9
11.25° VERT. OFFSET	3	4	6	7	8	9	11	13
UPPER LOWER BOND	1	1	1	2	2	3	3	3
WALL (DEAD END)	32	45	58	70	83	107	129	151
IN-LINE VALVE	32	46	65	85	95	126	165	200
17" x 8"	23	—	—	—	—	—	—	—
17" x 8"	75	25	—	—	—	—	—	—
17" x 8"	18	34	—	—	—	—	—	—
17" x 8"	18	32	46	58	—	—	—	—
17" x 8"	13	30	—	—	69	—	—	—
18" x 7"	28	41	55	67	80	—	—	—
20" x 6"	1	21	36	52	63	84	108	—
24" x 6"	1	18	34	48	57	80	108	129
27" x 6"	1	8	19	27	33	50	78	107
30" x 6"	1	1	22	38	50	84	103	124
33" x 6"	1	1	15	33	46	77	90	120
42" x 6"	1	1	2	22	27	51	102	132
17" x 8"	23	—	—	—	—	—	—	—
17" x 8"	36	25	—	—	—	—	—	—
17" x 8"	75	25	—	—	—	—	—	—
17" x 8"	14	34	44	—	—	—	—	—
18" x 9"	80	90	76	75	45	—	—	—
24" x 6"	123	116	107	105	81	45	—	—
24" x 6"	136	120	113	110	86	58	—	—

THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:

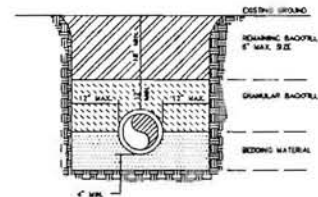
SOIL TYPE-SAND	TEST PRESSURE-150 PSI	DEPTH OF BURY-
RESTRAINED PIPE-TYPE-3	Safety Factor-1.5	NORTHERN OFFSET-
1. MINIMUM PIPE LENGTH ALLOWED (SEE DRAWING)		

2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.

3. ALL JOINTS BETWEEN UPPER AND LOWER ROWS SHALL BE REINFORCED.

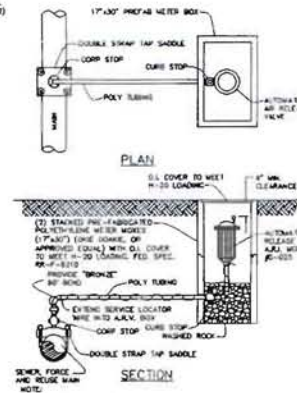
4. RESTRAINED PIPE LENGTHS APPLY TO PIPE ON BOTH SIDES OF YAWES AND FITTINGS.

MECHANICAL JOINT AND REQUIREMENTS



- 1. BEDDING MATERIAL SHALL BE HAND PLACED IN 6" LIFTS AND SHALL CONSIST OF 10-20 GRAIN QUARTZ SAND OF MAXIMUM AND CRUSHED 1/2" MAXIMUM SIZE. UNDESIRABLE MATERIALS SUCH AS WOOD, DEBRIS AND LARGER ROCK SHALL BE REMOVED.
- 2. THE PIPE SHALL BE FULLY BURIED IN ITS BOTH LENGTH AND WIDTH TO PREVENT CLOGGING OF THE DRAINAGE.
- 3. THE PIPE SHALL BE PLACED IN A DRY TRENCH.
- 4. BACKFILL SHALL BE DONE WITH UNWASHED MATERIAL, CLEAN AND FREE OF ROCKS, WOOD AND OTHER OBSTACULAR MATERIAL AND COMPACTED TO REACH THE MINIMUM DENSITY AS DETERMINED BY STANDARD TIGHTEN TO 100% MAXIMUM DENSITY AS DETERMINED BY ASTM D-1556.
- 5. BACKFILL TO BE COMPACTED ALONG THE SIDES OF THE PIPE AND TO A MINIMUM DISTANCE 18" AWAY FROM THE PIPE TO THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-1556.
- 6. A 6" WIDE PAVEMENT IS TO BE CONSTRUCTED OVER THE PIPE. THE REMAINING 18" SHALL BE UNWASHED MATERIAL AND COMPACTED TO THE MAXIMUM DENSITY AS DETERMINED BY ASTM D-1556 TO 100% MAXIMUM DENSITY TO BE CONSTRUCTED TO 18" FROM THE REMAINING 6" SPREAD. THE REMAINING 6" SHALL BE 1/2" TO 1" WASHED SAND TO 100% MAXIMUM DENSITY AS DETERMINED BY ASTM D-1556 TO 100% MAXIMUM DENSITY.
- 7. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL PAVEMENT REGULATIONS.

TYPICAL TRENCH DETAIL



4. AIR RELEASE VALVE SHALL BE AIR/WOOD, 1/2-225 9220 APPROPRIATE FOR SERVICE INTENDED.
5. POLYETHYLENE SHALL BE AS DEFINED BY A.S.T.M. A 9737 3019 AND A 9740 3019. NO PROTECTION AND NO PRESSURE RATED FOR 200 PSI.
6. BURELS SHALL BE MANUFACTURED WITH SIZE, MANUFACTURER'S NAME, WORKING PRESSURE, NATIONAL SANITATION FOUNDATION APPROVAL, A.S.T.M. SPECIFICATION AND PRESSURE RATING. MANUFACTURER SHALL HAVE AN OUTSIDE CUMULATIVE EQUIVALENT TO THE OVEN DURATION OF COPPER TUBING.
7. COMPRESSION FITTINGS SHALL BE SUITABLE FOR RUBING USED AND REQUIRE H.M.P. (U.S.) FITTINGS.
8. FOR WOODS PIPING AND AIR RELEASE VALVE BURELS, REFER TO A.C.I. APPROVED LOCATOR UNIT. ENGINEER OF RECORD SHALL BE RESPONSIBLE FOR 30"CM.
9. PRODUCE LINE SHALL BE Laid IN THE TRENCH WITH ALL AIR/VS CONNECTED TO THE MAIN WATER AND BEING INSULATED AGAINST THE AIR PIPING OF RUBING. USE FOR POTABLE WATER SHALL BE MENTIONED IN COLOR.
- UNDERGROUND AIR RELEASE VALVE
AND BOX**

NOTES ON UTILITIES RELOCATION

- THIS PLAN IS PREPARED BASED ON THE PHASES CONSTRUCTION SEQUENCE OF THE PROPOSED BOX CULVERT.
1. DURING THE CONSTRUCTION OF THE NORTHERN PORTION OF THE PROPOSED BOX CULVERT, THE EXISTING "A" WATER MAIN AND "B" RAW WATER MAIN SHALL BE SHUT DOWN AND BE REMOVED. CONTRACTOR SHALL COORDINATE SHUT DOWN OPERATIONS WITH MARTIN COUNTY UTILITIES A MINIMUM OF 5 BUSINESS DAYS PRIOR TO BEGIN WORK. THE EXISTING "C" FORCE MAIN SHALL REMAIN IN SERVICE AT ALL TIMES DURING THIS CONSTRUCTION PHASE. CONTRACTOR SHALL REMAIN ALERT TO TAKE CARE TO MAINTAIN THE LOCATION OF THE EXISTING "D" FORCE MAIN.
 2. UPON FINISHING THE CONSTRUCTION OF THE NORTHERN PORTION OF THE PROPOSED BOX CULVERT, THE CONTRACTOR SHALL COORDINATE THE PROPOSED RELOCATION OF "A" WATER MAIN, "B" RAW WATER MAIN AND "C" FORCE MAIN PLAN AND PROFILE AND IN CONFORMITY WITH MARTIN COUNTY UTILITIES STANDARDS AND SPECIFICATIONS.
 3. CONTRACTOR SHALL COORDINATE WITH MARTIN COUNTY UTILITIES ON THE TEMPORARY SHUT DOWN OF EXISTING "D" FORCE MAIN PRIOR TO CUTTING IN AND CONNECTING THE RELOCATED "C" FORCE MAIN WITH EXISTING.
 4. DURING THE CONSTRUCTION OF THE SOUTHERN PORTION OF THE PROPOSED BOX CULVERT, CONTRACTOR SHALL EXERCISE DUE CARE TO MAINTAIN THE INTEGRITY OF THE RELOCATED "C" FORCE MAIN.

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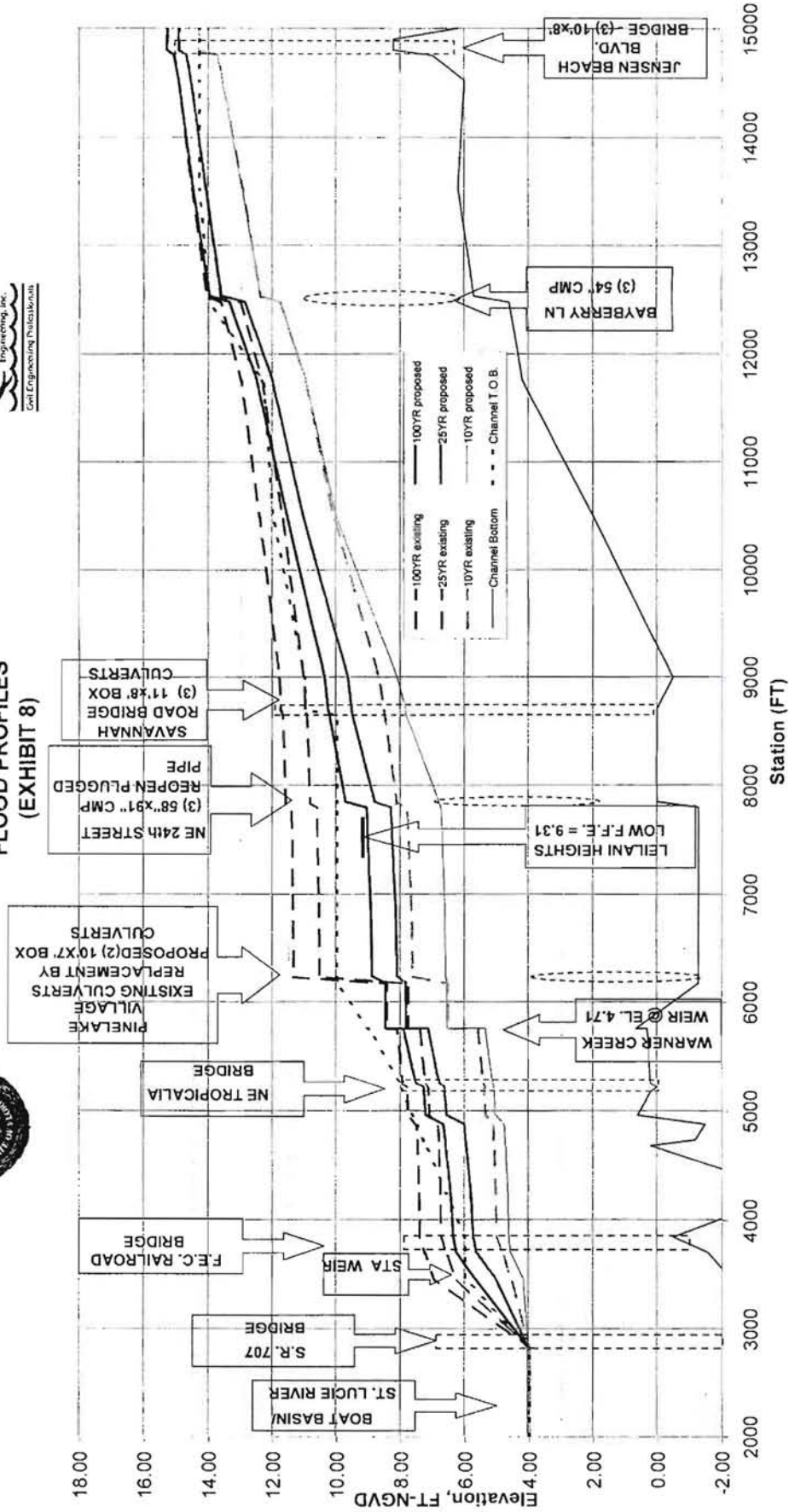
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WARNER CREEK
EXISTING/PROPOSED ICPR MODEL
FLOOD PROFILES
(EXHIBIT 8)



WARNER CREEK PROJECT SITE

SFWMD Mitigation, Monitoring and Maintenance Plan

Martin County, Florida

Revised February 2010



Prepared for:

Martin County
c/o Captec Engineering, Inc.
301 NW Flagler Avenue
Stuart, FL. 34994
(772) 692-4344
FAX (772) 692-4341

Prepared by:

R.L. Weigt Environmental Consultants, Inc.
8985 S.E. Bridge Road
Suite A
Hobe Sound, Florida 33455
(772) 546-6255
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E-Mail: rlwenv@comcast.net

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APPENDIX

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WARNER CREEK
STORM WATER QUALITY RETROFIT
MITIGATION, MONITORING AND MAINTENANCE PLAN

1.00 INTRODUCTION

The Warner Creek project site consists of approximately 9.25 acres of land located east of NE Savannah Road, east and west of Dixie Highway, south of Jensen Beach Boulevard and north of the Roosevelt Bridge (**Figure 1-3 of 12**). The site is located in Section 27, Township 37S, Range 41E, Jensen Beach, Martin County, Florida.

R.L. Weigt Environmental Consultants, Inc. (RLW) has been retained by the Applicant to prepare this Mitigation, Monitoring and Maintenance Plan for the proposed on-site wetland mitigation areas. The following addresses delineation of the preserve areas, prohibited activities, and mitigation, monitoring and maintenance plans for the proposed preserve areas. The Applicant proposes to create ± 0.29 acres of wetlands and enhance approximately 0.13 acres of wetlands to offset wetland impacts.

2.00 MITIGATION

Mitigation for approximately 0.32 acres of wetland impact will consist of creation of an additional ± 0.28 acres of wetland through scrapedown of Brazilian pepper uplands adjacent to the creek, creation of ± 0.01 acres of wetlands through scrapedown of Brazilian pepper infested pine-mesic oak, enhancement of ± 0.02 acres of wetland hardwood forest through removal of exotics and re-planting, as necessary, as well as enhancement of 0.11 acres of mangrove wetlands through removal of exotic vegetation (**Figures 4-7 of 12**). Impacts consist of ± 0.32 acres of Brazilian pepper infested wetland hardwood forest and ± 0.0004 acres of vegetated non-forested wetland (**Figures 8-9 of 12**). Impacts are necessary to prevent flooding upstream of the project site. Warner Creek has

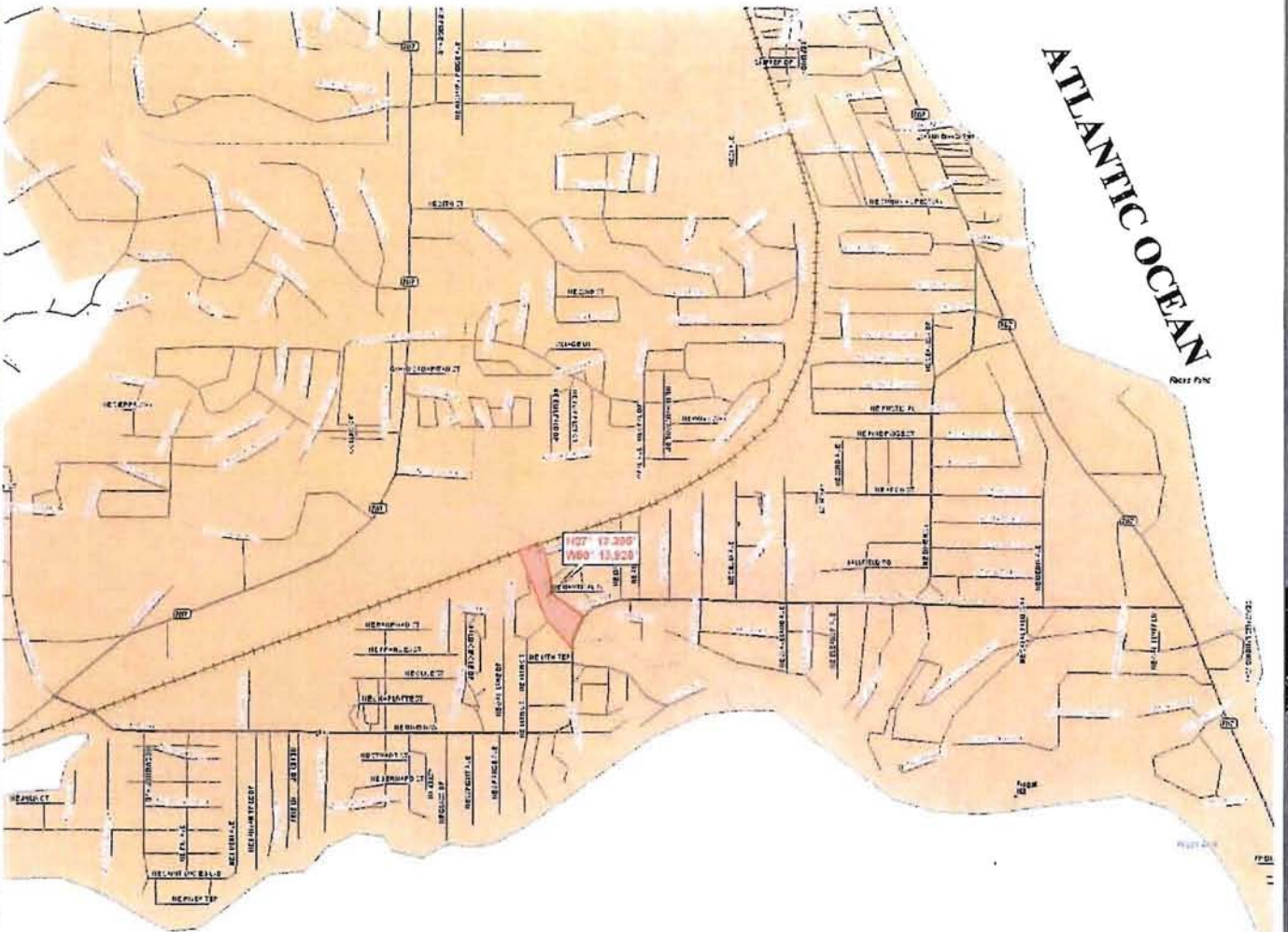
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ATLANTIC OCEAN



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Phone: (772) 602-4344
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E-mail: Captac1@aol.com

Engineering Business
No. EB-0007657



SFWM D APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 01 - VICINITY.DWG	DATE: 7 DECEMBER 2009	FIGURE: 1 OF 12	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN VICINITY MAP					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net			

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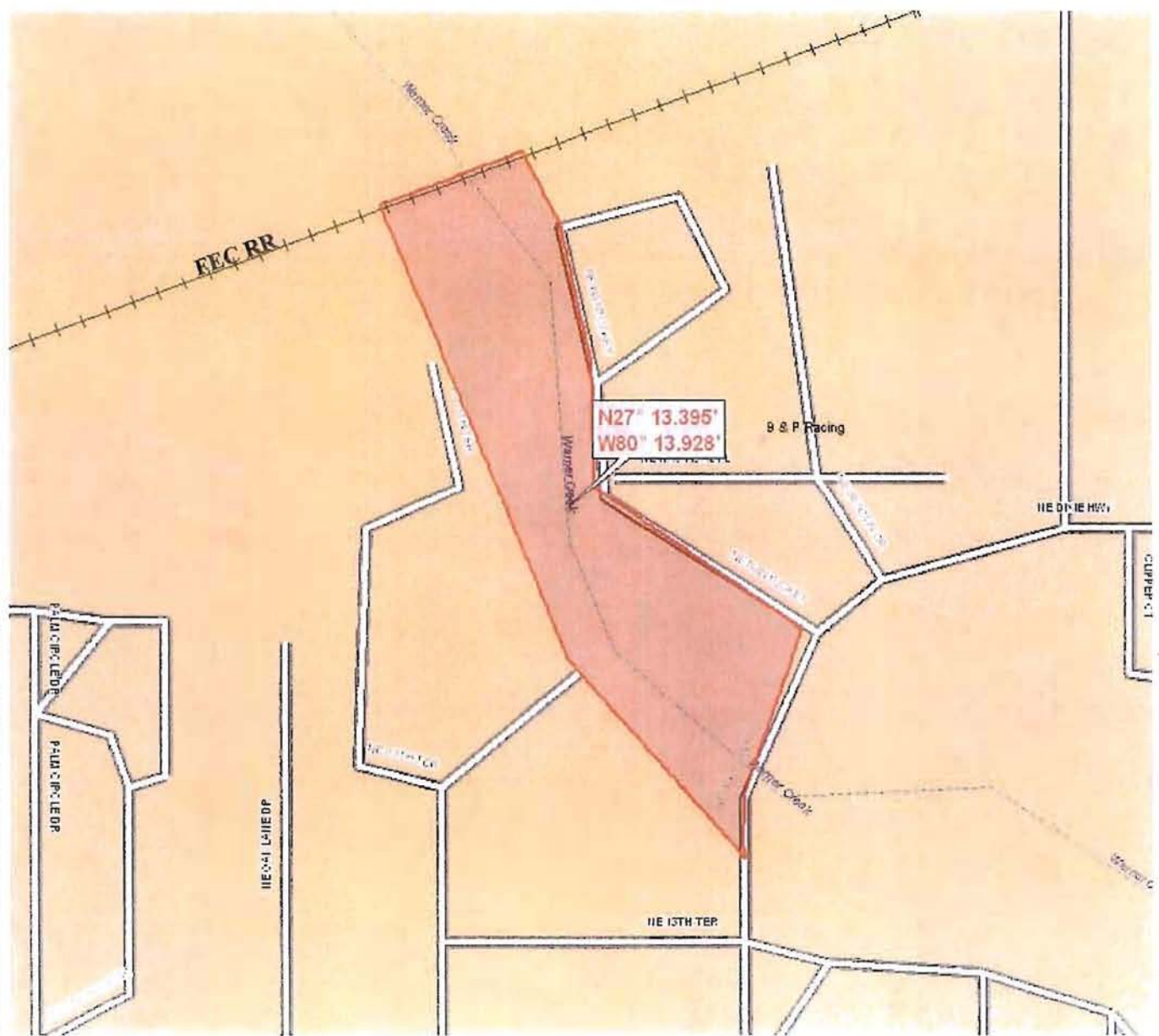
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E-mail: Captec1@aol.com
Engineering Business
No. 09-0001827

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SOURCE: DELORME STREET ATLAS USA, DELUXE

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC. 27	TWP. 37S	R. 41E	RLW JOB NO.: 08-033.03	DRAWING NAME: 02 - LOCATION.DWG	DATE: 7 DECEMBER 2009	FIGURE: 2 OF 12
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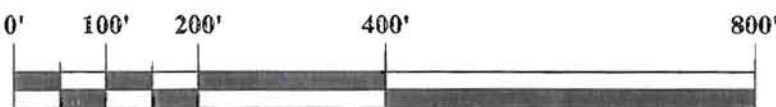
WARNER CREEK
STORMWATER QUALITY RETROFIT
MITIGATION, MONITORING & MAINTENANCE PLAN
LOCATION MAP

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net

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SCALE: 1" = 200'



LEGEND

— TOTAL PROJECT BOUNDARY

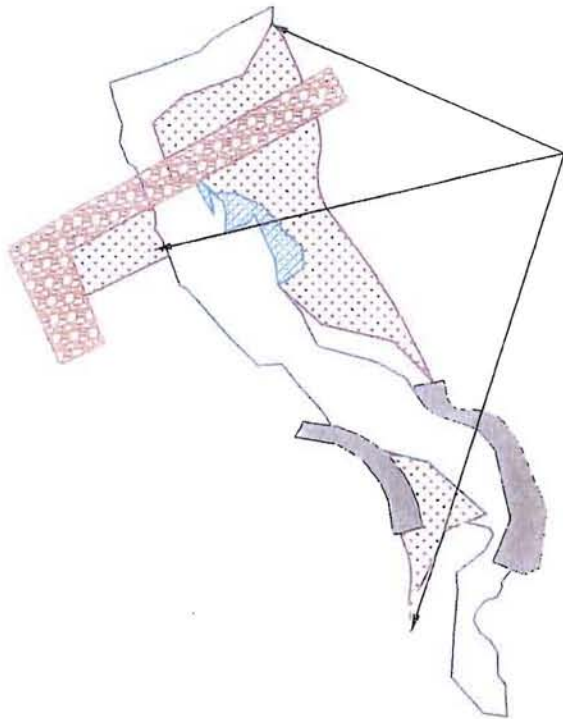
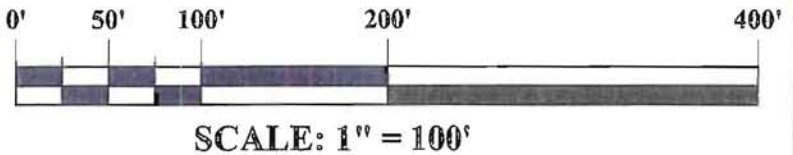
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SOURCE: MARTIN COUNTY PROPERTY APPRAISER'S OFFICE, 2007 AERIAL PHOTOGRAPH

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MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 03 - 2007 AERIAL.DWG	DATE: 7 DECEMBER 2009	FIGURE: 3 OF 12
	27	37S	41E				
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORM WATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN 2007 AERIAL PHOTOGRAPH					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

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NOT A SURVEY



LEGEND



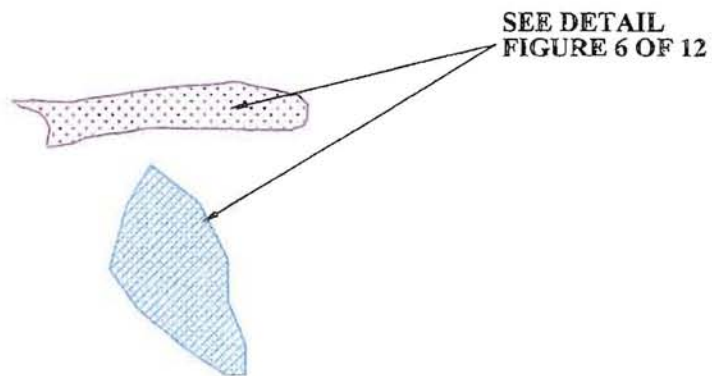
WETLAND CREATION
(±0.29 ACRES TOTAL)



WETLAND ENHANCEMENT
(±0.13 ACRES TOTAL)



IMPACT AREA



SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

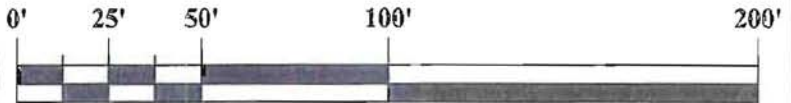
MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 04 - MIT PLAN.DWG	DATE REVISED: 23 FEBRUARY 2010	FIGURE: 4 OF 12
	27	37S	41E				
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:	
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN MITIGATION PLAN					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlweiv@comcast.net		

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NOT A SURVEY



• 301 NW Flagler Ave
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Fax: (772) 692-4341
E-mail: Captec1@aol.com
Engineering Business
No. EG-0007807



SCALE: 1" = 50'

LEGEND



WETLAND CREATION
(±0.22 ACRES)



WETLAND ENHANCEMENT
(±0.02 ACRES)



IMPACT AREA



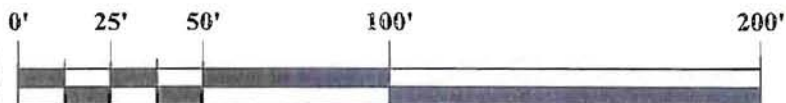
SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 05 - DETAIL N.DWG	DATE REVISED: 23 FEBRUARY 2010	FIGURE: 5 OF 12
	27	37S	41E				
LATITUDE: N27° 13.395'				LONGITUDE: W080° 13.928'	DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN MITIGATION PLAN DETAIL NORTH					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

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NOT A SURVEY



SCALE: 1" = 50'



LEGEND



WETLAND CREATION
(±0.07 ACRES)



WETLAND ENHANCEMENT
(±0.11 ACRES)

SOURCE: CAPTEC, RLW

SFVMD APPLICATION NO. 090128-6

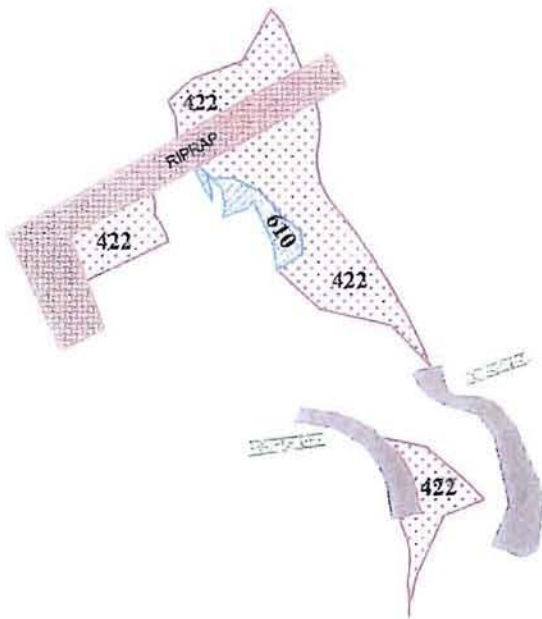
MARTIN COUNTY FLORIDA	SEC. 27	TWP. 37S	R. 41E	RLW JOB NO.: 08-033.03	DRAWING NAME: 06 - DETAIL S.DWG	DATE: 7 DECEMBER 2009	FIGURE: 6 OF 12
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'			
DESIGNED BY: FRP					DRAWN BY: FRP		CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN MITIGATION PLAN DETAIL SOUTH					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

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NOT A SURVEY



SCALE: 1" = 100'



LEGEND

610 CREATION
(FORMER 422 - ± 0.28 ACRES)

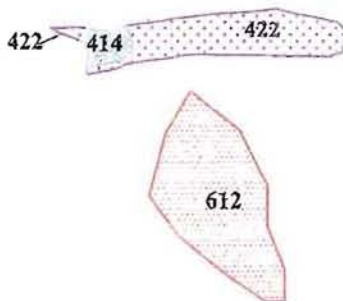
610 CREATION
(FORMER 414 - ± 0.01 ACRES)

TOTAL CREATION ACREAGE
±0.29 ACRES

610 ENHANCEMENT
±0.02 ACRES

612 ENHANCEMENT
±0.11 ACRES

TOTAL ENHANCEMENT ACREAGE
±0.13 ACRES



SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 07 - UMAM MIT.DWG	DATE: 7 DECEMBER 2009	FIGURE: 7 OF 12	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN UMAM MITIGATION POLYGONS					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net			

become overgrown and filled in with silt and debris and in large storm events, the creek backs up and floods residential areas upstream. The project proposes installation of a water quality weir within the existing creek and regrading of the creek, as well as conversion of waste water treatment ponds to stormwater treatment ponds to provide water quality enhancement in the Warner Creek Basin. Please refer to the site plan found as **Figure 10 of 12**.

Uniform Mitigation Assessment Methodology sheets have been completed for each impact and mitigation area and can be found as Appendix A. The total functional loss (FL) for the site is (-0.1102). The relative functional gain (RFG) is 0.155, offsetting the FL. Please refer to Appendix A for UMAM sheets for each habitat type, as well as State Debit and Credit calculations.

3.00 MONITORING AND MAINTENANCE PLAN

The proposed Preserve Areas of the Warner Creek project site will be monitored semiannually for a five (5) year period. A time-zero monitoring report will be completed following construction and planting. Monitoring will be conducted semiannually and annual reports, documenting the results of the semiannual monitoring iterations, will be prepared to document the progress of the Preserve Areas located on-site. The reports will include vegetation analysis, wildlife utilization, panoramic photographs, hydrology, and conclusions of the annual monitoring iterations.

3.01 Monitoring Set-up

R.L. Weigt Environmental Consultants, Inc. (RLW) will establish four (4) monitoring transects within the preserved wetland areas (**Figure 11 of 12**). The beginning of each transect will be established with a concrete filled PVC pipe monument in the preserve areas. The concrete filled PVC monument will also serve as the panoramic photograph locations for the preserve areas. Compass bearings from the concrete filled PVC markers will be

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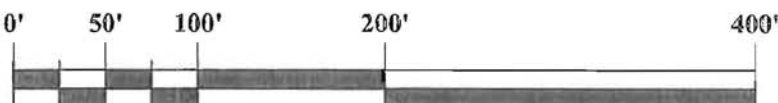
NOT A SURVEY



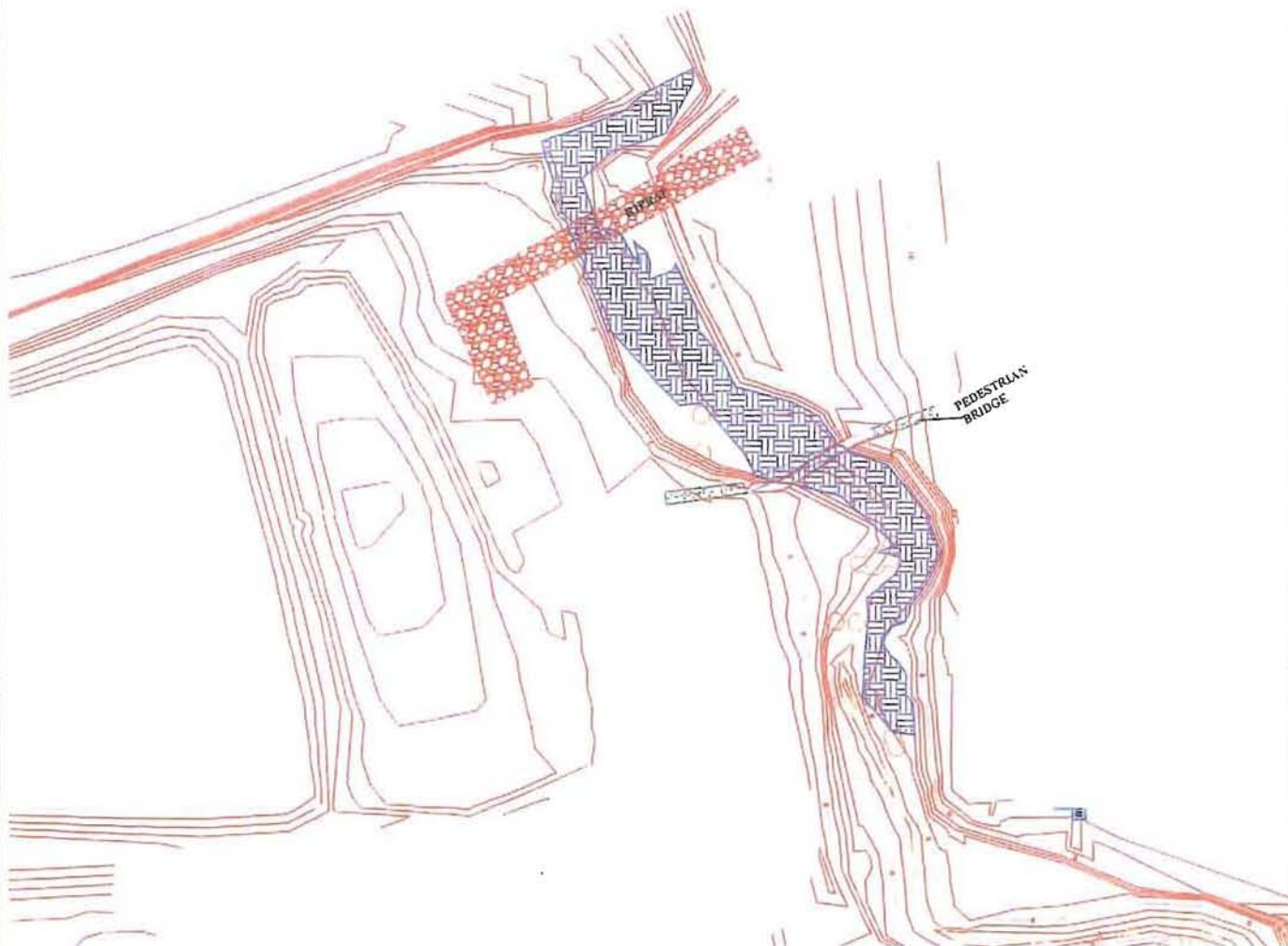
301 NW Flagler Ave
Sarasota, Florida 34094
Phone: (772) 622-4344
Fax: (772) 622-4341
E-mail: Captec1@aol.com
Engineering Number:
No. CG-0607057



NORTH



SCALE: 1" = 100'



LEGEND



WETLAND IMPACT
(± 0.32 ACRES)

SOURCE: CAPTEC, RLW

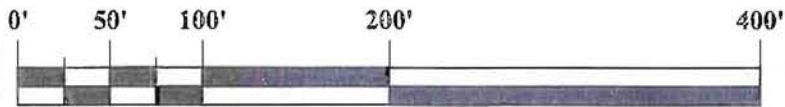
SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 08 - WET IMP.DWG	DATE REVISED: 23 FEBRUARY 2010	FIGURE: 8 OF 12	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN WETLAND IMPACT MAP					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net			

09/30/2010 12:15 PM

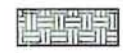
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NOT A SURVEY



SCALE: 1" = 100'

LEGEND

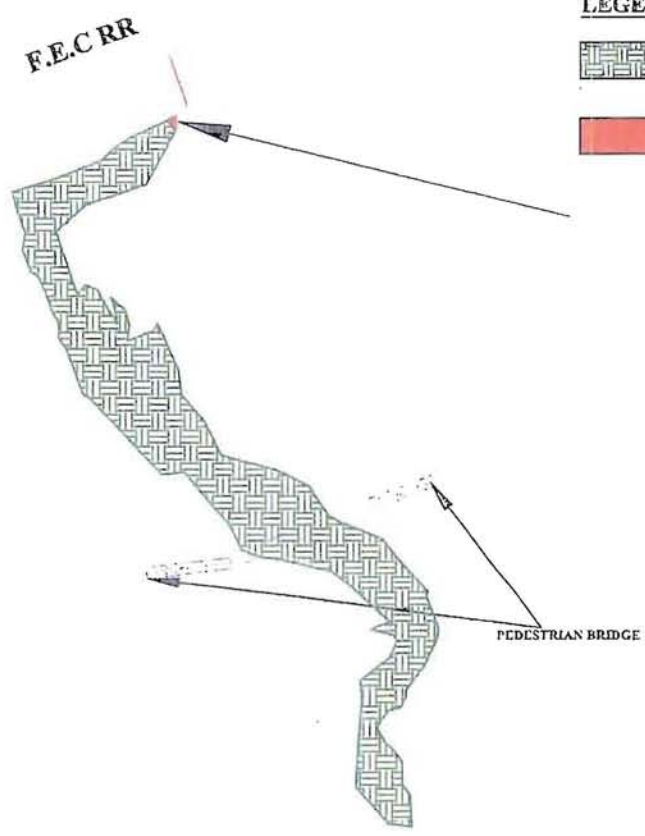


610 - WETLAND HARDWOOD FOREST
(± 0.32 ACRES)



640 - VEGETATED NON-FORESTED WETLAND
(± 0.0004 ACRES)

TOTAL WETLAND IMPACT
(± 0.32 ACRES)



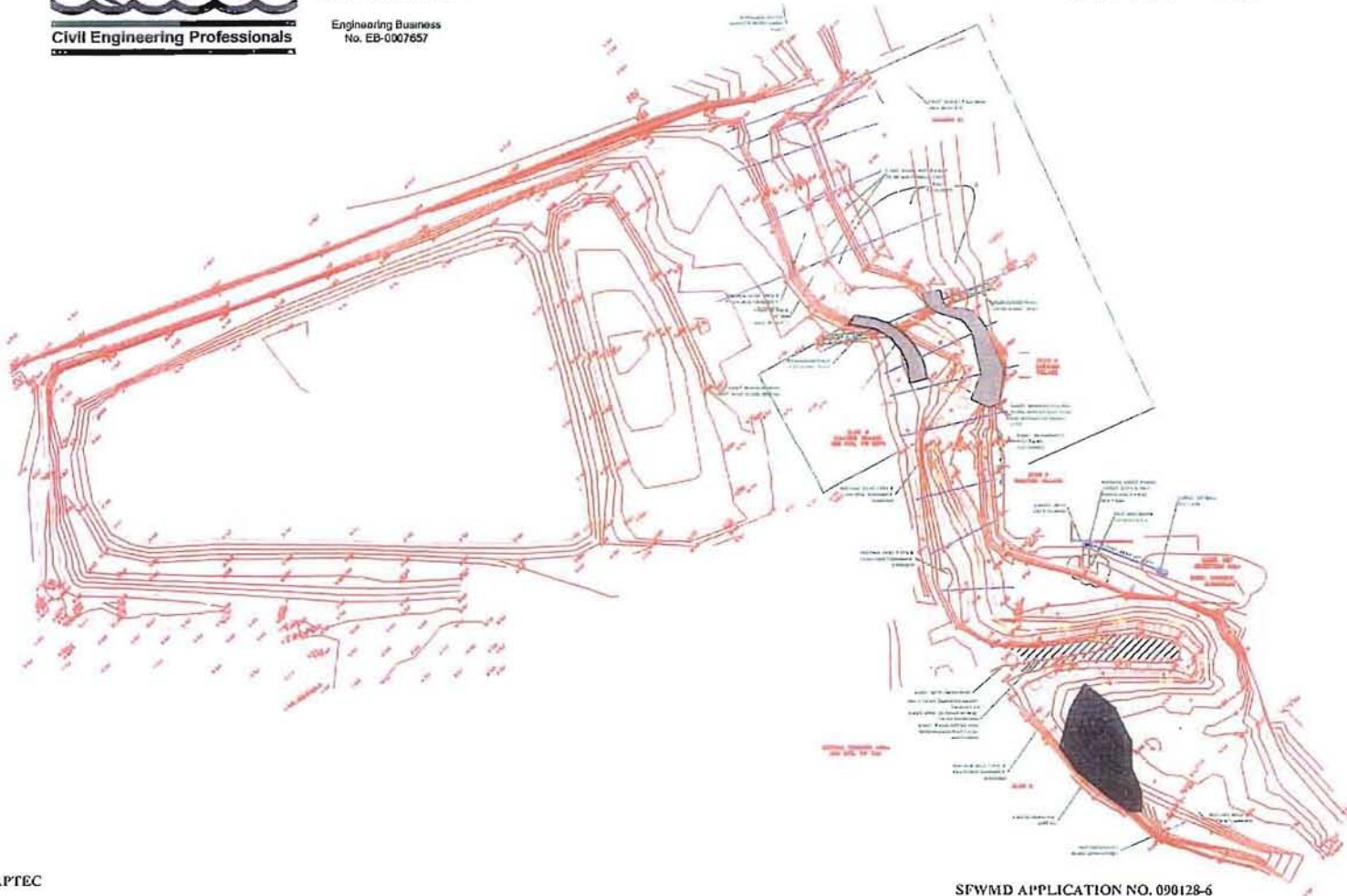
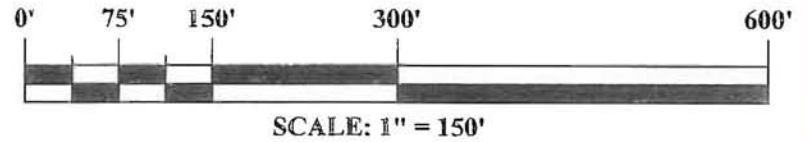
SOURCE: CAPTEC ENGINEERING, INC., RLW

SFWMD APPLICATION NO. 090128-6

SOURCE: CAPTEC ENGINEERING, INC., RLW								SPWMD APPLICATION NO. 090128-0	
MARTIN COUNTY FLORIDA		SEC. 27	TWP. 37S	R. 41E	RLW JOB NO.: 08-033.03	DRAWING NAME: 09 - UMAM IMP.DWG	DATE REVISED: 23 FEBRUARY 2010	FIGURE: 9 OF 12	
LATITUDE: N27° 13.395"			LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:	
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN UMAM IMPACT POLYGONS						R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net			

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NOT A SURVEY



SOURCE: CAPTEC

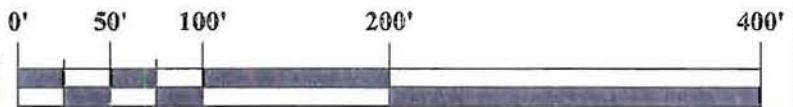
SFWMD APPLICATION NO. 090128-6

LATITUDE: N27° 13.395' LONGITUDE: W080° 13.928'		DESIGNED BY: FRP		DRAWN BY: FRP		CHECKED BY:	
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN SITE PLAN		MARTIN FLORIDA		SEC.	TWP.	R.	RLW JOB NO.: 08-033.03
				27	37S	41E	
		DRAWING NAME: 10 - SITE PLAN.DWG		DATE: 7 DECEMBER 2009		FIGURE: 10 OF 12	
R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net							

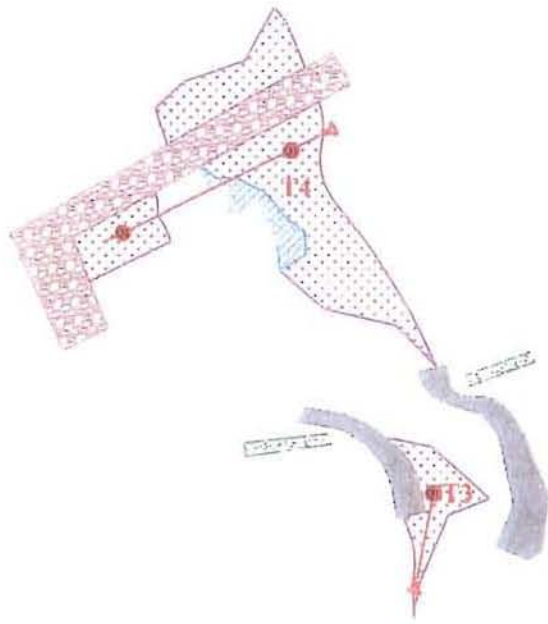
03/02/2010 11:11 AM

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NOT A SURVEY

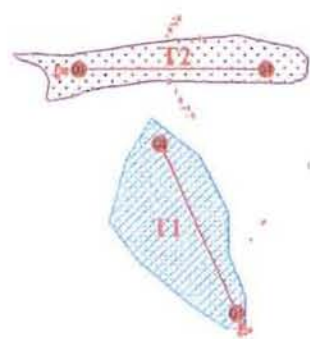


SCALE: 1" = 100'



LEGEND

- TRANSECT
- PANORAMIC PHOTOGRAPHIC STATION
- T3** TRANSECT NUMBER
- QUADRAT NUMBER
- CREATION AREA
- ENHANCEMENT AREA



SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 11 - MONITOR.DWG	DATE: 7 DECEMBER 2009	FIGURE: 11 OF 12
	27	37S	41E				
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN MONITORING PLAN					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

established for each transect. A metal plate will be engraved with the transect number, compass bearing, and date. The metal plates will be attached to the concrete filled PVC monuments with stainless steel bolts. The concrete filled PVC monuments will be field-located with a hand-held GPS unit and the latitude and longitude recorded.

3.02 Vegetation Survey

RLW biologists will conduct semiannual (April/May and October/November) vegetation surveys for each of the four (4) transects for a period of five (5) years. Sample quadrats, 10 meters x 10 meters (100 square meters), will be established every 100-feet. Vegetation inside the quadrats will be identified to species where possible, and recorded. Percent-coverage of each species will be recorded. Biologists will list all the species that are observed for each particular sample quadrat.

3.03 Panoramic Transect and Quadrat Photographs

During each sample iteration, RLW will take color panoramic photographs (180°) of each transect located throughout the project site. A range-pole will be provided in each photograph for scaling vegetation growth. A single photograph will be taken of each sample quadrat. The photographs will provide physical documentation of the conditions within the preserve area. Photographs of the semiannual monitoring iterations will be included in each of the annual reports.

3.04 Wildlife Utilization

A qualitative study of wildlife utilization (birds, mammals, amphibians, and reptiles) will be conducted during each sample iteration. Wildlife utilization will be determined by sighting, scat, calls, nest, burrows, tracks, etc. A species list of observed wildlife will be compiled and included in each of the semiannual reports.

3.05 Fish and Aquatic Macroinvertebrate Sampling

Qualitative sampling for the presence of fish and aquatic macroinvertebrates will be conducted by biologists during each semiannual sample iteration. The fish and aquatic macroinvertebrates will be collected with cast nets, seines, and/or dipnets, whichever is more applicable at the time of sampling. A species list of the fish and aquatic macroinvertebrate sampling will be included in the annual reports.

3.06 Preserve Signage

Signs notifying residents of the wetland plantings will be placed along the creation/enhancement zones to keep residents out of these areas (**Figure 12 of 12**). The signs will warn residents and the general public against clearing, trimming, mowing or dumping within the planted areas.

3.07 Exotic Plant Species

Exotic and nuisance plant species will be controlled, in perpetuity, within the mitigation areas. Brazilian pepper, and Australian pine will either be treated with an approved herbicide and allowed to die in-place, or they will be cut and removed from site. An appropriate herbicide will be applied to the stumps to prevent regrowth. Other exotic and nuisance species will be treated with an approved herbicide or pulled by hand. Exotic maintenance will be performed on a semiannual basis, depending on the existing conditions.

The wetland areas will be maintained free of exotic vegetation defined as Category I Plants by the Florida Exotic Pest Plant Council (**Table 1**). Other exotic or nuisance vegetation will be maintained to comprise less than five percent (<5%) of the total acreage of the wetland. Maintenance will be conducted in perpetuity and will run with the land. Martin County will be perpetually responsible for exotic species maintenance.

SCANNED 05/03/2010 11:11:44

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NOT A SURVEY

SCALE: NTS



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Stuart, Florida 34994
Phone: (772) 632-4344
Fax: (772) 632-4341
E-mail: Capteco1@aol.com
Engineering License:
No. 69-000757



PRESERVE SIGN DETAIL

SOURCE: RLW

SFWM APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.03	DRAWING NAME: 12 - FENCE SIGN.DWG	DATE: 7 DECEMBER 2009	FIGURE: 12 OF 12
	27	37S	41E				
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION, MONITORING & MAINTENANCE PLAN PRESERVE SIGN DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

Table 1. Florida Exotic Pest Plant Council's Category I Invasive Exotic Species (2009).

<u>Scientific Name</u>	<u>Common Name</u>
<i>Abrus precatorius</i>	rosary pea
<i>Acacia auriculiformis</i>	earleaf acacia
<i>Albizia julibrissin</i>	mimosa, silk tree
<i>Albizia lebbek</i>	woman's tongue
<i>Ardisia crenata</i> (= <i>A. crenulata</i>)	coral ardisia
<i>Ardisia elliptica</i> (= <i>A. humilis</i>)	shoebutton ardisia
<i>Asparagus aethiopicus</i> (= <i>A. sprengeri</i> ; <i>A. densiflorus</i> misapplied)	Asparagus fern
<i>Bauhinia variegata</i>	Orchid tree
<i>Bischofia javanica</i>	bischofia
<i>Calophyllum antillanum</i> (= <i>C. calaba</i> ; <i>C. inophyllum</i> , misapplied)	santa maria (names "mast wood", "Alexandrian laurel" used in cultivation)
<i>Casuarina equisetifolia</i>	Australian pine
<i>Casuarina glauca</i>	suckering Australian pine
<i>Cinnamomum camphora</i>	camphor-tree
<i>Colocasia esculenta</i>	wild taro
<i>Colubrina asiatica</i>	lather leaf
<i>Cupaniopsis anacardioides</i>	carrotwood
<i>Dioscorea alata</i>	winged yam
<i>Dioscorea bulbifera</i>	air potato
<i>Eichornia crassipes</i>	water hyacinth
<i>Eugenia uniflora</i>	Surinam cherry
<i>Ficus microcarpa</i> (= <i>Ficus nitida</i> ; <i>F. retusa</i> var. <i>nitida</i> misapplied)	laurel fig
<i>Hydrilla verticillata</i>	hydrilla
<i>Hygrophila polysperma</i>	green hygro
<i>Hymenachne amplexicaulis</i>	West Indian marsh grass
<i>Imperata cylindrica</i> (= <i>I. brasiliensis</i> misapplied)	cogon grass
<i>Ipomoea aquatica</i>	waterspinach
<i>Jasminum dichotomum</i>	Gold Coast jasmine
<i>Jasminum fluminense</i>	Brazilian jasmine
<i>Lantana camara</i>	lantana, shrub verbena
<i>Ligustrum lucidum</i>	glossy privet
<i>Ligustrum sinense</i>	Chinese privet, hedge privet
<i>Lonicera japonica</i>	Japanese honeysuckle
<i>Ludwigia peruviana</i>	Peruvian primrose willow
<i>Luziola subintegra</i>	Tropical American water grass
<i>Lygodium japonicum</i>	Japanese climbing fern
<i>Lygodium microphyllum</i>	Old World climbing fern
<i>Macfadyena unguis-cati</i>	cats claw vine
<i>Manilkara zapota</i>	sapodilla
<i>Melaleuca quinquenervia</i>	melaleuca, paper bark

Melinis repens
 (= *Rhynchelytrum repens*)
Mimosa pigra
Nandina domestica
Nephrolepis cordifolia
Nephrolepis brownii
 (= *N. Multiflora*)
Neyraudia reynaudiana
Nymphoides cristata
Paederia cruddasiana
Paederia foetida
Panicum repens
Pennisetum purpureum
Pistia stratiotes
Psidium cattleianum
 (= *P. littorale*)
Psidium guajava
Pueraria montana var. *lobata*
 (= *P. lobata*)
Rhodomirtus tomentosa
Rhynchelytrum repens
 (= *Melinis repens*)
Salvinia minima
Ruellia brittoniana
 (*R. tweediana* misapplied)
Sapium sebiferum
 (= *Triadeca sebifera*)
Scaevola taccada
 (= *Scaevola sericea*;
S. frutescens)
Schefflera actinophylla
 (= *Brassaia actinophylla*)
Schinus terebinthifolius
Scleria lacustris
Senna pendula var. *glabrata*
 (= *Cassia coluteoides*)
Solanum tampicense
 (= *S. houstonii*)
Solanum viarum
Syngonium podophyllum
Syzygium cumini
Tectaria incisa
Thespesia populnea
Tradescantia fluminensis
Urochloa mutica
 (= *Brachiaria mutica*)

natal grass
 catclaw mimosa
 nandina, heavenly bamboo
 sword fern

 Asian sword fern
 Burma reed, cane grass
 snowflake
 sewer vine, onion vine
 skunk vine
 torpedo grass
 napier grass
 water lettuce
 strawberry guava

 guava
 kudzu

 downy rose-myrtle
 Natal grass

 water spangles

 Mexican petunia
 popcorn tree, Chinese tallow tree

 scaevola, half-flower, beach naupaka

 schefflera, Queensland umbrella tree

 Brazilian pepper
 Wright's nutrush
 climbing cassia, Christmas cassia, Christmas senna

 wetland night shade, aquatic soda apple

 tropical soda apple
 Arrowhead vine
 jambolan, Java plum
 incised halberd fern
 seaside mahoe
 white-flowered wandering jew
 Para grass

Source: Florida Exotic Pest Plant Council. 2009 List of Invasive Species

3.08 Success Criteria

The wetland areas will achieve an eighty-percent (80%) coverage and survival rate of desirable obligate and facultative native vegetation at the end of the second year of monitoring. Replanting of native, desirable vegetation will occur after each monitoring event if the targeted coverage for any portion of a wetland area is not achieved within the specified time-frame.

4.00 MONITORING REPORTS

Annual reports containing results of the semiannual monitoring iterations will be submitted to the South Florida Water Management District (SFWMD), according to the following schedule of events:

October/November 2010	Time Zero Monitoring Report
April/May 2011	Semiannual monitoring
October/November 2011	Semiannual monitoring, Report #1
April/May 2012	Semiannual monitoring
October/November 2012	Semiannual monitoring, Report #2
April/May 2013	Semiannual monitoring
October/November 2013	Semiannual monitoring, Report #3
April/May 2014	Semiannual monitoring
October/November 2014	Semiannual monitoring, Report #4
April/May 2015	Semiannual monitoring
October/November 2015	Semiannual monitoring, Final Report #5

See
Exhibit
5
for
due
dates.
(MP)

Baseline and annual reports will be submitted within thirty (30) days of sampling the preserve areas. The monitoring reports will contain the following data:

- results of the semiannual vegetation surveys
- results of the semiannual wildlife utilization
- water level and rainfall data
- semiannual panoramic and quadrat photographs
- results of the semiannual fish and aquatic macroinvertebrate survey
- discussion of project issues related to water levels, vegetation changes, fish and wildlife utilization, percent-coverage, permit compliance, exotic species, and recommendations or proposed changes, as necessary for improving the success of the preserve areas.

SCANNED 03/30/2010 15:13 64

WARNER CREEK STORMWATER QUALITY RETROFIT ENVIRONMENTAL RESOURCE PERMIT (ERP)

MITIGATION PLANTING PLAN

SFWMD APPLICATION NO. 090128-6

14 JANUARY 2010

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL. 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net

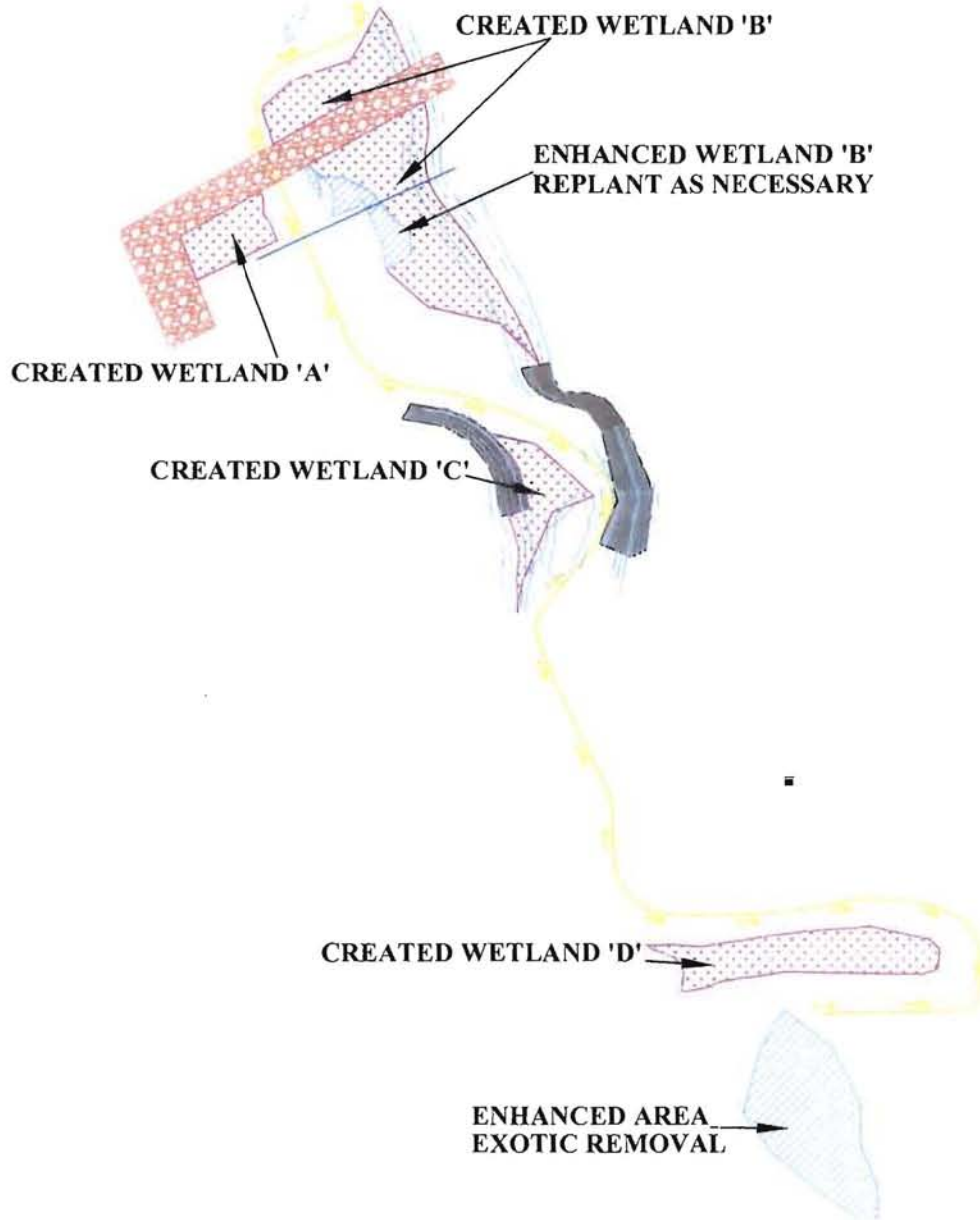
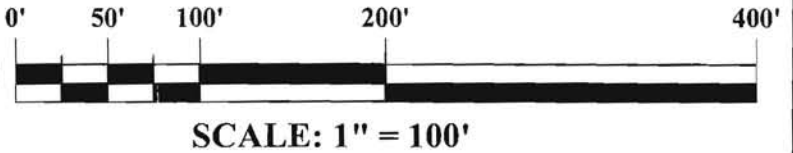


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NOT A SURVEY



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 Stuart, Florida 34954
 Phone: (772) 692-4344
 Fax: (772) 692-4341
 E-mail: Capteci@aol.com
 Engineering Business
 No. 03-0007607



SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO.090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 01 - MIT PLAN.DWG	DATE: 14 JANUARY 2010	FIGURE: 1 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:

WARNER CREEK
 STORMWATER QUALITY RETROFIT
 MITIGATION PLANTING PLAN
 MITIGATION PLAN

R. L. WEIGT
 ENVIRONMENTAL CONSULTANTS, INC.
 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwevnc@comcast.net

NOT A SURVEY



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E-mail: Captec1@aol.com

Engineering Business
No. 28-0007807

TYPICAL PLANTS

<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>DENSITY</u>	<u>SIZE</u>	<u>QUANTITY</u>
--------------------	------------------------	----------------	-------------	-----------------

HERBACEOUS PLANTS

	GIANT LEATHER FERN	<i>Acrostichum danaeifolium</i>	1' O.C.	BR	349
	SALTGRASS	<i>Distichlis spicata</i>	1' O.C.	BR	2047
	SALTMARSH CORDGRASS	<i>Spartina alterniflora</i>	1' O.C.	BR	5183
	SWITCHGRASS	<i>Panicum virgatum</i>	1' O.C.	BR	1438
	BLACK RUSH	<i>Juncus roemerianus</i>	1' O.C.	BR	3354

TREES

	POND APPLE	<i>Annona glabra</i>	5' O.C.	7 GAL.	57
	WHITE MANGROVE	<i>Laguncularia racemosa</i>	5' O.C.	7 GAL.	12

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 02 - PLANT DET.DWG	DATE: 14 JANUARY 2010	FIGURE: 2 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN PLANT DETAILS					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

2010 JAN 13 15:13 0102 AUG 20 09WNV

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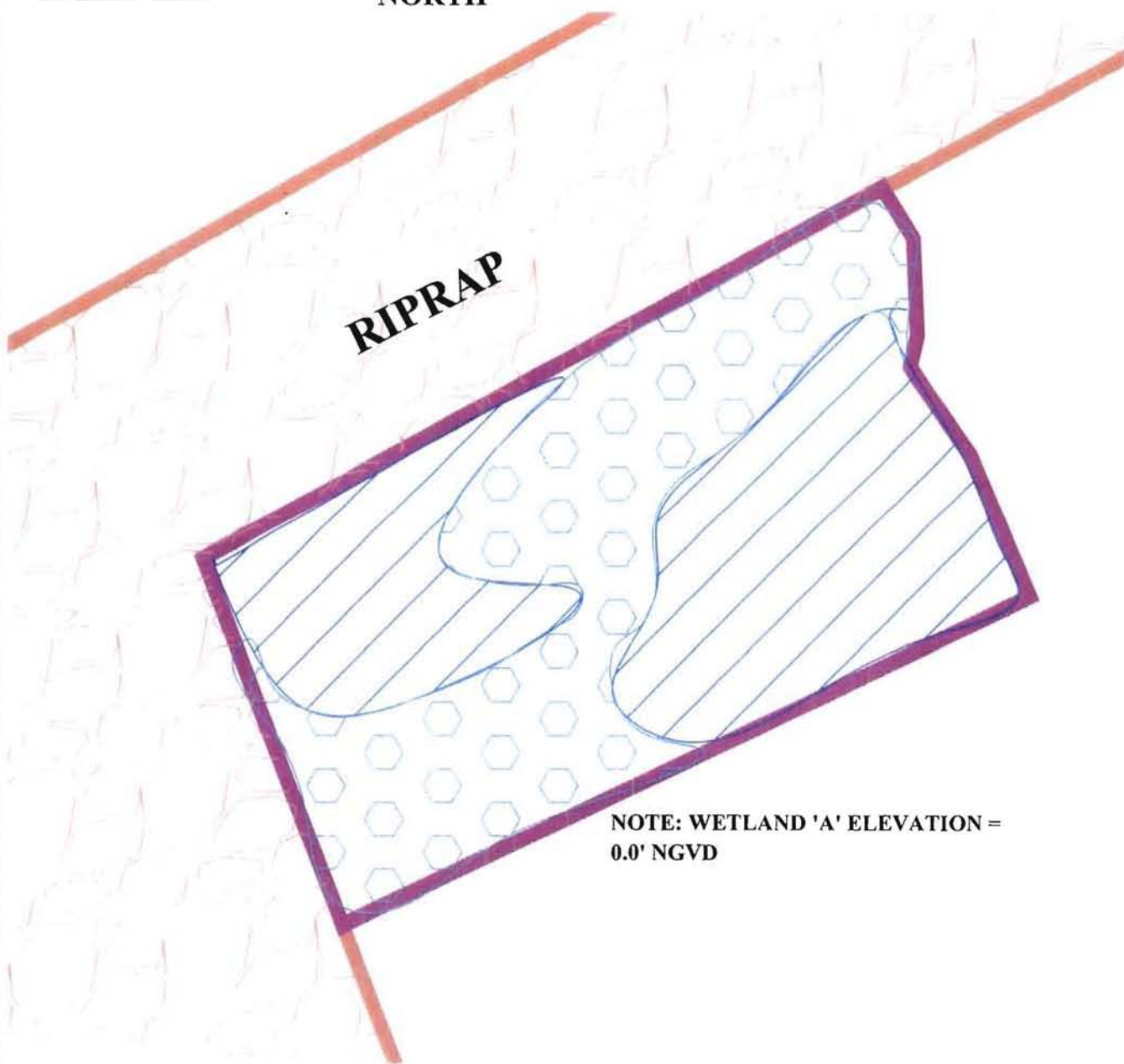
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Engineering Business
No. EB-000787



SCALE: 1" = 10'



NOTE: WETLAND 'A' ELEVATION = 0.0' NGVD

SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

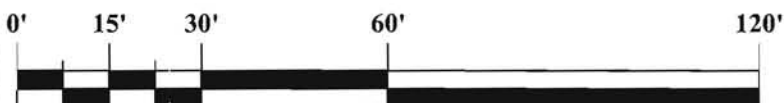
MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 03 - CR WET A.DWG	DATE: 14 JANUARY 2010	FIGURE: 3 OF 14	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN CREATED WETLAND 'A'					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net			

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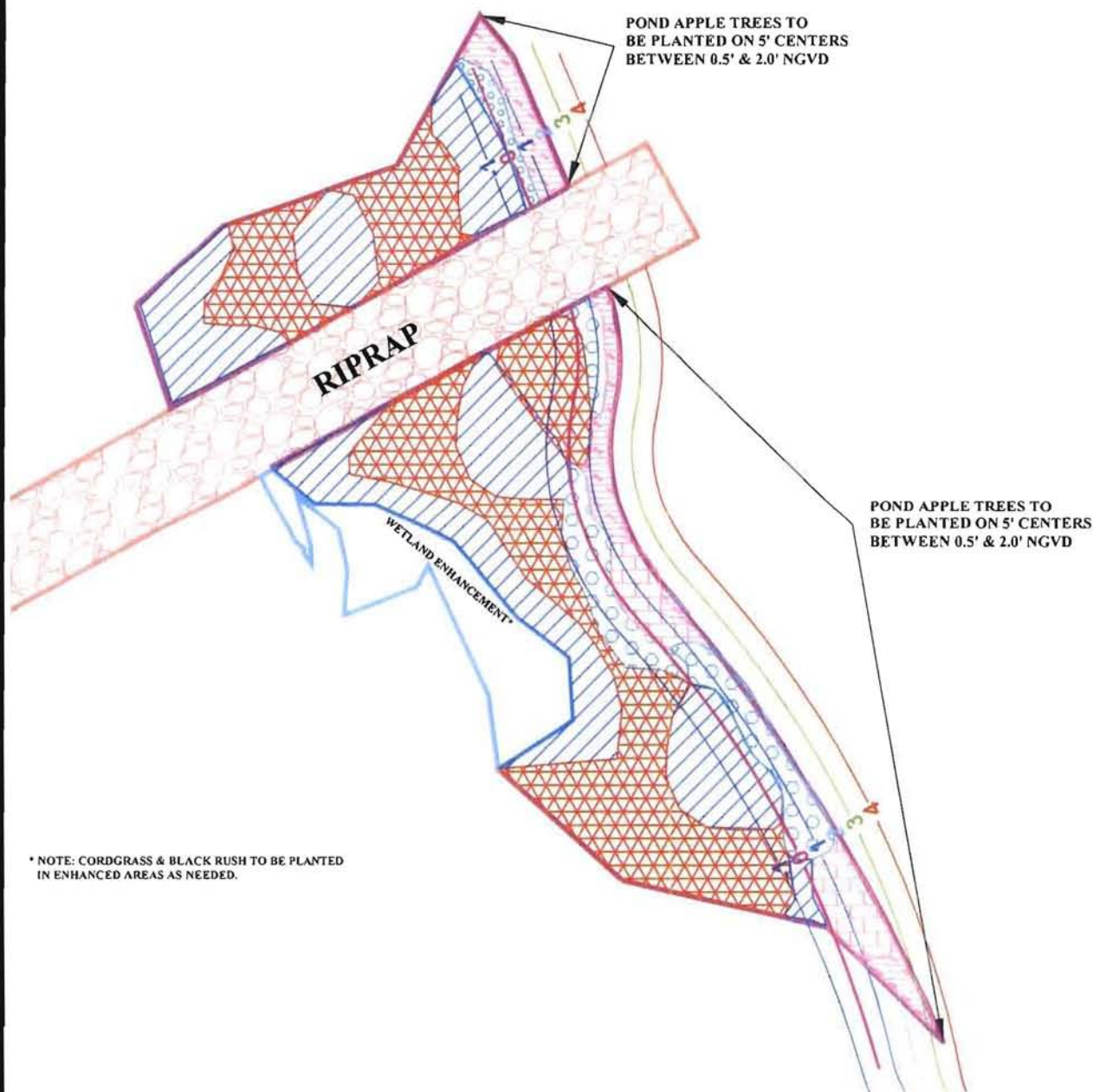
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Engineering Business
No. 639-0007167



SCALE: 1" = 30'



* NOTE: CORDGRASS & BLACK RUSH TO BE PLANTED IN ENHANCED AREAS AS NEEDED.

SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

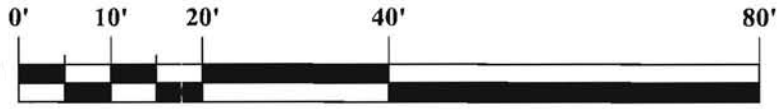
MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 04 - CREATE WET B.DWG	DATE: 14 JANUARY 2010	FIGURE: 4 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN CREATED/ENHANCED WETLAND 'B'					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

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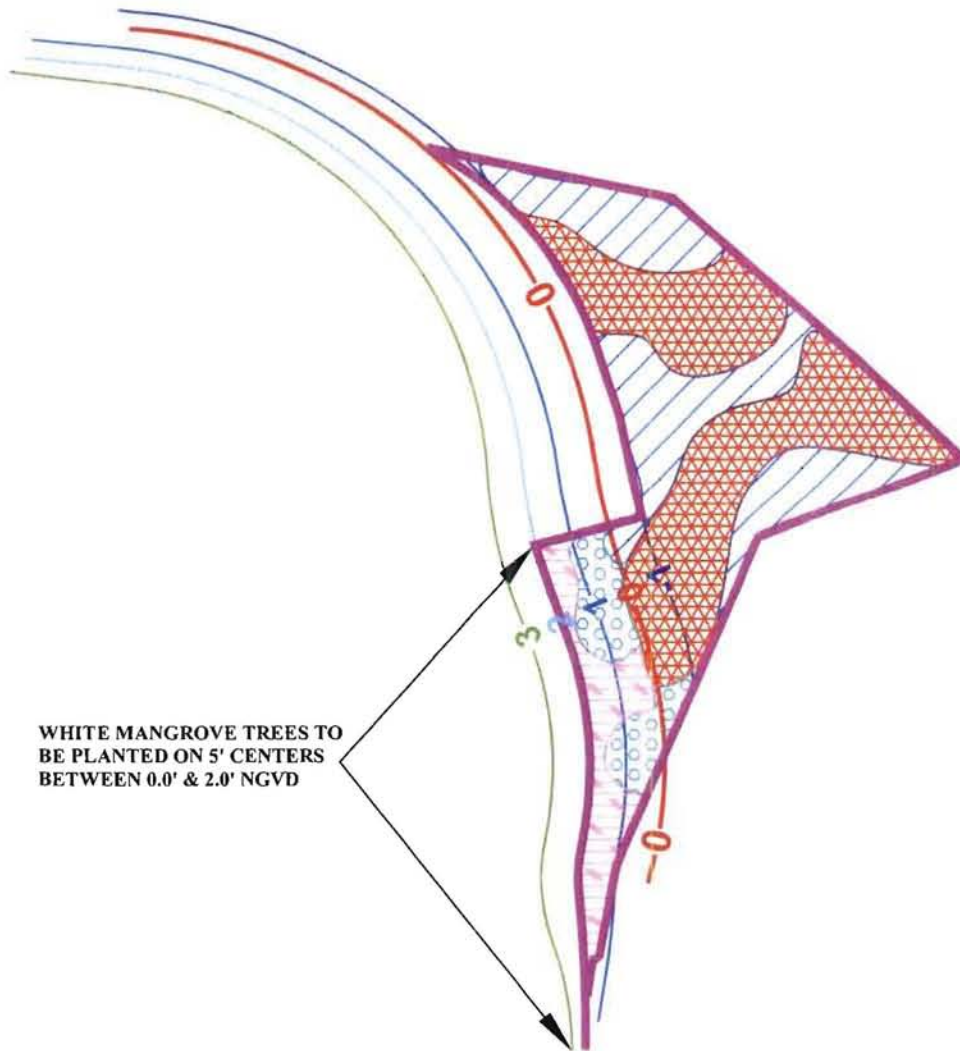
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No. 08-007937



SCALE: 1" = 20'



SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 05 - CREATE WET C.DWG	DATE: 14 JANUARY 2010	FIGURE: 5 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN CREATED WETLAND 'C'					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

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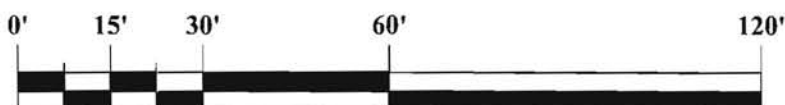
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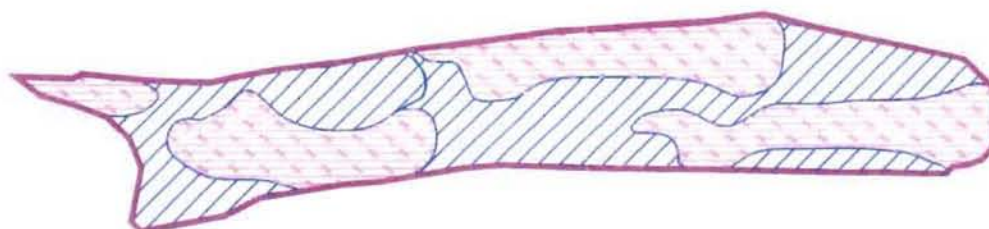


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No. EB-0007037



SCALE: 1" = 30'



NOTE: WETLAND 'D' PROPOSED ELEVATION= 0.0' NGVD

SOURCE: CAPTEC, RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 06 - CR WET D.DWG	DATE: 14 JANUARY 2010	FIGURE: 6 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN CREATED WETLAND 'D'					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

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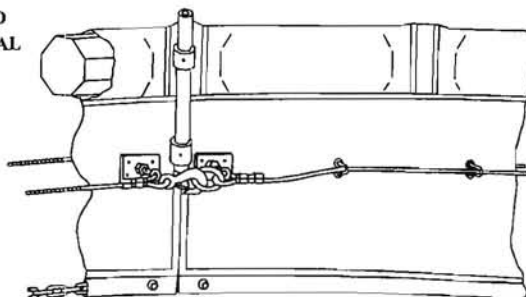


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No. EB-0007657

TURBIDITY CONTROL

SPECIFICATIONS

- FABRIC:** HIGH STRENGTH NYLON REINFORCED VINYL,
HIGH VISIBILITY YELLOW, 22 OZ./YD WEIGHT.
- CONNECTOR:** SNAP HOOKS AND RINGS CONNECT
LOAD LINES WITH SLOTTED REINFORCED
PVC PIPE FOR FABRIC CLOSURE. OPTIONAL
EXTRUDED ALUMINUM CONNECTORS.
- FLOTATION:** 12" EXPANDED POLYSTYRENE OVER
29 LBS/FT BUOYANCY.
- BALLAST:** 5/16" GALVANIZED CHAIN
(1.1 LBS/FT.)
- LOAD LINES:** DUAL 5/16" GALVANIZED WIRE
ROPES WITH HEAVY VINYL COATING.



TURBIDITY CURTAIN

TURBIDITY CURTAINS ARE TO REMAIN IN PLACE FOR A PERIOD OF
TIME NOT LESS THAN SEVEN (7) DAYS AFTER WORK HAS BEEN
COMPLETED AND TURBIDITY LEVELS ARE EQUAL TO OR BELOW
BACKGROUND N.T.U. LEVELS.

NOT TO SCALE

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 07 - TURB CNTRL.DWG	DATE: 14 JANUARY 2010	FIGURE: 7 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN TURBIDITY CONTROL DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

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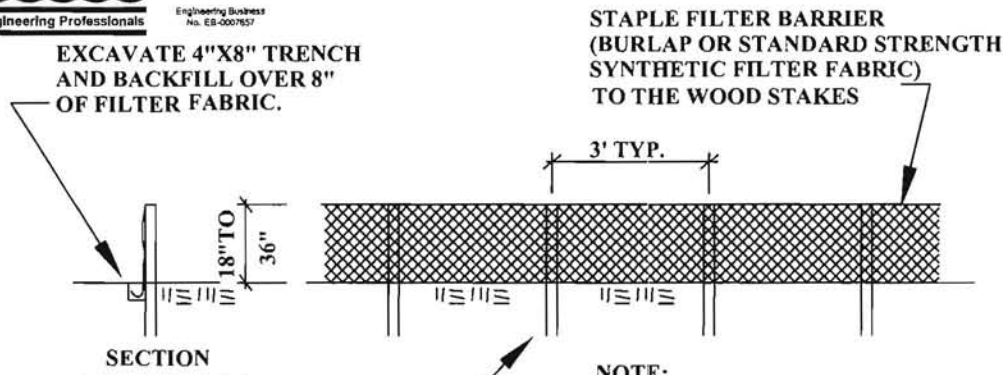
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TURBIDITY FILTER BARRIER

NOT TO SCALE



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3"x3" WOOD STAKE, MIN. DRIVEN 12" INTO GROUND.

NOTE:

- WHEN CONSTRUCTED ACROSS DITCH LINE, THE PLAN CONFIGURATION SHALL RESEMBLE AN ARC WITH ENDS ORIENTED UPSLOPE.
- BURLAP - MIN 10 OZ./SY MATERIAL
- FILTER FABRIC - SYNTHETIC MATERIAL MEETING STD. TESTING VTM-51,52 75% FILTERING EFFICIENCY
- FILTER BARRIERS SHALL BE MAINTAINED UNTIL ALL UPSLOPES HAVE BEEN PERMANENTLY STABILIZED.

FILTER BARRIER

- FILTER BARRIERS SHALL BE CONSTRUCTED AT THE FOLLOWING LOCATIONS TO INTERCEPT AND DETAIN SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION OPERATIONS FROM ENTERING EXISTING WETLANDS, DITCHES, OR RECEIVING WATERS.
 - AT THE PERIMETER OF ALL EXISTING WETLANDS THAT ARE BELOW DISTURBED AREAS WHERE EROSION COULD OCCUR DURING CONSTRUCTION OPERATIONS, AND AT THE LIMITS OF FILL OF EXISTING WETLANDS.
 - AT THE PERIMETER OF ALL INLETS IMMEDIATELY FOLLOWING THE INSTALLATION AND BACKFILLING OF EACH INLET.
 - AT ALL EXISTING DITCHES THAT TRAVERSE THE PROJECT SITE, A FILTER BARRIER SHALL BE CONSTRUCTED AT THE DOWNSTREAM PROPERTY LINE.
 - AT ALL OTHER LOCATIONS DEPICTED ON THE PLANS OR AS REQUESTED IN THE FIELD BY THE PROJECT ENGINEER.
- FLOATING SILT BARRIERS SHALL BE INSTALLED AROUND THE POINT OF DISCHARGE OF THE PROJECT STORMWATER RUN-OFF IN THE INDIAN RIVER. THE BARRIERS SHALL BE REGULARLY CHECKED AND MAINTAINED TO ENSURE ADEQUATE FUNCTION UNTIL ALL PAVEMENT SURFACES ARE COMPLETE AND ALL SWALED AREAS HAVE GRASS COVER.
- SOD ALL AREAS IN LIEU OF SEED AND MULCH THAT ARE PRONE TO CAUSE EXCESSIVE EROSION OF SEDIMENT, INCLUDING AREAS ADJACENT TO CULVERT ENDS, DISCHARGE STRUCTURES, FLUMES, ETC.

SOURCE: RLW

SFWM D APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 08 - TRB FLTR BAR.DWG	DATE: 14 JANUARY 2010	FIGURE: 8 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN TURBIDITY FILTER BARRIER DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

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NOT A SURVEY

NOT TO SCALE



• 301 NW Flagler Ave.
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E-mail: Captect@aol.com
Engineering Business
No. EB-0007637

- PLANT SO THAT TOP OF ROOT BALL IS LEVEL WITH THE FINISHED GRADE
- PAINT ALL CUTS OVER 2" DIA.

2 STRAND TWISTED 12 GAUGE
GAL. WIRE ENCASED IN 1/2" DIA.
RUBBER HOSE

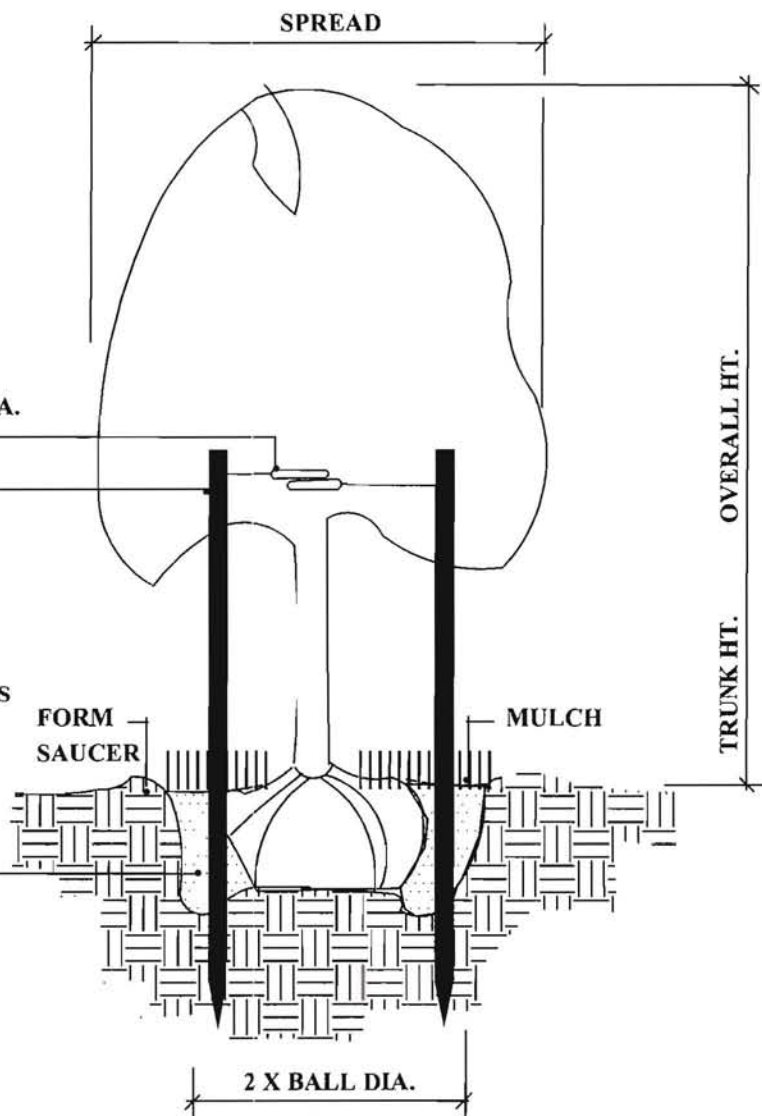
VACUUM IMPREGNATED
SOFTWOOD STAKES
1-3 STAKES 2" DIA.
DRIVE (MIN 36") FIRMLY
INTO SUBGRADE PRIOR
TO BACKFILLING

STAKE ABOVE FIRST BRANCHES
OR AS NECESSARY FOR FIRM
SUPPORT

SPECIFIED PLANTING MIX
WATER & TAMP TO
REMOVE AIR POCKETS

NOTE:

STAKING AS REQUIRED



TREE PLANTING - VERTICAL STAKES

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC. 27	TWP. 37S	R. 41E	RLW JOB NO.: 08-033.02	DRAWING NAME: 09 - TREE PLNTNG.DWG	DATE: 14 JANUARY 2010	FIGURE: 9 OF 14
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'			
DESIGNED BY: FRP				DRAWN BY: FRP			
CHECKED BY:							
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN TREE PLANTING DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net		

EXHIBIT 3.2 Application No. 090128-6 Page 11 of 15

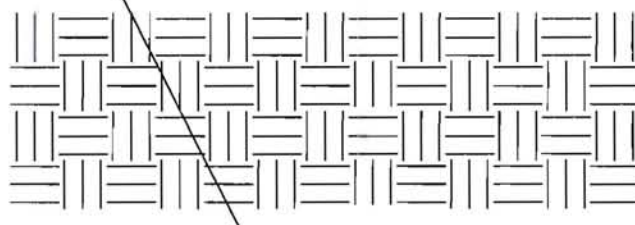
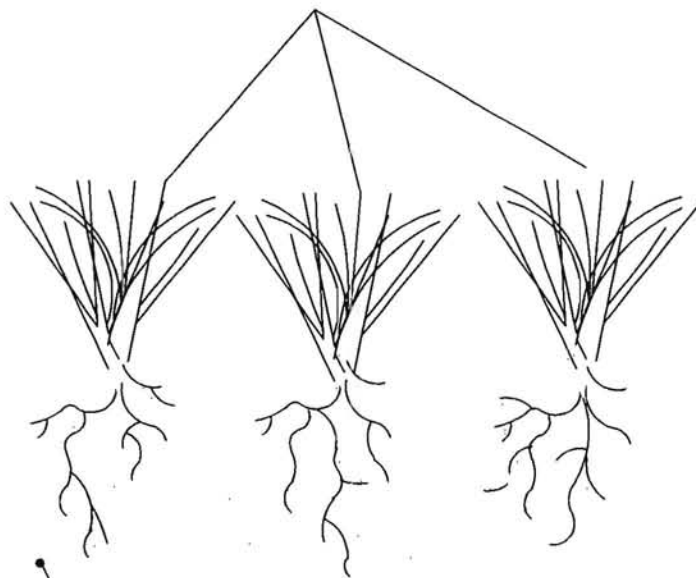
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 Engineering Business
 No. EB-0027657

PLANT SPACING AS PER PLAN



**PREPARE BED AS PER
WRITTEN SPECIFICATION**

GRASS PLANTING DETAIL

NOT TO SCALE

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC. 27	TWP. 37S	R. 41E	RLW JOB NO.: 08-033.02	DRAWING NAME: 10 - GRS PLNT DET.DWG	DATE: 14 JANUARY 2010	FIGURE: 10 OF 14
LATITUDE: N27° 13.395'		LONGITUDE: W080°13.928'			DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:

WARNER CREEK
 STORMWATER QUALITY RETROFIT
 MITIGATION PLANTING PLAN
 GRASS PLANTING DETAIL

R. L. WEIGT
 ENVIRONMENTAL CONSULTANTS, INC.
 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net

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NOT A SURVEY



301 NW Flagler Ave
Stuart, Florida 34994
Phone: (772) 892-4344
Fax: (772) 892-4341
E-mail: Captec1@aol.com
Engineering Business
No. E19-0007657



INSERT BAR AT
ANGLE SHOWN AND
PUSH FORWARD TO
UPRIGHT POSITION.



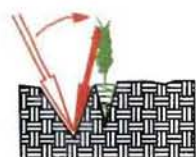
REMOVE BAR AND
PLACE PLANT AT
CORRECT DEPTH.



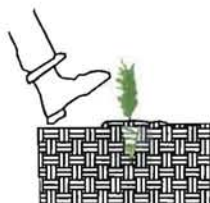
INSERT BAR TWO
INCHES TOWARD
PLANTER FROM THE
PLANT.



PULL BAR TOWARD
PLANTER FIRING
SOIL AT BOTTOM OF
ROOTS



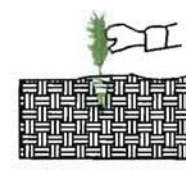
PUSH BAR FORWARD
FROM PLANTER
FIRMING SOIL AT
TOP OF ROOTS.



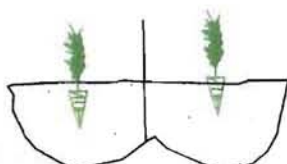
FILL IN LAST HOLE
BY STAMPING
WITH HEEL.



FIRM SOIL
AROUND PLANT
WITH FEET.



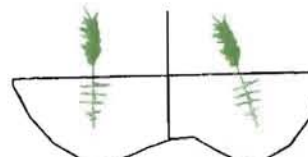
TEST PLANTING BY
PULLING LIGHTLY
ON
PLANTS



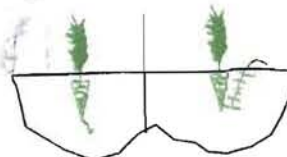
RIGHT WRONG

DON'T EXPOSE
ROOTS TO AIR.

PLANT PLANTS
UPRIGHT - NOT AT
AN ANGLE.



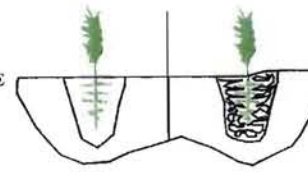
RIGHT WRONG



RIGHT WRONG

DO NOT BEND
ROOTS SO THAT
THEY GROW
UPWARDS
OUT OF THE GROUND.

ALWAYS PLANT IN
SOIL - NEVER LOOSE
LEAVES OR DEBRIS.
PACK SOIL
TIGHTLY.



RIGHT WRONG

PLANTING BARE ROOT PLANTS

NOT TO SCALE

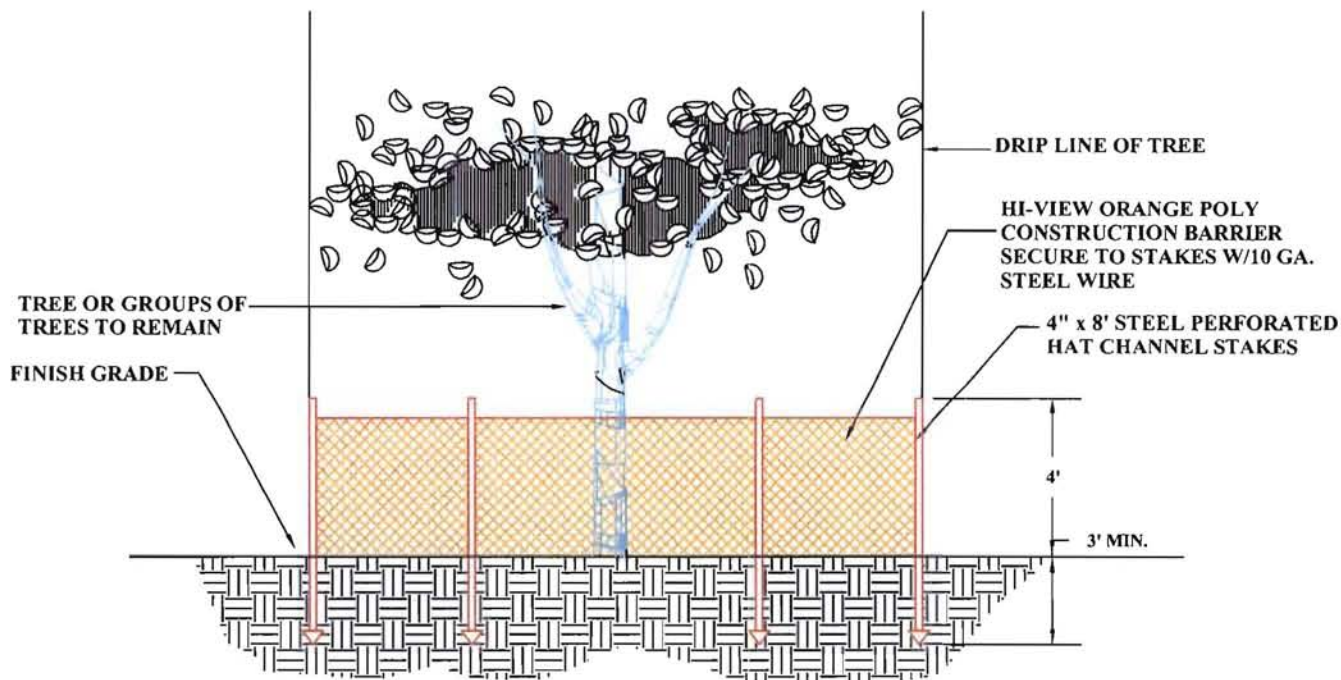
SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 11 - BR RT DET.DWG	DATE: 14 JANUARY 2010	FIGURE: 11 OF 14	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN BARE ROOT PLANTING DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net			

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NOT A SURVEY



NOTE:
NO STOCKPILING OF MATERIALS
TRASH OR DEBRIS SHALL BE
PERMITTED WITHIN THE BARRIER

EXISTING TREE PROTECTION DETAIL

NOT TO SCALE

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 12 - EX TR PROT DET.DWG	DATE: 14 JANUARY 2010	FIGURE: 12 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:

WARNER CREEK
STORMWATER QUALITY RETROFIT
MITIGATION PLANTING PLAN
EXISTING TREE PROTECTION DETAIL

R. L. WEIGT
ENVIRONMENTAL CONSULTANTS, INC.
8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455
PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net

NOT A SURVEY



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Engineering Business
No. EB-0007637

GENERAL NOTES

1. PLANTS NATIVE TO FLORIDA MAY BE SUBSTITUTED FOR THOSE LISTED, ACCORDING TO AVAILABILITY AND SIZE, WITH THE WRITTEN AUTHORIZATION OF THE AGENCIES AND THE ENVIRONMENTAL CONSULTANT.
2. LOCATION OF PLANTS MAY BE FIELD ADJUSTED IN ORDER TO PROVIDE THE BEST GROWING CONDITIONS.
3. PLANT MATERIAL SHALL BE INSPECTED BY THE ENVIRONMENTAL CONSULTANT PRIOR TO INSTALLATION.
4. ALL PLANTS SHALL BE INSTALLED IN HEALTHY AND VIGOROUS CONDITION, AND SHALL BE FREE OF WEEDS, DISEASE, AND INSECT PESTS, EGGS OR LARVAE.
5. CONTRACTOR IS RESPONSIBLE FOR THE PROPER WATERING AND FERTILIZATION OF THE INSTALLED PLANTS FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR.
6. ROOT BOUND CONTAINER PLANTS WILL NOT BE ACCEPTED.

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 13 - GNL NOTE.DWG	DATE: 14 JANUARY 2010	FIGURE: 13 OF 14	
	27	37S	41E					
LATITUDE: N27° 13.395'				LONGITUDE: W080°13.928'		DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN GENERAL NOTE DETAIL					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL: rlwenv@comcast.net			

SCANNED 03/20/2010 13:15:54

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NOT A SURVEY



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E-mail: Captec1@aol.com
Engineering Business
No. 12-0027657

GENERAL NOTES

DEFINITION OF IMPROVED SOIL

IMPROVED SOIL IS DEFINED AS A TOPSOIL MIXTURE COMPRISED OF PEAT AND SAND OR MUCK WITH AN ORGANIC MATTER CONTENT OF FIFTY PERCENT BY VOLUME. OPTIONAL METHODOLOGY: FIVE TO FOURTEEN PERCENT ORGANIC CONTENT BY VOLUME AFTER SIEVED THROUGH A NUMBER TEN SIEVE.

THE IMPROVED SOIL SHALL BE SUITABLE FOR AND CAPABLE OF SUPPORTING WETLAND VEGETATION AND SHALL BE FREE OF EXOTIC OR INVASIVE PLANT SEED SOURCES. ALL IMPROVED SOIL MUST BE APPROVED BY THE PROJECT ENGINEER BEFORE PLACEMENT IN MITIGATION AREAS.

GRADE STANDARDS AND QUALITY

QUALITY OF ALL PLANTS SHALL BE AT LEAST EQUAL TO THAT OUTLINED AS NO. 1 IN GRADES AND STANDARDS FOR NURSERY PLANTS, PART 1, 1963, REVISED EDITION AND PART 1, PALMS AND TREES, BY THE STATE PLANT BOARD OF FLORIDA.

ALL PLANTS SHALL BE SOUND, HEALTHY AND VIGOROUS, WELL BRANCHED, AND DENSELY FOLIATED WHEN IN LEAF. THEY SHALL HAVE HEALTHY, WELL DEVELOPED ROOT SYSTEMS, AND SHALL BE FREE OF DISEASES AND INSECT PESTS, EGGS, OR LARVAE. ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED HEREIN OR INDICATED ON THE CONTRACT DRAWINGS.

TRANSPORTATION AND INSPECTION

PLANT TRANSPORTATION SHALL COMPLY WITH ALL FEDERAL AND STATE REGULATIONS, THEREFORE, AND UPON DELIVERY AT THE SITE, ALL PLANTS SHALL BE INSPECTED BY THE PROJECTS ENVIRONMENTAL CONSULTANT FOR CONFORMITY TO SPECIFICATIONS AND FOR HANDLING DAMAGE. THE CONTRACTOR SHALL PROVIDE THE ENVIRONMENTAL CONSULTANT WITH A 24-HOUR NOTICE BEFORE ANY REQUESTED INSPECTION. REJECTED PLANTS SHALL BE REMOVED IMMEDIATELY FROM THE SITE BY THE CONTRACTOR.

TREES THAT HAVE TO BE TRANSPORTED MORE THAN ONE (1) MILE TO REACH THE PROJECT SITE SHALL BE TREATED WITH "WILT PRUF" AND COVERED WITH A 70% SHADE-CLOTH-TARP OR EQUIVALENT TO PREVENT WIND BURN.

SOURCE: RLW

SFWMD APPLICATION NO. 090128-6

MARTIN COUNTY FLORIDA	SEC.	TWP.	R.	RLW JOB NO.: 08-033.02	DRAWING NAME: 14 - GNL NTS 2.DWG	DATE: 14 JANUARY 2010	FIGURE: 14 OF 14
	27	37S	41E				
LATITUDE: N27° 13.395' LONGITUDE: W080°13.928'					DESIGNED BY: FRP	DRAWN BY: FRP	CHECKED BY:
WARNER CREEK STORMWATER QUALITY RETROFIT MITIGATION PLANTING PLAN GENERAL NOTES DETAIL 2					R. L. WEIGT ENVIRONMENTAL CONSULTANTS, INC. 8985 S.E. BRIDGE ROAD, SUITE A, HOBE SOUND, FL 33455 PHONE: (772) 546-6255 FAX: (772) 546-2316 E-MAIL rlwenv@comcast.net		

02 / 11 / 2009
16:49.54FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
TITLE AND LAND RECORDS SECTION
BOARD OF TRUSTEES LAND DATABASE SYSTEM
WORKSHEET SHORT FORM (FOR INTERNAL DEP USE ONLY)Page 1 of 1
WSMPRT02

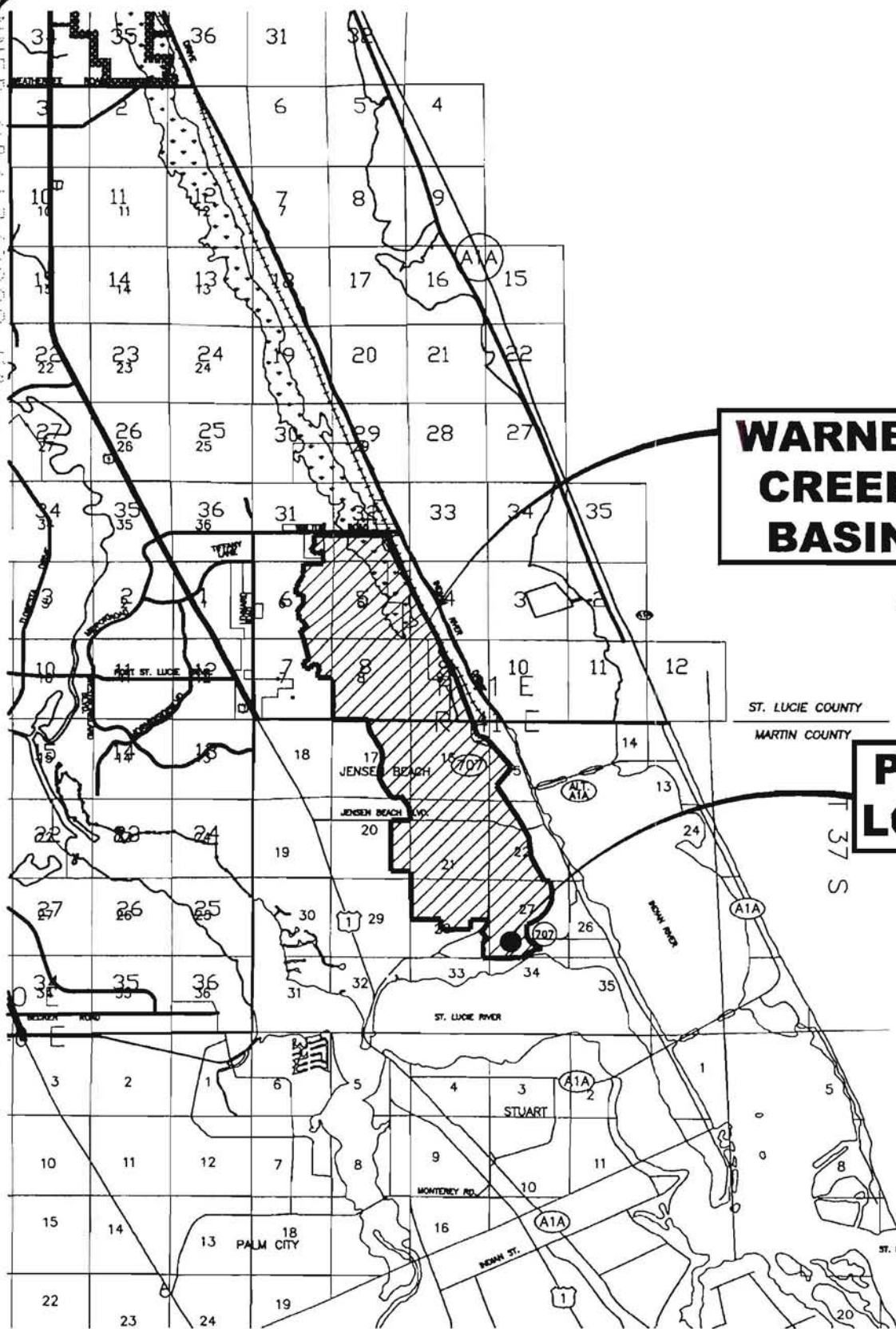
FILE NUMBER: 090128-6
WORKSHEET ID: 86566
COUNTY: MARTIN
APPLICANT: JOSEPH CAPRA, PE, AGENT
COMPANY: BOARD OF COUNTY COMM, MARTIN COUNTY
SITE: BEACON 21 CONDO PHASE II SEWER PLANT (14 NE 14TH CT, STUART
LOCATED @ S SIDE OF RR RWY, WEST OF WARNER CREEK)
TYPE OF ACTIVITY: STORMWATER MGMT IMPROVEMENTS
PROJECT LOCATION: SECTION TOWNSHIP RANGE
27 37S 41E
AQUATIC PRESERVE: N/A
WATER BODY: WARNER CREEK

COMMENTS: RECORDS INDICATE THAT THE SUBMERGED LANDS LYING BELOW THE MEAN HIGH WATER LINE OF WARNER CREEK PRIOR TO ALTERATIONS OF THE NATURAL SHORELINE ARE STATE OWNED AND ARE SUBJECT TO EXISTING ESMT NOS. 00209(4048-43), 29057(4401-43), AND 29463(4714-43). HOWEVER, BASED ON AVAILABLE INFORMATION WE ARE UNABLE TO DETERMINE WHETHER THE SUBMERGED LANDS OF THE CREEK WITHIN THE VICINITY OF THE PROPOSED ACTIVITY ARE STATE OWNED. THEREFORE, WE RECOMMEND THAT PROPRIETARY REQUIREMENTS NORMALLY APPLIED TO STATE OWNED LANDS NOT APPLY TO THIS PROJECT.

✓

PREPARER:
DATE PREPARED: 02 / 11 / 2009

NOTICE: THE CONCLUSIONS AND DETERMINATIONS SET FORTH IN THIS TITLE WORKSHEET ARE BASED ON A REVIEW OF THE RECORDS CURRENTLY AVAILABLE WITHIN THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AS SUPPLEMENTED, IN SOME CASES, BY INFORMATION FURNISHED BY THE REQUESTING PARTY. SINCE THE ACCURACY AND COMPLETENESS OF THE TITLE INFORMATION REVIEWED MAY VARY, THE CONCLUSIONS AND DETERMINATIONS SET FORTH HEREIN DO NOT CONSTITUTE A LEGAL OPINION OF TITLE AND SHOULD NOT BE RELIED ON AS SUCH.



**WARNER
CREEK
BASIN**

*Atlantic
Ocean*

ST. LUCIE COUNTY
MARTIN COUNTY

**PROJECT
LOCATION**

EXHIBIT 1

Application# 090128-6
Page 1 of 1



• Joseph W. Capra
301 N.W. Flagler Ave
Stuart, Florida 34994
P.E. No. 37638
Phone: (772) 692-4344
Fax: (772) 692-4344

Engineering Business
No. EB-0007857

DATE: 07-19-07
DRAWN BY: DHR
DESIGNED BY:
CHECKED BY: JWC
PROJECT No.: 830.6
HORIZ. SCALE: N.T.S.
VERT. SCALE: N.T.S.
CADD FILE:

**WARNER CREEK
STORMWATER QUALITY RETROFIT
MARTIN COUNTY, FLORIDA**
**EXHIBIT 1
LOCATION MAP**

**SCALE
VERIFICATION**
0" = 1" AS SHOWN
SOLID BAR IS EQUAL TO
HALF AN INCH ON ORIGINAL
DRAWING. ADJUST ALL
SCALED DIMENSIONS
ACCORDINGLY

Sheet No. 1 of 1

South Florida Water Management District
Work Schedule Requirements

Application No : 090128-6

Page 1 of 1

Mitigation Plan ID: WARNER CREEK

Activity	Due Date
SUBMIT TIME ZERO MONITORING REPORT	02-NOV-10
SUBMIT FIRST MONITORING REPORT	02-NOV-11
SUBMIT SECOND MONITORING REPORT	02-NOV-12
SUBMIT THIRD MONITORING REPORT	02-NOV-13
SUBMIT FOURTH MONITORING REPORT	02-NOV-14
SUBMIT FIFTH MONITORING REPORT	02-NOV-15

Exhibit No : 5

STAFF REPORT DISTRIBUTION LIST

WARNER CREEK STORM WATER QUALITY RETROFIT

Application No: 090128-6

Permit No: 43-02364-P

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- X Ryan Bond
- X Hugo A. Carter, P.E.
- X Melinda Parrott
- X A. Bain
- X A. Waterhouse
- X D. Loving
- X ERC Martin/St. Lucie
- X Permit File

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- X Agent - Captec Engineering, Inc
- X Engr Consultant - Captec Engineering, Inc

GOVERNMENT AGENCIES

- X Div of Recreation and Park - District 7 - FDEP
- X Martin County - County Administrator
- X Martin County - Growth Management Department
- X Martin County Board of County Commissioners
- X Martin County Engineering Dept. - Don G. Donaldson, P.E.