Hills SELF
Op Permit

JONES EDMUNDS

July 15, 2008

Mr. Albert Gagne
Florida Department of Environmental Protection
Southwest District
Environmental Resource Management
13051 Telecom Parkway
Temple Terrace, Florida 33637-0926

RE: Hillsborough County Southeast County Landfill
Facility Final Build-Out Conceptual Environmental Resource Permit Application
Response to Request for Additional Information
File No. 29-0270881-004

Dear Mr. Gagne:

On behalf of the Hillsborough County Solid Waste Management Department (SWMD), Jones Edmunds is pleased to submit six originals of the response to the Conceptual Environmental Resource Permit application request for additional information dated May 29, 2008 for the Southeast County Landfill. In addition, six full-size drawing sets of the revised drawings referenced in the response are enclosed.

Please feel free to contact us at (813) 258-0703 if you have any questions.

Sincerely,

Jason Timmons, P.E.
Project Engineer

Jeffrey D. PeQueen, P.E.
Project Engineer

Enclosure

xc: Patricia V. Berry, SWMD
Megan Miller, SWMD
Larry Ruiz, SWMD
Susan J. Pelz, FDEP
Ron Cope, HCEPC

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Dept. of Environmental Protection

JUL 16 2008

Southwest District

324 South Hyde Park Avenue
Suite 250
Tampa, FL 33606

813.258.0703 Phone
813.254.6860 Fax
www.jonesedmunds.com

SOUTHEAST COUNTY LANDFILL FACILITY FINAL BUILD-OUT CONCEPTUAL ENVIRONMENTAL RESOURCE PERMIT APPLICATION

RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

Submitted to:

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
13051 North Telecom Parkway
Temple Terrace, Florida 33637-0926

Prepared for:

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
601 East Kennedy Boulevard, 24th Floor
County Center
Tampa, Florida 33601

Prepared by:

JONES EDMUNDS & ASSOCIATES, INC.
324 S. Hyde Park Avenue, Suite 250
Tampa, Florida 33606

JONES EDMUNDS
ENGINEERS | ARCHITECTS | SCIENTISTS

July 2008

SOUTHEAST COUNTY LANDFILL
FACILITY FINAL BUILD-OUT
CONCEPTUAL ENVIRONMENTAL
RESOURCE PERMIT APPLICATION

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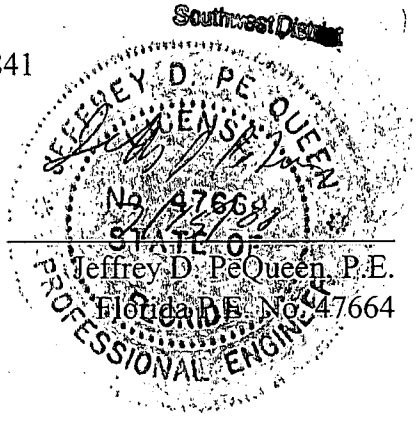
Certificate of Authorization #1841

July 2008



Jeffrey D. PeQueen, P.E.
Florida P.E. No. 47664

SOUTHEAST COUNTY LANDFILL
FACILITY FINAL BUILD-OUT
CONCEPTUAL ENVIRONMENTAL
RESOURCE PERMIT APPLICATION

RESPONSE TO FDEP
REQUEST FOR ADDITIONAL
INFORMATION

Permit No.: **29-0270881-004**

July 2008

The following information is provided in response to the Florida Department of Environmental Protection (FDEP) request for additional information prepared by Douglas Hyman dated May 29, 2008 and received on May 30, 2008. Information is provided in the order requested in the referenced correspondence. In each case the FDEP request is repeated with the response immediately following.

TABLE OF CONTENTS

RESPONSES TO COMMENTS

Part I - Stormwater:

Comment 1: Please clarify whether Basin H contains the 2 acre existing Storage Tank Area (STA) including the new 575,000 gallon storage tank addition and new paved STA perimeter road to be authorized under pending FDEP ERP No. 29-0270881-003. Please refer to Application Section E, Part III Item F.

Response 1: The "Basin H" designation was used because it is what was used under the original MSSW permit issued for the site and refers to a small 0.12-acre area. The STA and its appurtenances are broken into multiple smaller sub-basins, e.g. LTF-1, LTF-2, etc. as they were under FDEP ERP No. 2909270881-003. The names and areas are slightly different due to revised grading but they include this area – all of which drains to Basin C.

Comment 2:
a. Table 4.1 indicates a difference of about 0.5' head in wetland mine cut (MC) #2 and greater than 0.5' head differential in MC3. Therefore –
b. Do the hydraulic modeling results provide reasonable assurance that the hydro-periods of MC Nos. 1, 2, 3 will not be adversely affected by the proposed project should it be authorized under future ERP construction permits. Please refer to BOR CH 3.2.2.4.

Response 2a: The head differentials occur only for a limited time immediately following large storm events.

Response 2b: The stormwater system was specifically designed to avoid adversely impacting the hydroperiods of the various mine cuts. To accomplish this, the overflow elevations from each of the three mine cuts have not been modified. No changes have been made to the existing discharge culverts for Mine Cuts 1 and 2, and the proposed new control structure for Mine Cut 3 has the same 110.1 overflow elevation as the existing system. Maintaining the existing discharge elevations ensures that the normal water level and seasonal high water levels of the mine cuts will remain unchanged. In addition, since the littoral regions within the mine cuts are extremely limited, the head differentials would not impact the littoral vegetation.

Comment 3
a. Basin A evidently currently discharges to the Creek which is presumably an other surface water or a wetland. Please comment on the decommissioning and reclamation procedure of those elements of Basin A which under the proposed conditions will be phased out, and comment on the measures that will be in place and maintained in order to prevent any adverse impacts to the creek from sedimentatious or turbid water discharges. Please refer to Application Section E, Part III Item P.
b. Basin D currently discharges to mine cut No. 3, but under the proposed conditions, will it discharge into the Creek? Please comment on whether any adverse impact to the Creek or to the mine cut will eventuate. Please refer to BOR CH 3.2.2.4.

Response 3a: The existing discharge culvert from Basin A will be grouted, i.e. filled, before any excavation or grading work begins inside Basin A. Therefore, there is no concern of *"sedimentatious or turbid water discharges."* There should also be no concern over effects of possible dehydration impacts to the creek from removing the Pond A1 (pre-development Basin A) discharge and re-routing it through Pond A2. The pre-development contributing drainage area to Basin A is only 5.8 acres. This is less than 1% of the area contributing drainage to the part of the creek where Basin A currently discharges. The removal of this discharge will present a negligible difference in the total stormwater discharged to this portion of the creek.

Response 3b: Basin D does not currently discharge to Mine Cut 3, but rather directly to the creek through its control structure (and potentially through its emergency overflow weir). The proposed design re-routes the discharge from Basin D directly to Mine Cut 3, which then discharges through the polishing ponds and then ultimately back to the same creek to which the existing pond discharges. Neither water body will be adversely impacted. On the contrary, the additional "polishing" or "cleaning" of the discharge over and above what is required will help protect the receiving waters.

Comment 4: Were pre vs. post drainage patterns provided? Please refer to Application Section E, Part III, Item I.

Response 4: Due to the large amount of data on the plans, the pre-development and post-development drainage patterns are shown on different plans. Figure 2.0 provided in the application details the pre-development patterns. Drawings Number 6 and 7 in the plan set detail the post-development drainage patterns. Additional drainage arrows have been added to these drawings to further clarify the patterns. The revised Drawings 6 and 7 are provided in Attachment 1.

Comment 5: How will stormwater enter Basin J? Is Basin J permitted by the FDEP BOMR, because it is a borrow pit? Is Basin J an other surface water? Will Basin J be used as a borrow pit? If so, will all materials remain on site and none exported off-site? Please refer to Application Section E, Part III, Item G, Part IV, Item C.

Response 5: Stormwater enters Basin J through a combination of open channels and cross-drains that will collect drainage from approximately one-half of the CEA and convey it into Basin J. These elements are represented in the ICPR model based on our best available data. The specific elevations and dimensions will be developed in conjunction with the design of the perimeter roadway that will extend along the base of the CEA. When future construction permit applications are submitted for those areas, the roadway and the adjacent channel and pipes will be included in that design. Plans submitted under that future application will thus provide the necessary construction details. For now, the drainage arrows shown on the construction plans would seem to be sufficient to convey the intent of carrying stormwater to Basin J.

The Capacity Expansion Area, which includes the area of Basin J, is currently used as a soil borrow area for site operations and is operated under the current solid waste and ERP permits. The soil is used onsite only, and is not exported for offsite use.

Comment 6: In the conceptual project area, please locate all landfill cells that are proposed, currently in operation or which have been closed. Please refer to Application Section E, Part III, Items L &R.

Response 6: Phases I-VI and the Capacity Expansion Area Sections 7 and 8 are the currently active cells. Section 9 has recently been constructed and is in the process of obtaining operations approval with FDEP. The remaining sections of the CEA, including Sections 10, 11, and 12, are future Class I Landfill sites. None of the areas shown are currently closed. The revised Drawings 6 and 7 are provided in Attachment 1.

Comment 7: Please clarify what material will be stored in the material storage area on the sheet No. 6. Please refer to Application Section E, Part III, Item L.

Response 7: The material storage area will include piping, geosynthetic material, gravel, and other items for operation and construction of the landfill site.

Comment 8: Will there be a citizen's convenience center? Please refer to Application Section E, Part III, Items L.

Response 8: No citizen's convenience center is proposed in the area under the Conceptual ERP.

Comment 9:
a. Please indicate what SWMS will serve the existing tire area in Basin B. Please provide drainage arrows.
b. Please indicate what SWMS will serve the CEA and provide drainage arrows. Please refer to Application Section E Part III, Item I & O.

Response 9a: The existing tire area is not included in the Conceptual Design for this ERP. The tire area will be replaced by Sections 11 and 12 in the final build-out. The existing tire area currently drains to Basin D.

Response 9b: Additional drainage arrows have been added to Drawings 6 and 7 to further clarify the CEA drainage. Additionally, a table has been added to these plans to specifically define all of the sub-basins draining to each pond. The revised drawings are provided in Attachment 1.

Comment 10: Please clarify whether the existing holding basin, main leachate pump station and existing effluent/leachate storage pond have a SWMS. Please refer to Application Section E, Part III, Item O.

Response 10: The holding basin, main leachate pump station, and effluent/leachate storage pond have an SWMS associated with them which drains to Pond C and Basin D. These areas are permitted under MSSW Permit No. 100330.

Comment 11: Portions of the project appear to be located in the 100-year flood plain. Therefore, please follow the protocol referenced in Application Section E, Part III, Item D.

Response 11: Figures 2.4 and 2.5, in the original application, provide the current approved 100-Year Floodplains and those currently proposed by Hillsborough County (but as of yet not approved by FEMA), respectively. These figures were provided for information only. This project is not located in a known floodplain, therefore, the protocol referenced in Application Section E, Part III, Item D is not applicable.

Comment 12: Please provide the CA to Basin "Sed" 2, 3, and 4 if you have this information. Otherwise it can be taken up again during the construction permitting process.

Response 12: Please refer to Table 4.2 in the original application for all of the pre-development and post-development drainage basins and areas – including Sed2, Sed 3, and Sed 4.

Comment 13: Please provide the PONDS analysis for the other Basins. PONDS was only provided for Basin B pre. Please refer to BOR CH 5.2.c.2.

Response 13: To provide starting water elevations that are accurate as possible, the PONDS model was originally used to model "pre-storm" loading, antecedent conditions, and the drawdown percolation capabilities of the pre-development basins. This allowed the pre-development ICPR model to reflect the fact that the basins were likely not dry but rather partially full of water when the 25-yr, 24-hr design storm started. To alleviate any possible question about PONDS parameters (and to inject an even more conservative safety factor into the design), we have revised the pre-development analysis and model to assume all of the basins (except Basin C) have starting water elevations at their bottoms, i.e. all of the basins are dry when the storm starts. Basin C was recently permitted under ERP 29-0270881-001 to have an initial water elevation of 130.4. We have maintained this elevation in this current design as well. By removing the PONDS analyses on the other Basins, we are modeling the pre-development condition to have the maximum available storage for attenuation in the Basins. This results in greater attenuation in the Basins and therefore lower discharge rates. Even with this conservative approximation, our proposed site will discharge a lower peak discharge rate to the ultimate NPDES discharge point than did the pre-development site.

Accordingly, PONDS information is not included in this response as it has been removed from the project. The revised existing condition ICPR models are provided in Attachment 2, as is a revised Table 4.1 from the original calculations documenting the revised existing water elevations and discharge rates when no percolation is assumed for the existing conditions.

Comment 14: No comment provided.

Comment 15: Why is the design SHWT elevation for POND D not set at 110.1', if the mine cut receiving water is at 110.1' ngvd? How can the Pond B permanent pool volume from 106 to control elevation be claimed for credit, if the gradient is from mine cut 3 to Basin D since is pre-dev. SHWT elevation estimated at 106? Please refer to BOR CH 5.2.a.

Response 15: Please note that the reference to Pond B in the DEP comment was assumed to be a reference to Pond D; therefore this response focuses only on Pond D.

As explained in Section 3.4 of the Engineering Report included in the original application, the design SHWT in Basin D is set at 110.75 to allow for minimal head loss and potential as-built deviations in its outfall conveyance system. Because the design high water level in Basin D can be allowed to stage fairly high, it is not as critical (as it usually is for most ponds) to force the design SHWT as low as possible. The pond could be designed with a 110.1 control elevation to match the normal water level of 110.1 in Mine Cut 3 if necessary. Doing that would, however, not allow any margin for error in the as-built conditions, e.g. if the control structure bleed-down weir is installed an inch or two lower than design or if the control in Mine Cut 3 is installed an inch or two too high. Choosing the 110.75 simply allows for an additional safety factor – with no apparent costs.

As described in the original submittal, Basin D is likely to experience some infiltration and will probably operate with a normal water level lower than the 110.75 estimated in the design. If it does, that does not in any way diminish its effectiveness as a stormwater pond – it simply means that the pond has even additional storage over and above the required 1 inch of treatment provided above the 110.75 design elevation. There is no volume claimed for credit below elevation 110.75. All of the required 1 inch of treatment volume is provided between elevations 110.75 and 111.75, with no credit taken for any volume below this.

Comment 16: What will become of the Basin E underdrain system?

Response 16: Basin E receives fairly clean runoff and appears to be functioning fine with its existing underdrain system. It has functioned for 20 years+/- and no changes are proposed to Basin E as part of this CERP.

Comment 17: How will the project re-hydrate the two severely dehydrated bald cypress wetlands?

Response 17: The two bald cypress wetlands are north of an existing east-west upland-cut drainage. All proposed activities are south of this drainage and no impacts to the cypress wetlands are proposed. All mitigation activities are either south or west of the upland-cut drainage; therefore, no restoration or enhancement activities are proposed at the cypress wetland locations.

Comment 18: Please provide if you have not already done so, a master develop plan. Please refer to Application Section E, Part III, Item W.

Response 18: The Conceptual ERP plans and report provided with the original application are intended to serve as the master development plan.

For Planning Purposes:

Comment 1: A comprehensive geotechnical workup will be required in the footprint of each element of the SWMS for construction permitting purposes.

Response 1: The comment is noted.

Comment 2: Table 4.2 has post CA to Basin C at 6.7 (may be a typographical error) acres, but pending ERP No. 29-0270881-003 has it at app. 61.7 acres.

Response 2: Under pending ERP No. 29-0270881-003, the total drainage area to Basin C is 61.7 acres. Under this application the total drainage areas to each of the Basins are broken down into multiple smaller sub-basins. The 6.7 acres is the sub-basin draining directly to Basin C and does not reflect the other small sub-basins that also drain to Basin C.

Comment 3: The construction permit application may require a capacity assessment of the existing RIB to handle additional dewatering over and above what was permitted by ERP No. 29-0270881-001. Please refer to Application Section E, Part III Item T.

Response 3: The comment is noted.

Comment 4: Pond D may require a time-stage node in mine cut No. 3 for the construction permit phase. Basin J may require a time-stage node in mine cut No. 2 for the construction permit phase. Basin C may require a time-stage node in mine cut No. 1 for the construction permit phase. Basin B may require a time-stage node in mine cut No. 1 for the construction permit phase.

Response 4: It is understood that detailed ICPR models will be required for each construction phase.

Comment 5: Please check all tables and the ICPR for consistency. For example, Pond B Strs. B1 and B2 on DWG 9 at 126.5', but DWG 21 table has 126.3'.

Response 5: The inconsistency noted has been corrected. We have re-checked all tables, models, and plans accordingly. The Revised Drawings 9 and 21 are provided in Attachment 1.

Comment 6: What avenues will the applicant pursue to mitigate any adverse impacts from the project should the hydrology change through phenomena such as long-term SHWT rise (effect might be loss of ground water through the apertures in the wet pond control structures, or short-circuiting of water quality treatment volume in dry ponds, or collection basins E, F, G & H rendered relatively ineffectual since they are assumed to be dry basins even during the wet season), or mine cut water level rise (tail water might inhibit pond recoveries, etc.)

Response 6: If an adverse impact occurs due to a change in hydrology, the impact will be evaluated and an impact correction plan will be drafted, reviewed, and implemented.

Comment 7: For planning purposes, the department recommends that the CN for landfill cells at closure be $\geq$ 95.

Response 7: The comment is noted.

Part I - Wetlands:

Comment 1: Please flag the wetland jurisdictional lines for staff review. If the applicant does not wish to formalize any specific wetland lines please remove them from the project drawings. Once the lines are verified onsite they should be shown on the revised survey. Refer to Chapter 62-340 F.A.C.

Response 1: All jurisdictional wetland lines have been flagged and recorded with a sub-meter GPS. An on-site wetland verification walk-through was conducted June 24, 2008 with Greg Nieboer in the FDEP Tampa office. All wetland lines have been verified and the revised maps and figures are provided in Attachment 3. In addition, Drawings 6, 7, and 12 have been revised to reflect the approved wetlands lines. These drawings are provided in Attachment 1.

Comment 2: Figure 6.1 delineates the north and south upland mitigation areas and the wetland boundaries. Based on the drawings it appears that the uplands are within the limits of the wetland boundary. Please explain. Please refer to Application Section E, Part II.

Response 2: The upland mitigation areas are adjacent to the wetland areas and not within the wetland boundary limits. Figure 6.1, provided in Attachment 3, has been revised to clarify the upland mitigation areas sharing a common boundary with the adjacent jurisdictional wetlands.

Comment 3: Please show the location of the seven control structures on a plan view drawing and an aerial drawing. Please refer to Application Section E, Part III.

Response 3: The seven control structure locations are highlighted in the drawing provided in Attachment 4.

Comment 4: Please define "NWL" as seen on sheet 16, 16A, and 16B of the project drawings. Does this stand for Normal water level? Does NWL represent the treatment volume or the ground water table? Please refer to Application Section E, Part III.

Response 4: Yes, "NWL" stands for "Normal Water Level" and does reflect the normal high groundwater level – not any sort of treatment level.

Comment 5: Please show the ground water/normal pool, ordinary high, and ordinary low water levels on the cross sectional drawings for the four of the polishing ponds. Provide reasonable assurance that the polishing ponds will maintain the appropriate hydrology for the wetland creation. Please refer to Application Section E, Part III.

Response 5: Wetland Creation Areas Sed 6, Sed 7, and Final Sed have been removed from the proposed wetland creation mitigation plan.

The pool elevations for Sed 5 are provided on Drawing 16B. Additional information for Sed 5 is provided in Response 6 below. The limits of the proposed mitigation area are defined by the control elevation set at 105.0 feet NGVD. This elevation is approximately three feet above the proposed grade within the Sed 5 polishing pond. Although the water levels (depth) would be subject to seasonal variation, the proposed mitigation area would maintain appropriate hydrology throughout the year. Therefore, the proposed wetland creation area would remain inundated or saturated and would be consistent with the hydroperiods of freshwater marsh and/or shallow water pond systems in the region.

Comment 6: Provide a planting plan for the wetland creation areas (polishing ponds). Please refer to Application Section E, Part II.

Response 6: The following tables summarize the potential wetland creation area and mitigation planting plan for pond Sed 5. Wetland Creation Areas – Sed 6, Sed 7, and Final Sed have been removed from the proposed wetland creation mitigation plan.

Potential Wetland Creation Area			
Pond Identification	**Control Elevation**	**Wetland Acres (below control elevation)**	**Total Herbaceous Units required for Mitigation Planting**
Sed 5	**105**	**2.8**	**13,552**

Wetland Mitigation Planting Plan	
Wetland Species	**Herbaceous Units required for Mitigation Planting**
Scirpus californicus* or *S. validus	2,710
Thalia geniculata	2,033
Sagittaria lancifolia	2,033
Pontederia cordata	2,033
Iris hexagona	1,355
Nuphar lutea	1,355
Nymphaea odorata	2,033
TOTAL	**13,552**

The Sed 5 wetland creation mitigation plan consists of a wetland vegetative cover (both plantings and natural recruitment) of the littoral areas below the identified control elevation – 105 (Figure 6.1 and DWG No. 12). Desirable herbaceous wetland species including bulrush (*Scirpus californicus* or *S. validus*) fire flag (*Thalia geniculata*), arrow-head (*Sagittaria lancifolia*), pickerelweed (*Pontederia cordata*), prairie iris (*Iris hexagona*), spatterdock (*Nuphar lutea*), and water lily (*Nymphaea odorata*) will be planted on 3-foot centers to establish desirable native species and to minimize establishment of exotic or nuisance species. Substitution of similar wetland vegetation is allowed with prior approval. All wetland species will be at least 4-inch pot minimum or equivalent. In addition, no individual plant species will exceed 33% of the required planting units without prior authorization (i.e., individual species cannot exceed 4,473 units).

The wetland mitigation planting plan described above is provided on Drawing 2 in Attachment 1.

Comment 7: The Department is in receipt of the UMAM information. Please contact Greg Nieboer at 813-632-7600 ext. 360 to set up a site inspection to verify the UMAM information and to verify the wetland jurisdictional lines. Refer to Chapter 62-345 F.A.C.

Response 7: An on-site wetland and UMAM verification was conducted on June 24, 2008 with Brian Lane of Jones Edmunds and Greg Nieboer of the FDEP Tampa office. Jones Edmunds is currently working with FDEP to revise the UMAM worksheets based on the wetlands verification site visit. The revised worksheets will be submitted under separate correspondence to FDEP when completed.

ATTACHMENT 1

REVISED DRAWINGS

11x17 Sheets of the revised Drawings are provided in this Attachment.

Full-Size Signed and Sealed Drawings are bound and provided separately.

GENERAL NOTES

1. SURVEY WAS PROVIDED BY PICKETT AND ASSOCIATES, INC. DATED JANUARY 2008. FOR SURVEY INFORMATION SEE SURVEYORS NOTES.

2. ANY NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD29) MONUMENT WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY:

   FLORIDA STATE GEODETIC ADVISOR

   RONNIE L. TAYLOR
   NOAA, NATIONAL GEODETIC SURVEY
   NATIONAL OCEAN SERVICE ADVISOR
   C/O BUREAU OF SURVEYS AND MAPPING, FLDEP
   3900 COMMONWEALTH BLVD, MAIL STOP 105
   TALLAHASSEE, FL 32399

   TELEPHONE: (850)245-2610
   FAX: (850)245-2545
   E-MAIL: Ronie.Taylor@noaa.gov

   IN THE EVENT THAT MR TAYLOR IS UNAVAILABLE, CONTACT:

   ASSISTANT GEODETIC ADVISOR

   RANDY WEGNER
   NOAA, NATIONAL GEODETIC SURVEY
   ASSISTANT NATIONAL OCEAN SERVICE ADVISOR
   BUREAU OF SURVEYS AND MAPPING
   3900 COMMONWEALTH BLVD, MAIL STOP 105
   TALLAHASSEE, FL 32399

   TELEPHONE: (850)245-2606
   E-MAIL: Randy.Wegner@dep.state.fl.us

3. THE CONTRACTOR SHALL PROVIDE A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA TO ESTABLISH THE CONSTRUCTION SITE LAYOUT, PERFORM TOPOGRAPHIC SURVEYS, AND PERFORM ALL OTHER REQUIRED SURVEYING SERVICES.

4. CONSTRUCTION MONUMENTS FOR VERTICAL AND HORIZONTAL CONTROL HAVE BEEN PROVIDED AT THE PROJECT SITE. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THESE MONUMENTS TO THEIR OWN SATISFACTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROPER VERTICAL AND HORIZONTAL ALIGNMENT OF CONSTRUCTED FACILITIES AND FINISHED GRADE.

5. LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY, PRIOR TO CONSTRUCTION, THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES (WHETHER OR NOT SHOWN ON THE PLANS) AFFECTING THEIR OWN WORK.

6. THE CONTRACTOR SHALL VERIFY ALL CLEARANCES PRIOR TO CONSTRUCTION.

7. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.

8. FIELD CONDITIONS MAY NECESSITATE SLIGHT ALIGNMENT AND GRADE DEVIATION OF THE PROPOSED CONSTRUCTION TO AVOID OBSTACLES, AS ORDERED BY THE ENGINEER. THE CONTRACTOR SHALL CONSTRUCT THE PROPOSED FACILITIES TO THE ORDERED DEVIATION WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.

9. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY COMPANIES IN ORDER TO PERMIT THE LOCATION OF EXISTING UNDERGROUND UTILITIES IN ADVANCE OF CONSTRUCTION. CONTACT SUNSHINE STATE ONE CALL AT 1-800-432-4770.

10. THE CONTRACTOR SHALL BE AWARE THAT THERE MAY BE SOME UTILITY CONFLICTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT ANY AND ALL EXISTING UTILITIES ON THIS PROJECT WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.

11. THE INFORMATION PROVIDED IN THESE PLANS IS SOLELY TO ASSIST THE CONTRACTOR IN ASSESSING THE NATURE AND EXTENT OF THE CONDITIONS WHICH MAY BE ENCOUNTERED DURING THE COURSE OF WORK. ALL CONTRACTORS ARE DIRECTED, PRIOR TO BIDDING, TO CONDUCT WHATEVER INVESTIGATIONS THEY MAY DEEM NECESSARY TO ARRIVE AT THEIR OWN CONCLUSIONS REGARDING THE ACTUAL CONDITIONS THAT WILL BE ENCOUNTERED, AND UPON WHICH THEIR BIDS SHALL BE BASED.

12. ———, ? , & * ARE EXAMPLES OF DRAWING ELEMENTS WHICH HAVE BEEN SCREENED/SHADOWED TO INDICATE EXISTING CONDITIONS.

13. THE CONTRACTOR SHALL BE AWARE THAT THE CONSTRUCTION SITE IS ADJACENT AND CONNECTS TO ACTIVE LANDFILL CELLS, AND THAT LANDFILL GAS MAY MIGRATE ONTO THE CONSTRUCTION SITE. THE CONTRACTOR SHALL TAKE PROVEN MEANS TO PROTECT PERSONNEL AND FACILITIES FROM RELATED HAZARDS, INCLUDING EXPLOSION, ASPHYXIATION, AND POISONING DUE TO THE PRESENCE OF LANDFILL GASES.

14. THE CONTRACTOR SHALL BE AWARE THAT THERE MAY BE BURIED WASTE AND/OR OTHER BURIED DEBRIS ENCOUNTERED DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL EXCAVATE DISCOVERED WASTE AND OTHER UNSUITABLE MATERIALS AND DISPOSE OF THEM IN THE LINED PORTIONS OF THE LANDFILL AS REQUIRED TO CONSTRUCT THE FACILITIES IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS WITHOUT INCREASE IN CONTRACT PRICE OR TIME. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING AND PROTECTING THE GEOMEMBRANE AT ALL TIMES. WIND BLOWN GEOMEMBRANE SHALL BE CONSIDERED DAMAGED AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

15. THE CONTRACTOR SHALL NOT INTERFERE WITH FACILITY OPERATIONS. THE CONTRACTOR SHALL COORDINATE WITH AND NOTIFY THE OWNER A MINIMUM OF 48 HOURS IN ADVANCE OF ALL PLANNED UTILITY OUTAGES AND ROAD CROSSINGS.

16. THE CONTRACTOR SHALL TAKE WHATEVER MEANS NECESSARY TO PROTECT MONITOR WELLS FROM DAMAGE DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR OR REPLACE MONITOR WELLS DAMAGED DURING CONSTRUCTION WITH LIKE MATERIALS AND CONSTRUCTION METHODS AS APPROVED BY THE ENGINEER AND FDEP WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD DAMAGE OCCUR TO ANY MONITOR WELLS.

17. THE CONTRACTOR SHALL PREVENT DAMAGE TO THE EXISTING GEOMEMBRANE. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD DAMAGE OCCUR AND PERFORM REPAIRS AS DIRECTED BY THE ENGINEER WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.

18. THE CONTRACTOR SHALL PREVENT DISTURBANCE TO AND UNDERMINING OF ADJACENT STRUCTURES, SLABS, PIPING, AND OTHER UTILITIES OR FACILITIES DURING CONSTRUCTION.

19. THE CONTRACTOR SHALL REPLACE ALL EXISTING PAVING, STABILIZED EARTH, CURBS, DRIVEWAYS, SIDEWALKS, FENCES, MAILBOXES, GRASSING, SIGNS, AND OTHER IMPROVEMENTS WITH SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION OR AS DIRECTED BY THE ENGINEER TO EQUAL OR BETTER CONDITION WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.

20. THE CONTRACTOR SHALL COMPLY WITH ALL TERMS, CONDITIONS, AND REQUIREMENTS OF ALL APPLICABLE PERMITS, INCLUDING FDEP AND WATER MANAGEMENT DISTRICT PERMITS FOR THE SITE.

21. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH EXISTING COUNTY DESIGN AND CONSTRUCTION STANDARDS UNLESS THOSE STANDARDS CONFLICT WITH THESE CONTRACT DOCUMENTS IN WHICH CASE THESE CONTRACT DOCUMENTS SHALL GOVERN. SUCH CONFLICTS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

22. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BECOME FAMILIAR WITH THE OSHA EXCAVATION SAFETY STANDARDS AND TO ABIDE BY THEM AS COVERED UNDER THE FLORIDA TRENCH SAFETY ACT (LAWS OF FLORIDA 90-96) EFFECTIVE OCTOBER 1, 1990.

23. THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER A WRITTEN STATEMENT PRIOR TO BEGINNING WORK THAT HE/SHE WILL COMPLY WITH APPLICABLE TRENCH SAFETY STANDARDS.

24. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ENVIRONMENTAL PROTECTION DURING THE LIFE OF THE CONTRACT, INCLUDING THE WARRANTY PERIOD. THE CONTRACTORS' OPERATIONS SHALL COMPLY WITH FEDERAL, STATE, AND LOCAL REGULATIONS, INCLUDING THOSE PERTAINING TO WATER, AIR, SOLID WASTE, HAZARDOUS WASTE MATERIALS, OILY SUBSTANCES, AND NOISE POLLUTION. THE CONTRACTOR SHALL IMPLEMENT EROSION AND SEDIMENTATION CONTROL MEASURES AS NECESSARY TO COMPLY WITH THESE REGULATIONS FOR BOTH TEMPORARY AND PERMANENT CONSTRUCTION.

25. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL PROVIDE STORMWATER AND EROSION CONTROL PLANS TO PREVENT PONDING AND CONTROL EROSION AND RUNOFF. NO PONDING OF WATER SHALL BE ALLOWED. THE CONTRACTOR SHALL USE APPROVED CONSTRUCTION TECHNIQUES TO PREVENT EROSION AND SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING PROVIDING EQUIPMENT, LABOR, FILL, ETC NECESSARY TO REMEDIATE AND/OR RESTORE ALL AREAS IMPACTED BY EROSION.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING STORMWATER RUNOFF, SOLID WASTE, LANDFILL GAS, AND LEACHATE FROM ENTERING OR IMPACTING THE AREAS OF THE WORK. THE CONTRACTOR SHALL INSTALL AND MAINTAIN MANAGEMENT AND CONTROL DEVICES INCLUDING DIVERSION/COLLECTION BERMS, DITCHES, PUMPING STATIONS, WALLS, LINERS, ETC. TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS WITHOUT INCREASE IN THE CONTRACT PRICE OR TIME.

27. THE CONTRACTOR SHALL MAINTAIN A CLEAR PATH FOR ALL SURFACE WATER DRAINAGE STRUCTURES AND DITCHES DURING ALL PHASES OF CONSTRUCTION AND SHALL USE APPROVED CONSTRUCTION TECHNIQUES TO MANAGE STORMWATER SUCH THAT THE IMPACT TO CONSTRUCTION IS MINIMIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGE DUE TO STORMWATER.

28. FDOT INDICES SHALL REFER TO THE "2004 FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS."

29. THE CONTRACTOR SHALL PROVIDE CONTROL AND MAINTENANCE OF TRAFFIC IN ACCORDANCE WITH FDOT INDEX 600 THROUGH 665, OSHA, AND OTHER APPLICABLE REGULATORY REQUIREMENTS AND AS NECESSARY TO PROVIDE FOR SITE SAFETY DURING CONSTRUCTION.

30. RCP PIPE SHALL BE CLASS-III UNLESS OTHERWISE SPECIFIED

STRUCTURE NOTES

GENERAL

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS RELATING TO EXISTING CONSTRUCTION BY MAKING FIELD MEASUREMENTS PRIOR TO COMMENCING WORK.
2. CONTRACTOR SHALL PROTECT EXISTING STRUCTURES AND UTILITIES FROM DAMAGE. CONTRACTOR SHALL REPAIR OR REPLACE ANYTHING DAMAGED WITH EQUIVALENT MATERIALS AS APPROVED BY FACILITY OWNER.
3. TEMPORARY SHORING & BRACING FOR CONSTRUCTION IS THE RESPONSIBILITY OF THE CONTRACTOR
4. ALL EXCAVATED MATERIAL & CONSTRUCTION DEBRIS SHALL BE REMOVED FROM SITE & DISPOSED OF BY THE CONTRACTOR.
5. ALL WORK SHALL BE PERFORMED BY LICENSED & QUALIFIED SUBCONTRACTORS & CONTRACTORS. CONTRACTOR SHALL PROVIDE & INSTALL ALL REQUIRED AND PUBLISHED ACCESSORIES FOR ITEMS SHOWN ON PLANS.
6. CONTRACTOR SHALL VERIFY THE LOCATION OF EXISTING UTILITIES
7. CONTRACTOR SHALL COORDINATE CONSTRUCTION SCHEDULE WITH INDIVIDUAL COMPANIES CONCERNING RELOCATION OF UTILITIES AND ANY ADDITIONAL RELOCATIONS RESULTING FROM CONFLICTS NOT DELINEATED ON THE CONSTRUCTION PLANS.
8. CONTRACTOR SHALL PROMPTLY REPORT FIELD CHANGES TO THE OWNER'S REPRESENTATIVE.

CODE

1. FLORIDA BUILDING CODE, 2001 EDITION.

REINFORCING STEEL

1. CRSI AND ACI STANDARDS APPLY.
2. ALL DEFORMED BARS SHALL CONFORM TO ASTM A615, GRADE 60.
3. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
4. LAP ALL WELDED WIRE FABRIC A MINIMUM DISTANCE OF ONE CROSS WIRE SPACING PLUS TWO INCHES.
5. ALL REINFORCING STEEL SHALL BE SUPPORTED IN STANDARD ACCESSORIES, HELD RIGIDLY AND ACCURATELY IN PLACE, AND PROTECTED AGAINST DISPLACEMENT BEFORE AND DURING PLACEMENT OF CONCRETE.
6. REINFORCEMENT CHAIR LEGS THAT REST ON CONCRETE SURFACES THAT WILL BE EXPOSED IN THE FINISHED STRUCTURE SHALL BE FABRICATED OF STAINLESS STEEL OR SHALL BE PLASTIC COATED.
7. WHERE SPLICE LENGTHS ARE NOT SPECIFIED, USE 50 BAR DIAMETERS.

CONCRETE

1. THE LATEST EDITION OF THE FOLLOWING ACI STANDARDS APPLY:
   ACI 318 (CODE) — ACI 304 (PLACING)
   ACI 306 (WINTER CONCRETING) — ACI 315 (DETAILING)
   ACI 305 (HOT WEATHER CONCRETING) — ACI 347 (FORM WORK)
   ACI 211.1 (MIX PROPORTIONING)
2. THE REQUIRED CONCRETE STRENGTH BASED ON AN AGE OF 28 DAYS FOR ELEMENTS IN THE STRUCTURE SHALL NOT BE LESS THAN:
   a. 4000 PSI.
   b UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
3. SITE ADDED WATER IS PERMITTED PROVIDED SLUMP SPECIFICATIONS ARE NOT EXCEEDED, HOWEVER NOT MORE THAN ONE GALLON OF WATER PER CUBIC YARD MAY BE USED TO ADJUST THE MIX AT THE JOB SITE.
4. DO NOT PLACE CONCRETE DURING RAIN OR IF RAIN IS LIKELY TO OCCUR PRIOR TO CONCRETE HARDENING.
5. EPOXY ADHESIVE SHALL BE HILTI HY150.
6. ALL CONCRETE EXPANSION JOINTS AND CRACK CONTROL JOINTS SHALL BE FILLED/SEALED IN ACCORDANCE WITH FDOT INDEX SECTION 932.

Dept. Of Environmental Protection
JUL 16 2008
Southwest District

⚠

WETLAND MITIGATION PLANTI NG PLAN	
WETLAND SPECIES	HERBACEOUS UNITS REQUIRED FOR MITIGATION PLANTING
SCIRPUS CALIFORNICUS OR *S. VALIDUS*	2,710
THALIA GENICULATA	2,033
SAGITTARIA LANCIFOLIA	2,033
PONTEDERIA CORDATA	2,033
IRIS HEXAGONA	1,355
NUPHAR LUTEA	1,355
NYMPHAEA ODORATA	2,033
TOTAL	13,552

THE SED 5 WETLAND CREATION MITIGATION PLAN CONSISTS OF A WETLAND VEGETATIVE COVER (BOTH PLANTINGS AND NATURAL RECRUITMENT) OF THE LITTORAL AREAS BELOW THE IDENTIFIED CONTROL ELEVATION – 105 (FIGURE 6.1 AND DWG NO.12). DESIRABLE HERBACEOUS WETLAND SPECIES INCLUDE BULRUSH (SCIRPUS CALIFORNICUS OR S. VALIDUS) FIRE FLAG (THALIA GENICULATA), ARROW-HEAD (SAGITTARIA LANCIFOLIA), PICKERELWEED (PONTEDERIA CORDATA), PRAIRIE IRIS (IRIS HEXAGONA), SPATTERDOCK (NUPHAR LUTEA), AND WATER LILY (NYMPHAEA ODORATA) WILL BE PLANTED ON 3-FOOT CENTERS TO ESTABLISH DESIRABLE NATIVE SPECIES TO MINIMIZE ESTABLISHMENT OF EXOTIC OR NUISANCE SPECIES. SUBSTITUTION OF SIMILAR WETLAND VEGETATION IS ALLOWED WITH PRIOR APPROVAL. ALL WETLAND SPECIES WILL BE AT LEAST 4-INCH POT MINIMUM OR EQUIVALENT. IN ADDITION, NO INDIVIDUAL PLANT SPECIES WILL EXCEED 33% OF THE REQUIRED PLANTING UNITS WITHOUT PRIOR AUTHORIZATION (I.E., INDIVIDUAL SPECIES CANNOT EXCEED 4,473 UNITS)

LTR.	DATE	REVISIONS	BY	APPRD.
⚠	6-25-08	REVISED PER FDEP COMMENTS	DLW	JDP

DESIGNED JDP
DRAWN DLW
CHECKED JET/JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
GENERAL NOTES

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
SCALE AS SHOWN
PROJECT NO. 08449-030-02
DWG. NO. 3

Edited: 00/00/00 0:00 login N:\08449 Hillsborough County\030 - 02\1600\Contract Drawings\Civil\Site Wide_ERP\08449030302-C-03-GEN NOTES.dwg Plotted: 7/14/08 12:58pm dwhite

NPDES DISCHARGE POINT

BASIN SRA

BASIN B10-NW SWALE

BASIN SED 7

BASIN SED 6

BASIN SED 5

BASIN B9-NW2

BASIN B6-MC3
MINE CUT 3

WETLAND BOUNDARY (TYP.)

TURBIDITY CURTAIN

SILT FENCE (25' OFF WETLAND)

BASIN J

GOPHER TORTOISE LOCATION

SILT FENCE (25' OFF WETLAND)

TURBIDITY CURTAIN

FUTURE ROAD

GRAPHIC SCALE
0 150 300 600
SCALE IN FEET
1"=300'

N

SILT FENCE (25' OFF WETLAND)

BASIN FINAL SED

BASIN SED 8

BASIN D

BASIN 11

BASIN 10C
SECTION 11
(FUTURE)

BASIN 10B
SECTION 10
(FUTURE)

MINE CUT 2

BASIN B5-MC2

CAPACITY EXPANSION AREA
FINAL BUILD OUT
(CURRENTLY ACTIVE)

CAPACITY EXPANSION BOUNDARY

SILT FENCE (25' OFF WETLAND)

BASIN B7 CREEK

BASIN 12

EFFLUENT/LEACHATE STORAGE TANK

LTRF BASINS AND BASIN H

BASIN SED 2

TH-30

BASIN SED 3

BASIN 13
SECTION 10
(FUTURE)

BASIN 10A

BASIN 9
SECTION 9
(EXISTING)

BASIN SED 4

BASIN 78

TH-19

TH-58

MATERIAL STORAGE AREA

SILT FENCE (25' OFF WETLAND)

BASIN PH 56

BASIN PH 3

PHASES I-VI
FINAL BUILD OUT
(CURRENTLY ACTIVE)

TH-28

TH-57

MINE CUT 1

BASIN B4-MC1

BASIN C

BASIN PH 2

BASIN PH 4

BASIN A-1

BASIN PH 1

BASIN A-2

TH-38 (REPLACED BY TH-38A)

TH-40*

BASIN E

PHASE I-VI BOUNDARY

TH-24

BASIN A-3

TH-22

TH-20B

BASIN PH 2A

BASIN F

BASIN G

BASIN B4-MC1

BASIN B

BASIN OS

SILT FENCE ALONG TOP OF BERM AND ACROSS OUTFALL

DRAINAGE BASINS CONTRIBUTING AREA TO EACH TREATMENT POND
POND/BASIN B B, A1, A2, A3, F, G PH1, PH2A, PH4
POND/BASIN C C, H, TOE789, SECT78, SECT 9, SECT 10A, LTF-1, LTF-4, LTF-6, LTF-7, LEACHATE
POND/BASIN D D, PH2, PH3, PH56, SECT12,SECT13, SED2, SED3, SED4, SED8
POND/BASIN E E
POND/BASIN J J, SECT10B, SECT10C, SECT11

LEGEND

- APPROXIMATE DRAINAGE BASIN BOUNDARIES TO POND SYSTEMS
- FLOW DIRECTION
- GOPHER TORTOISE LOCATIONS

NOTE:

EXISTING SURVEY FROM PICKETT AND ASSOCIATES DATED JANUARY 18, 2008

LTR.	DATE	REVISIONS	BY	APPRD.
1	6-25-08	REVISED PER FDEP COMMENTS	DLW	JDP

DESIGNED JDP
DRAWN DLW
CHECKED JET/JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
DRAINAGE BASIN PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 6 (1)

Plotted: 7/14/08 10:26am dwhite
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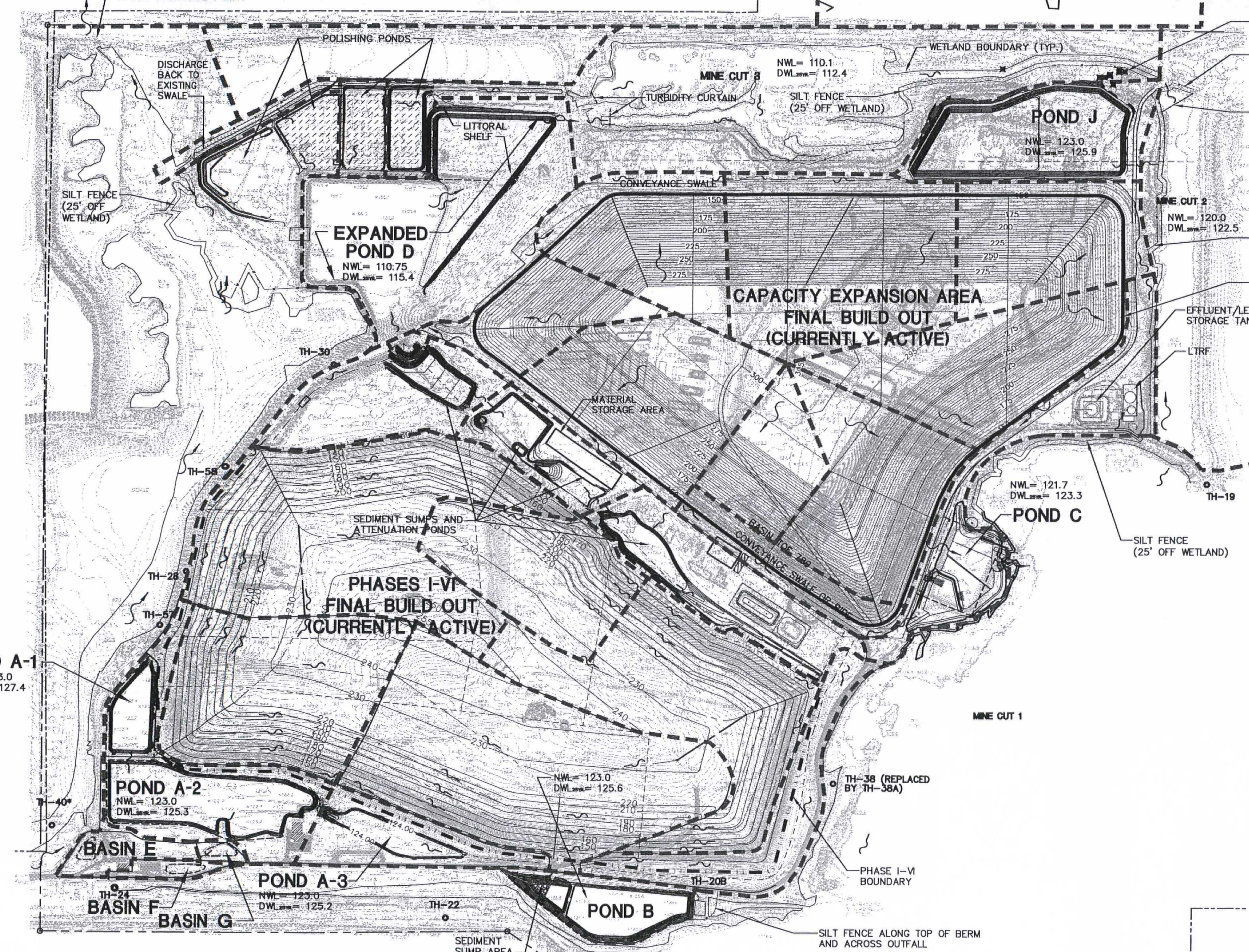
Edited: 00/00/00 0:00 login



GOPHER TORTOISE LOCATION
SILT FENCE (25' OFF WETLAND)
TURBIDITY CURTAIN
SILT FENCE (25' OFF WETLAND)
CAPACITY EXPANSION AREA BOUNDARY
EFFLUENT/LEACHATE STORAGE TANK
LTRF
SILT FENCE (25' OFF WETLAND)

GRAPHIC SCALE
0 150 300 600
SCALE IN FEET
1"=300'
N

DRAINAGE BASINS CONTRIBUTING AREA TO EACH TREATMENT POND
POND/BASIN B
B, A1, A2, A3, F, G PH1, PH2A, PH4
POND/BASIN C
C, H, TOE789, SECT78, SECT 9, SECT 10A, LTF-1, LTF-4, LTF-6, LTF-7, LEACHATE
POND/BASIN D
D, PH2, PH3, PH56, SECT12, SECT13, SED2, SED3, SED4, SED8
POND/BASIN E
E
POND/BASIN J
J, SECT10B, SECT10C, SECT11

LEGEND

- APPROXIMATE DRAINAGE BASIN BOUNDARIES TO POND SYSTEMS
- NWL — NORMAL WATER LEVEL
- DWL_{25YR} — 25 YEAR DESIGN HIGH WATER LEVEL
- FLOW DIRECTION
- GOPHER TORTOISE LOCATIONS

NOTE:
EXISTING SURVEY FROM PICKETT AND ASSOCIATES DATED JANUARY 18, 2008

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HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
POND PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

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PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 7

PHASES I-VI FINAL BUILD OUT

PHASE II

TH-38 (REPLACED BY TH-38A)

CONST. ROCK CHECK DAM TOP EL. 130.0

CONST. ROCK CHECK DAM TOP EL. 128.5

CONST. ROCK CHECK DAM TOP EL. 128.0

EXISTING MANHOLE TO REMAIN

REMOVE APPROX. 130'LF EXISTING 24" RCP AND EXIST. 48" STAND PIPE CONTROL STRUCTURE IN POND

EXISTING 48" RCP TO REMAIN

TH-20A

TH-20B

S-8

S-9

S-10

LITTORAL ZONE @ EL. 121.0

15' SPILLWAY AT OVERFLOW ELEV.= 122.0

CONST. 300LF± 30" RCP AT 1.67% INCL. M.E.S. EACH END AT INV. ELEV.=123.0 (POND A3) INV. ELEV.=118.0 (POND B)

SILT FENCE

POND B

STRUCTURE "B1" CONST. TYPE "E" DBI GRATE ELEV.= 125.8 SLOTS N AND S SIDES AT ELEV.= 123.6 15" SLOT S SIDE AT ELEV.=123.0 INV. ELEV.= 121.7

STRUCTURE "B2" CONST. TYPE "E" DBI GRATE EL. 125.8 3 SLOTS N & S SIDES @ EL. 123.6 INV. EL. 121.7

SILT FENCE

CONST. 150 LF 36" RCP AT 0.33 % W / MES ON EAST END @ INV. 121.0

EXISTING SPILLWAY TO REMAIN AS EMERGENCY DISCHARGE W / OVERFLOW @ ELEV. 130.4 ± (REPAIR BACK TO EXISTING CONDITION FOLLOWING INSTALLATION OF NEW PIPE.)

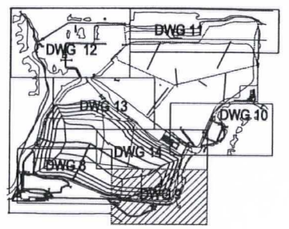
NOTE:
LITTORAL ZONE PROVIDED IN PONDS B AND A3.

CONST. 40 LF ± 36" RCP AT 0% FROM TYPE "E" DBI TO EXIST. MANHOLE INV. ELEV.= 121.7

#5
E 598710.90
N 1249383.77
EL 126.01

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

MINE CUT 1



KEY PLAN

LTR.	DATE	REVISIONS	BY	APPRD.
1	6-25-08	REVISED PER FDEP COMMENTS	DLW	JDP

DESIGNED JDP
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SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
POND B

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 9

MATCH LINE THIS SHEET

MINE CUT 3

WETLAND BOUNDARY (TYP.)

SF

W.E. 110.1

POND J
NWL= 123.0
DWL= 125.9

CONTROL STRUCTURE
TYPE "E" DBI W/GREASE BAFFLES,
GRATE EL 126.1
3' SLOT N SIDE @ EL 123.7
7' SLOT N SIDE @ EL 123.0
INV EL 120.0

LITTORAL SHELF @ 121.0

SILT FENCE

S-14

INSTALL TURBIDITY CURTAIN

MINE CUT 2

CONST 280 LF OF 36" RCP @ 0.36%
MES INV ELEV 119.0

FUTURE ACCESS ROAD

W.E. 119.1

SILT FENCE

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

N

CAPACITY EXPANSION AREA / FINAL BUILD OUT — DRAINAGE BASIN TO POND J

REMOVE EXISTING 2 PIPES AND REPLACE W/NEW CONTROL STRUCTURE:
TYPE "H" DBI, GRATE ELEV. 111.1
3' SLOTS N & S SIDES @ ELEV. 110.1
INV ELEV. 107.0
85 LF OF 42" RCP @ 0.15%
MES @ ELEV. 106.8 ON WEST END

MINE CUT 3

#13
E 598104.00
N 1254421.53

CONTROL STRUCTURE TYPE "E" DBI W/GREASE BAFFLES, GRATE EL. 115.5

18" SLOT N SIDE @ ELEV. 111.75
10" SLOT N SIDE @ ELEV. 110.75
36" RCP INV ELEV. 108.0

S-15A

S-15B

POND D

INSTALL TURBIDITY CURTAIN

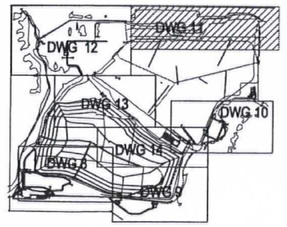
INSTALL TURBIDITY CURTAIN

MATCH LINE THIS SHEET

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

Dept. Of Environmental Protection
JUL 16 2008
Southwest District

KEY PLAN



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HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
POND J

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
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P.E. # P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 11 1

NPDES DISCHARGE POINT

S-17

CONST MES INV ELEV 88.0

CONST 90 LF OF 24" RCP @ 1%

CONST TYPE "C" DBI GRATE ELEV = 93.0 2' SLOTS E & W SIDES ELEV 91.5 INV ELEV = 88.90

W.E. 89.9

W.E. 91.5

CONST 42 LF OF 12" RCP @ 0.0% W/MES INV EL 102.0

#11
E 595105.15
N 12542 EL 96.12

SILT FENCE

C-12C-16A

C-12C-16B

C-12C-16D

C-12C-16E

REMOVE EXISTING 2 PIPES AND REPLACE W/NEW CONTROL STRUCTURE: TYPE "H" DBI, GRATE ELEV. 111.1 3' SLOTS N & S SIDES @ ELEV. 110.1 INV ELEV. 107.0 85 LF OF 42" RCP @ 0.15% MES @ ELEV. 106.8 ON WEST END

APPROXIMATE LOCATION OF EXISTING IMPOUNDMENT TO BE REMOVED

S-15A

S-15B

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

N

CONST 15' WIDE SPILLWAY @ ELEV. 103.0

CONST 50 LF OF 12" RCP @ 4% W/MES INV EL 100.0 W END AND INV EL 102.0 E END

C-12C-16A

10' BERM @ 105.0

POND SED-7

POND SED-6

10' BERM @ 107.0

POND SED-5

EXCAVATE BOTTOM TO 102.0

EXISTING GRADE TO REMAIN

10' BERM @ 106.0

CONST MES INV ELEV 85.0

21" DIP SITE-16

S-16

CONST 100 LF OF 12" RCP @ 4% W/MES INV ELEV. 99.0 E END INV ELEV. 95.0 W END

EXISTING GRADE TO REMAIN

CONST. 15' WIDE SPILLWAY AT ELEV. = 104.0

CONST. 15' WIDE SPILLWAY AT ELEV.= 105.0

CONTROL STRUCTURE TYPE "E" DBI W/GREASE BAFFLES, GRATE EL. 115.5

18" SLOT N SIDE @ ELEV. 111.75
10" SLOT N SIDE @ ELEV. 110.75
36" RCP INV ELEV. 108.0

CONST 310 LF OF 36" RCP MES @ EAST INV ELEV. 107.0

TH-32

LITTORAL SHELF (BOTTOM EL. 109.0)

TH-42

TS-3

18" CMP SITE-18

CONST. 15' WIDE SPILLWAY AT ELEV. = 102.0

POND FINAL-SED

IMPROVE EXISTING BERM BY RAISING LOW AREA (APPROX. 250 LF) TO ELEVATION 116.4

CONST MES INV ELEV 90.0

S-18

CONST 60'x30' CONCRETE RUBBLE RIP RAP

C-12C

MATCH EXISTING GRADE AT ELEV.= 109.0

CONSTRUCT 2 COURSES OF 8" CONCRETE BLOCKS ACROSS MOUTH OF SPILLWAY TO RAISE OVERFLOW ELEVATION FROM 114.5 TO 115.8. SPILLWAY WILL REMAIN AS EMERGENCY OVERFLOW AT ELEV. 115.8

CONST 130 LF OF 24" RCP @ 1% DENSE

REPAIR 2-18" CMP AS NEEDED

CONST TYPE "C" DBI GRATE ELEV = 97.0 2' SLOTS E & W SIDES ELEV 95.5 INV ELEV = 91.30

POND D
NWL= 110.75
DWL 25YR= 115.4

S-19

SPILLWAY

PLUG EXISTING 18" RCP DISCHARGE PIPE FROM EXISTING CONTROL STRUCTURE TO ELIMINATE DISCHARGE.

SILT FENCE

16" METAL PIPE

W.E. 95.5

Base
E 596445.60
N 1252812.38
EL 129.71

CONST. 40LF 7-36" RCP INCLUDE M.E.S. EACH END. INV. ELEV. = 123.1 SE INV. ELEV. = 122.4 NW

S-21

S-20

KEY PLAN

DWG 11
DWG 12
DWG 13
DWG 10
DWG 14
DWG 9

Received by Florida Department of Environmental Protection
JUL 16 2008
Southwest District

LTR.	DATE	REVISIONS	BY	APPRD.
1	6-25-08	REVISED PER FDEP COMMENTS	DLW	JDP

DESIGNED JDP
DRAWN DLW
CHECKED JET/JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS POND D AND POLISHING PONDS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 12

Plotted: 7/14/08 12:35pm dwhite
N:\08449 Hillsborough County\030 - 02\1600\Contract Drawings\Civil\Site Wide_ERP\08449030002-C-12-POND-D.dwg
Edited: 00/00/00 0:00 login

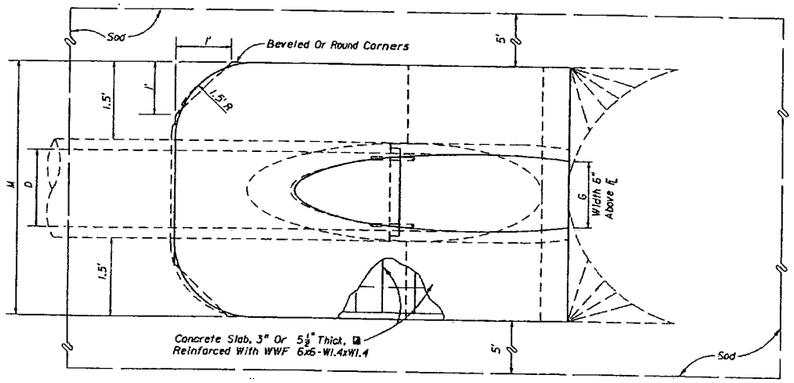
DIMENSIONS AND QUANTITIES

	D	X	A	B	C	E	F	G	M Single Pipe	M Double Pipe	M Triple Pipe	M Quad. Pipe	N	5½" CONCRETE SLAB (CY) ◪ Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	SODDING (SQ. YDS.) Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
1:2 Slope	15"	2'-7"	1.92'	2.18'	4.10'	2.06'	5'	1.22'	4.63'	7.91'	9.79'	12.37'	1.15'	0.38	0.58	0.77	0.96	21	24	27	30
	18"	2'-10"	1.97'	2.74'	4.71'	2.56"	6'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.44	0.65	0.87	1.09	22	25	28	31
	24"	3'-5"	2.06'	3.85'	5.91'	3.56"	7'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.54	0.83	1.12	1.42	24	28	32	35
	30"	4'-3"	2.15'	4.95'	7.10'	4.56"	8'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	0.66	1.09	1.50	1.91	26	31	35	40
	36"	5'-1"	2.25'	6.08'	8.33'	5.56"	9'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	0.81	1.38	1.95	2.51	28	34	39	45
	42"	6'-0"	2.34'	7.21'	9.55'	6.56"	10'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	0.97	1.70	2.45	3.19	30	37	43	50
	48"	6'-9"	2.43'	8.33'	10.76'	7.56"	11'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.13	2.04	2.93	3.84	32	39	47	54
	54"	7'-8"	2.52'	9.44'	11.96'	8.56"	12'	2.83'	8.42'	15.08'	23.75'	31.42'	1.46'	1.31	2.34	3.38	4.42	34	42	51	59
	60"	8'-6"	2.62'	10.56'	13.18'	9.56"	14'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	1.51	2.89	4.28	5.68	36	45	55	64
	66"	9'-2"	2.71'	11.68'	14.39'	10.56"	15'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	1.68	3.25	4.84	6.43	38	48	58	68
	72"	10'-0"	2.80'	12.80'	15.60'	11.56"	16'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	1.89	3.74	5.59	7.45	40	51	62	73
1:4 Slope	15"	2'-7"	2.27'	4.09'	6.36'	4.03"	8'	1.22'	4.63'	7.81'	9.79'	12.37'	1.15'	0.57	0.87	1.15	1.44	23	26	29	32
	18"	2'-10"	2.36'	5.12'	7.48'	5.03"	9'	1.41'	4.92'	7.75'	10.58'	13.42'	1.21'	0.66	0.99	1.31	1.65	25	28	31	35
	24"	3'-5"	2.53'	7.18' △	9.71'	7.03"△	11'	1.73'	5.50'	8.92'	12.33'	15.75'	1.25'	0.85	1.30	1.75	2.20	28	32	36	40
	30"	4'-3"	2.70'	9.25'	11.95'	9.03"	13'	2.00'	6.08'	10.33'	14.58'	18.83'	1.29'	1.10	1.74	2.39	3.05	31	36	41	46
	36"	5'-1"	2.87'	11.31' ◇	14.18"	11.03"◇	15'	2.24'	6.67'	11.75'	16.83'	21.92'	1.33'	1.32	2.21	3.08	3.96	34	40	46	52
	42"	6'-0"	3.05'	13.37'	16.42"	13.03"	17'	2.45'	7.25'	13.25'	19.25'	25.25'	1.38'	1.58	2.76	3.91	5.09	38	44	51	58
	48"	6'-9"	3.22'	15.43'	18.65'	15.03"	19'	2.65'	7.83'	14.58'	21.33'	28.08'	1.42'	1.85	3.30	4.73	6.17	41	48	56	63
	54"	7'-8"	3.39'	17.49'	20.88'	17.03"	21'	2.83'	8.42'	16.08'	23.75'	31.42'	1.46'	2.14	3.55	5.77	7.58	44	52	61	69
	60"	8'-6"	3.56'	19.55'	23.11'	19.03"	23'	3.00'	9.00'	17.50'	26.00'	34.50'	1.50'	2.45	4.66	6.87	9.07	47	56	66	75
	66"	9'-2"	3.73'	21.62'	25.35'	21.03"	25'	3.18'	9.58'	18.75'	27.92'	37.08'	1.54'	2.88	5.54	8.18	10.84	49	59	69	80
	72"	10'-0"	3.91'	23.68'	27.59'	23.03"	27'	3.30'	10.16'	20.16'	30.16'	40.16'	1.58'	3.54	6.61	9.87	13.13	52	63	74	85

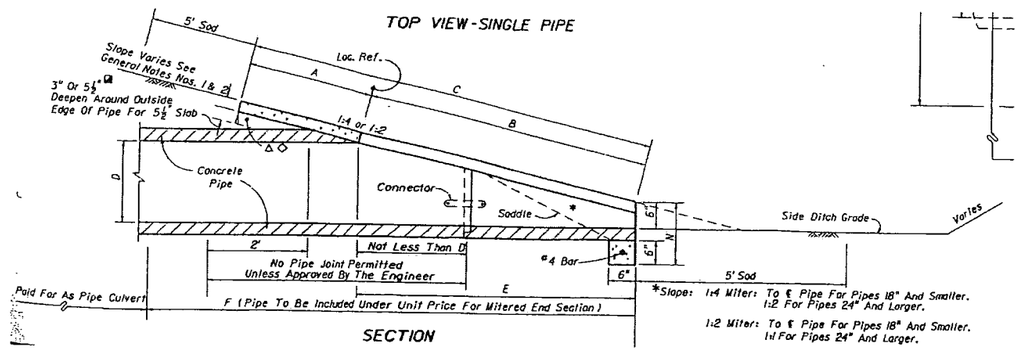
◪ See General Note No. 3.
See Sheet 5 Of 6 For 3" Slab Quantities

B	E	
△ 6.42'	△ 6.25'	Dimensions permitted to allow use of 8' standard pipe lengths.
◇ 10.40'	◇ 10.10'	Dimensions permitted to allow use of 12' standard pipe lengths.

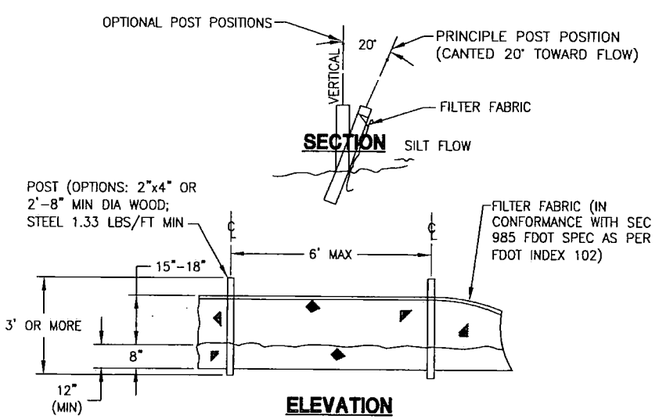
△◇ Concrete slab shall be deepened to form bridge across crown of pipe. See section below



TOP VIEW - SINGLE PIPE MITERED END DETAIL



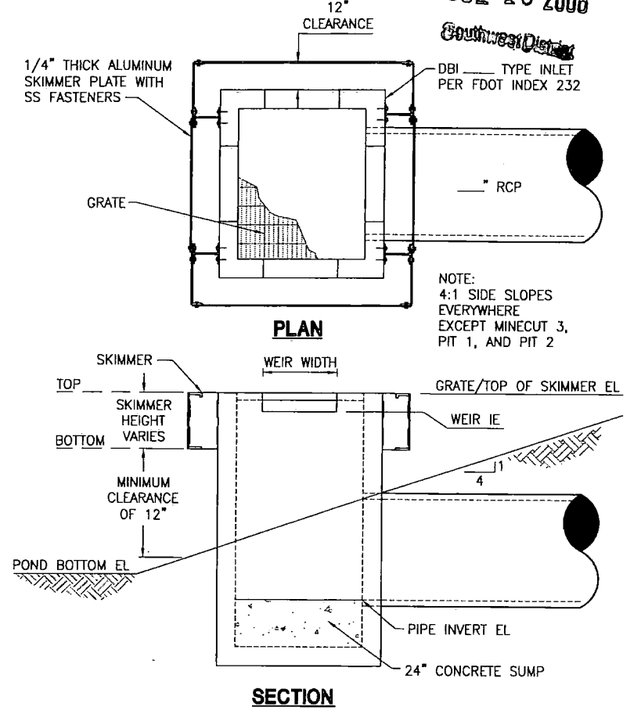
MITERED END SECTION DETAIL



ELEVATION

TYPICAL TYPE III SILT FENCE DETAIL

NTS



SECTION

OVERFLOW CONTROL STRUCTURE DETAIL

NTS

OVERFLOW CONTROL STRUCTURE TABLE

LOCATION	DBI TYPE	GRATE ELEVATION	WEIR/SLOT WIDTH, LOCATION AND ELEVATION	SKIMMER ELEVATION (TOP AND BOTTOM)	PIPE SIZE, LOCATION AND INVERT ELEVATION	POND BOTTOM ELEVATION
POND-D	E	115.50	18" N SIDE @ 111.75 10" N SIDE @ 110.75	115.50 110.25	36" RCP E SIDE @ 108.0	109.00
MINE CUT-3	H	111.10	36" N & S SIDES @ 110.10	N/A	42" W SIDE @ 107.0	UNKNOWN (STEEP SIDE SLOPES)
PIT-1	C	97.00	24" E & W SIDES @ 95.50	N/A	24" RCP N SIDE @ 91.30	UNKNOWN (STEEP SIDE SLOPES)
PIT-2	C	93.00	24" NE & SW SIDES @ 91.50	N/A	24" RCP NW SIDE @ 93.00	UNKNOWN (STEEP SIDE SLOPE)
POND-J	E	126.10	36" N SIDE @ 123.70 7" N SIDE @ 123.00	126.10 122.5	36" RCP E SIDE @ 120.00	121.00
POND-B (2) STRUCTURES B1 AND B2	E	125.80	(BOTH: 36" N & S SIDES @ 123.60) (B1 ONLY: 15" S SIDE @ 123.00)	125.80 122.50	36" RCP E SIDE @ 121.70	121.00
POND-A1	E	127.50	18" ORIFICE N SIDE @ 123.00	N/A	30" RCP S SIDE @121.00	120.00
POND SED-2 (2) STRUCTURES 2A AND 2B	E	123.50	36" NE AND SW SIDE @ 119.5	N/A	36" RCP NW SIDE @ 116.00	115.00

LTR.	DATE	REVISIONS	BY	APPRD.
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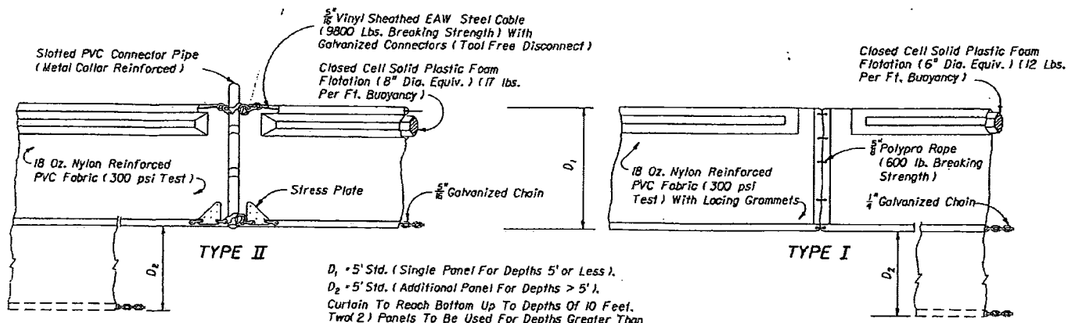
HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
CIVIL DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 21

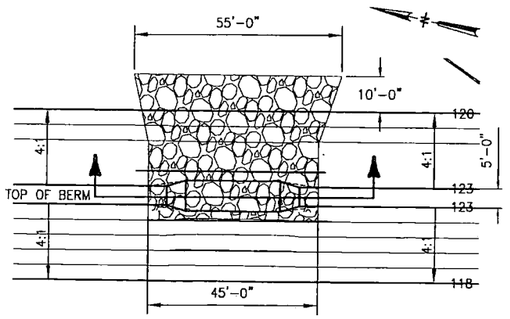
PIPE DATA TABLE					
Structure No	Type of Structure	Upper End	Lower End	Diameter (in)	Length
S-1A	RCP	116.24 (E)	115.82 (W)	18.00	39.97
S-1B	RCP	115.45 (E)	114.93 (W)	36.00	115.45
S-2	ERCP	124.83 (E)	124.72 (W)	14x22	92.38
S-3	CMP	122.96 (S)	122.07 (N)	36.00	81.19
S-4	ERCP	124.98 (S)	124.91 (N)	14X22	47.87
S-5	ERCP	124.44 (N)	125.34 (S)	14X22	73.39
S-6	This point is not depicted in the plan				
S-7	CMP	122.316 (E)	122.065 (W)	24.00	37.00
S-8	ERCP	126.70 (S)	126.51 (N)	34X54	100.67
	ERCP	126.66 (S)	126.51 (N)	34X54	100.39
S-9	CMP	123.90 (W)	123.64 (E)	24.00	343.74
S-10	RCP	121.73 (E)	121.62 (W)	48.00	100.06
	RCP	121.53 (E)	121.49 (W)	24.00	17.96
S-11	This point is not depicted in the plan				
S-12A	RCP	121.79 (W)	121.35 (E)	30.00	169.40
S-12B	RCP	121.45 (W)	121.39 (E)	48.00	50.37
S-13	RCP	121.69 (S)	120.71 (N)	24.00	104.48
	RCP	121.75 (S)	120.86 (N)	24.00	104.56
S-14	RCP	120.35 (E)	118.806 (W)	24.00	104.90
	RCP	120.43 (E)	118.956 (W)	24.00	104.90
S-15A	RCP	106.852 (W)	106.832 (E)	18.00	48.75
S-15B	RCP	106.772 (E)	106.682 (W)	18.00	47.60
S-16	Steel	94.87 (E)	94.62 (W)	24 (W) – 21(E)	22.04
	Steel (E) – ECMP (W)	94.97 (E)	94.81 (W)	21 (E) – 22X24 (W)	20.98
S-17	RCP	90.98 (N)	90.69 (S)	48.00	50.51
	RCP	90.87 (N)	90.62 (S)	48.00	50.71
S-18	CMP	95.47 (E)	95.09 (W)	18.00	19.89
S-19	RCP	101.16 (E)	100.91 (W)	48.00	161.35
S-20	CMP	115.32 (N)	114.60 (S)	48.00	90.98
	CMP	115.48 (N)	114.73 (S)	48.00	91.11
S-21	RCP	123.16 (N)	122.95 (S)	36.00	34.84
S-22	RCP	121.112 (S)	120.623 (N)	36.00	88.74
S-23	CMP	131.153 (E)	129.551 (W)	30.00	79.75
S-24	ERCP	146.44 (E)	145.05 (W)	12X18	91.04
S-25	CMP	127.404 (E)	126.607 (W)	36.00	74.93
	CMP	127.513 (E)	126.692 (W)	36.00	75.48
S-26	This point is not depicted in the plan				
S-27	CMP	123.03 (E)	123.00 (W)	18.00	24.15
S-28	This point is not depicted in the plan				
TS-2	ERCP	130.05 (W)	129.18 (E)	48X96	74.73
TS-3	RCP	129.007 (E)	128.157 (W)	18.00	98.07
TS-4	RCP	123.58 (S)	122.355 (N)	36.00	80.83
TS-5	REMOVED				
TS-6	Metal	125.94 (N)	125.55 (S)	20.00	29.65
	CMP	125.90 (N)	125.68 (S)	36.00	19.59



D_1 = 5' Std. (Single Panel For Depths 5' or Less).
D_2 = 5' Std. (Additional Panel For Depths > 5').
Curtain To Reach Bottom Up To Depths Of 10 Feet. Two(2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

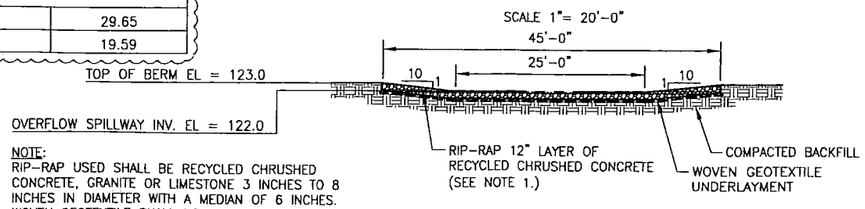
NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

FLOATING TURBIDITY BARRIERS



PLAN INTERNAL SPILLWAY IN POND-B

SCALE 1"= 20'-0"

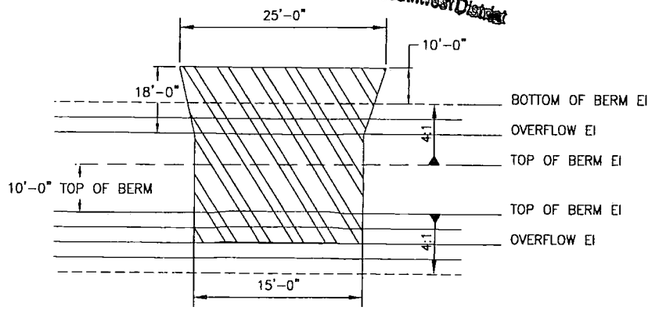


NOTE:
RIP-RAP USED SHALL BE RECYCLED CHRUSHED CONCRETE, GRANITE OR LIMESTONE 3 INCHES TO 8 INCHES IN DIAMETER WITH A MEDIAN OF 6 INCHES. WOVEN GEOTEXTILE SHALL MEET THE REQUIREMENTS OF SECTION 02771 OF THE PROJECT SPECIFICATIONS.

SECTION

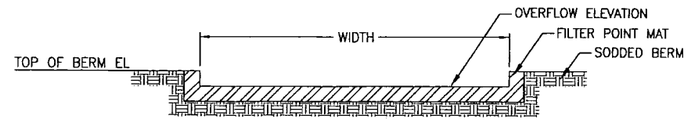
NTS

INTERNAL SPILLWAY IN POND-B DETAIL



DISCHARGE OVERFLOW SPILLWAY PLAN FOR PONDS SED-5, SED-6, SED-7 AND FINAL SED

NTS



DISCHARGE OVERFLOW SPILLWAY DETAIL FOR PONDS SED 5, SED-6, SED-7, FINAL SED

NTS

POND	TOP OF BERM ELEVATION	OVERFLOW ELEVATION	WIDTH	BOTTOM OF BERM ELEVATION
SED-5	107.00	105.00	180"	103.00
SED-6	106.00	104.00	180"	102.00
SED-7	105.00	103.00	180"	101.00
FINAL SED	104.00	102.00	180"	100.00

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DATE 05/2008
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SCALE AS SHOWN
DWG. NO. 22

ATTACHMENT 2

REVISED ICPR MODEL AND TABLE 4.1

Revised Table 4.1 Reflecting Modified Existing Conditions with no Infiltration Assumed

Table 4.1 Comparison of Pre-and Post- Development Design Storm Peak Discharge

Peak Design Storm Data	Pre-Development (1983/1985)		Post-Development	
	Stage (ft NGVD)	Discharge (cfs)	Stage (ft NGVD)	Discharge (cfs)
Pond A1 (NA1 – Pre)	123.9	17.3	127.4	13.1
Pond A2 (NA2 – Pre)	125.5	0.0	125.3	13.4
Pond A3 (NB1 – Pre)	127.0	6.4	125.2	15.7
Pond B (NB2 – Pre)	127.0	0	125.6	70.7
Pond C (NC – Pre)	132.3	169.8	129.3	127.2
Pond D (ND – Pre)	112.8	0.0	115.4	34.9
Pond E (B13 – Pre)	127.1	7.6	127.3	11.9
Pond F	N/A		126.3	4.5
Pond G	N/A		125.8	5.4
Pond H	N/A		139.8	0
Pond J	N/A		125.9	35.4
Mine Cut No. 1 (B4 – Pre)	122.9	11.1	123.3	19.0
Mine Cut No. 2 (B5 – Pre)	121.9	18.0	122.5	44.8
Mine Cut No. 3 (B6 – Pre)	111.7	29.4	112.4	69.4
Creek (Upstream of NPDES) (B7 – Pre)	97.4	246.2	97.3	243.4
NPDES	90.8	246.2	90.8	243.4

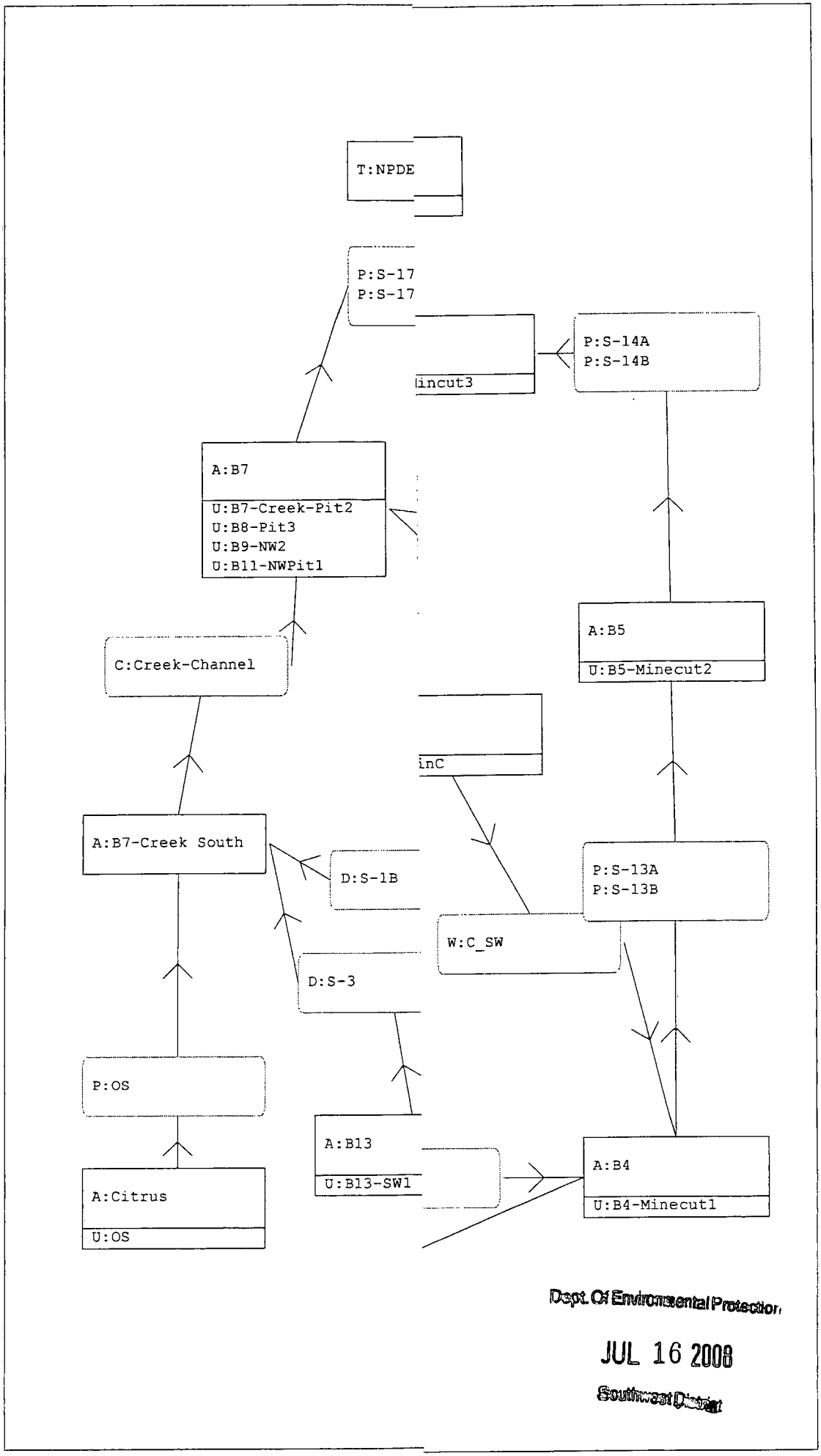
Notes:
1. Satisfied discharge requirement by limiting the total flow from the property to offsite receiving water at NPDES point.
2. Satisfied water level requirement by limiting the peak staging at the NPDES point, minimizing off-site flooding potential.

REVISED EXISTING CONDITION ICPR INPUT DATA

odes
Stage/Area
V Stage/Volume
T Time/Stage
M Manhole

sins
Overland Flow
U SCS Unit CN
S SBUH CN
SCS Unit GA
SBUH GA

Links
P Pipe
W Weir
Channel
Drop Structure
B Bridge
R Rating Curve
H Breach
Percolation
Filter
Exfil Trench



REVISED EXISTING CONDITION NODE/LINK DIAGRAM

==== Basins ====

Name: B1-Middle
Group: BASE
Node: B1
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 167.900
Curve Number: 62.00
DCIA(%): 0.00
Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 83.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B10-NW-swale
Group: BASE
Node: B10
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 4.900
Curve Number: 82.00
DCIA(%): 0.00
Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 17.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B11-NWPit1
Group: BASE
Node: B7
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 13.400
Curve Number: 85.00
DCIA(%): 0.00
Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 22.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B12-NW3
Group: BASE
Node: B12
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 13.700
Curve Number: 45.00
DCIA(%): 0.00
Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 35.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B13-SW1
Group: BASE
Node: B13
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 3.600
Curve Number: 82.00
DCIA(%): 0.00
Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 39.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B14-SW2
Group: BASE
Node: B14
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 2.100
Curve Number: 87.00
DCIA(%): 0.00
Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B2-Mid2
Group: BASE
Node: B2
Type: SCS Unit Hydrograph CN
Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 14.400
Curve Number: 72.00
DCIA(%): 0.00
Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B3-Mid3
Group: BASE

Node: B3
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 6.600
Curve Number: 75.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B4-Minecut1
Group: BASE

Node: B4
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 202.400
Curve Number: 87.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 63.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B5-Minecut2
Group: BASE

Node: B5
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 49.200
Curve Number: 81.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B6-Mincut3
Group: BASE

Node: B6
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 98.900
Curve Number: 75.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 14.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B7-Creek-Pit2
Group: BASE

Node: B7
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 279.300
Curve Number: 78.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 128.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B8-Pit3
Group: BASE

Node: B7
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 2.600
Curve Number: 88.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: B9-NW2
Group: BASE

Node: B7
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 22.300
Curve Number: 80.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 54.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinA1
Group: BASE

Node: NA1
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 5.800
Curve Number: 85.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinA2
Group: BASE

Node: NA2
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 17.700
Curve Number: 76.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinB1
Group: BASE

Node: NB1
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 45.400
Curve Number: 61.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 30.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinB2
Group: BASE

Node: NB2
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 7.500
Curve Number: 88.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 6.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinC
Group: BASE

Node: NC
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 62.800
Curve Number: 70.00
DCIA(%): 0.00

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 22.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: BasinD
Group: BASE

Node: ND
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 23.000
Curve Number: 90.00
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 8.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

Name: OS
Group: BASE

Node: Citrus
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh256
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 534.700
Curve Number: 55.80
DCIA(%): 0.00

Peaking Factor: 256.0
Storm Duration(hrs): 0.00
Time of Conc(min): 249.00
Time Shift(hrs): 0.00
Max Allowable Q(cfs): 999999.000

From Hillsborough County SWMM: TC, acres, CN

Name: SRA
Group: BASE

Node: SRA
Type: SCS Unit Hydrograph CN

Status: Onsite

Unit Hydrograph: Uh484
Rainfall File:
Rainfall Amount(in): 0.000
Area(ac): 100.300

Peaking Factor: 484.0
Storm Duration(hrs): 0.00
Time of Conc(min): 68.00
Time Shift(hrs): 0.00

Curve Number: 68.00 Max Allowable Q(cfs): 999999.000
DCIA(%): 0.00

Nodes

Name: B1 Base Flow(cfs): 0.000 Init Stage(ft): 117.000
Group: BASE Warn Stage(ft): 121.000
Type: Stage/Area

Stage(ft)	Area(ac)
117.000	0.1000
118.000	0.7000
120.000	1.4000
121.000	34.0000

Name: B10 Base Flow(cfs): 0.000 Init Stage(ft): 94.880
Group: BASE Warn Stage(ft): 109.000
Type: Stage/Area

Stage(ft)	Area(ac)
94.880	0.2100
98.000	0.3700
102.000	0.5300
106.000	0.6900
109.000	0.8500

Name: B12 Base Flow(cfs): 0.000 Init Stage(ft): 128.000
Group: BASE Warn Stage(ft): 130.000
Type: Stage/Area

Stage(ft)	Area(ac)
128.000	0.1000
129.000	0.9000
130.000	3.3000

Name: B13 Base Flow(cfs): 0.000 Init Stage(ft): 125.100
Group: BASE Warn Stage(ft): 129.000
Type: Stage/Area

Stage(ft)	Area(ac)
125.100	0.0500
126.000	0.2000
127.000	0.3000
128.000	0.5000
129.000	0.8000

Name: B14 Base Flow(cfs): 0.000 Init Stage(ft): 124.500
Group: BASE Warn Stage(ft): 128.000
Type: Stage/Area

Stage(ft)	Area(ac)
124.500	0.0500
125.000	0.1000
126.000	0.7000
127.000	0.9000
128.000	1.0000

Name: B2 Base Flow(cfs): 0.000 Init Stage(ft): 123.700
Group: BASE Warn Stage(ft): 127.000
Type: Stage/Area

Stage(ft)	Area(ac)
123.700	0.1000
124.000	1.5000
125.000	2.2000
126.000	2.6000
126.800	3.0000
127.000	3.6000

Name: B3 Base Flow(cfs): 0.000 Init Stage(ft): 123.700
Group: BASE Warn Stage(ft): 127.000
Type: Stage/Area

Stage(ft)	Area(ac)
123.700	0.1000
124.000	1.1000
125.000	1.5000
126.000	2.0000
126.800	2.4000
127.000	3.0000

Name: B4 Base Flow(cfs): 0.000 Init Stage(ft): 121.700
Group: BASE Warn Stage(ft): 125.000
Type: Stage/Area

Stage(ft)	Area(ac)
120.600	106.0000
123.000	111.3000
124.000	116.9000
125.000	122.7000

Name: B5 Base Flow(cfs): 0.000 Init Stage(ft): 120.400
Group: BASE Warn Stage(ft): 124.500
Type: Stage/Area

Stage(ft)	Area(ac)
118.100	10.0000
121.000	10.5000
123.500	11.0300
124.500	11.6000

Name: B6 Base Flow(cfs): 0.000 Init Stage(ft): 110.100
Group: BASE Warn Stage(ft): 120.000
Type: Stage/Area

Stage(ft)	Area(ac)
110.100	21.1000
113.000	22.2000
115.000	23.3000
117.000	24.5000
120.000	25.7000

Name: B6a Base Flow(cfs): 0.000 Init Stage(ft): 107.200
Group: BASE Warn Stage(ft): 114.000
Type: Stage/Area

Stage(ft)	Area(ac)
107.000	0.0100
114.000	0.1000

Name: B7 Base Flow(cfs): 0.000 Init Stage(ft): 90.000
Group: BASE Warn Stage(ft): 98.000
Type: Stage/Area

Stage(ft)	Area(ac)
90.000	0.0001
91.490	0.0001
91.500	3.4000
92.000	3.8000
93.000	4.6000
94.000	5.9000
95.000	9.5000
96.000	18.6000
97.000	22.9000
98.000	31.6000

Name: B7-Creek South Base Flow(cfs): 0.000 Init Stage(ft): 120.200
Group: BASE Warn Stage(ft): 125.000

Type: Stage/Area

Stage(ft)	Area(ac)

Name: Citrus Base Flow(cfs): 0.000 Init Stage(ft): 122.100
Group: BASE Warn Stage(ft): 128.000
Type: Stage/Area

Stage(ft)	Area(ac)
122.100	0.1000
125.000	0.2000
125.500	2.1000
126.000	4.1000
128.000	10.3000

Name: NA1 Base Flow(cfs): 0.000 Init Stage(ft): 122.500
Group: BASE Warn Stage(ft): 129.000
Type: Stage/Area

Stage(ft)	Area(ac)
122.500	0.0500
123.000	0.1000
124.000	2.2000
125.000	2.5000
128.000	3.1000
129.000	3.4000

Name: NA2 Base Flow(cfs): 0.000 Init Stage(ft): 121.100
Group: BASE Warn Stage(ft): 127.000
Type: Stage/Area

Stage(ft)	Area(ac)
121.100	0.1000
122.000	3.0000
123.000	6.7000
124.000	8.1000
125.000	8.9000
126.000	10.2000
127.000	11.2000

Name: NB1 Base Flow(cfs): 0.000 Init Stage(ft): 124.100
Group: BASE Warn Stage(ft): 128.000
Type: Stage/Area

Stage(ft)	Area(ac)
124.100	0.1000
125.000	0.9000
126.000	3.3000
127.000	9.3000
128.000	25.0000

Name: NB2 Base Flow(cfs): 0.000 Init Stage(ft): 125.800
Group: BASE Warn Stage(ft): 131.000
Type: Stage/Area

Initial Stage set using PONDS drawdown analysis following 25 yr 24 hr storm event

Stage(ft)	Area(ac)
125.800	0.1000
126.000	0.8000
127.000	5.2000
130.000	6.0000
131.000	6.3000

Name: NC Base Flow(cfs): 0.000 Init Stage(ft): 130.350
Group: BASE Warn Stage(ft): 132.500
Type: Stage/Area

Initial Stage set using PONDS drawdown for 25 yr 24 hr storm event

Stage(ft)	Area(ac)
126.300	0.1000

127.000	0.7000
128.000	2.5000
130.000	3.0000
132.500	3.4000

Name: ND Base Flow(cfs): 0.000 Init Stage(ft): 106.400
Group: BASE Warn Stage(ft): 115.000
Type: Stage/Area

itial Stage set from PONDS drawdown analysis following 25 yr 24 hr storm event

Stage(ft)	Area(ac)
106.400	0.1000
107.000	7.9000
108.000	10.0000
109.000	11.3000
110.000	11.9000
115.000	15.4000

Name: NPDES Base Flow(cfs): 0.000 Init Stage(ft): 90.800
Group: BASE Warn Stage(ft): 95.000
Type: Time/Stage

Time(hrs)	Stage(ft)
0.00	90.800
999.00	90.800

Name: SRA Base Flow(cfs): 0.000 Init Stage(ft): 115.200
Group: BASE Warn Stage(ft): 121.000
Type: Stage/Area

Stage(ft)	Area(ac)
115.200	0.0100
116.000	5.0000
117.000	7.0000
119.000	9.0000
121.000	11.0000

== Cross Sections ==

Name: B3-Discharge Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	127.000	0.000000
200.000	126.800	0.000000
730.000	127.000	0.000000

Name: B3-W Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	160.000	0.000000
0.000	157.400	0.000000
100.000	157.000	0.000000
200.000	156.000	0.000000
250.000	159.100	0.000000
300.000	150.000	0.000000
350.000	135.000	0.000000
400.000	128.000	0.000000
500.000	125.500	0.000000
600.000	130.700	0.000000
700.000	126.800	0.000000
700.000	160.000	0.000000

Name: B6-Discharge Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	112.480	0.000000
20.000	110.520	0.000000
25.000	110.100	0.000000

29.000	110.580	0.000000
48.000	112.950	0.000000

Name: B9-W Group: BASE
Encroachment: No

Station(ft)	Elevation(ft)	Manning's N
0.000	110.000	0.000000
0.000	93.200	0.000000
100.000	95.000	0.000000
400.000	94.300	0.000000
700.000	94.000	0.000000
900.000	93.700	0.000000
1100.000	93.200	0.000000
1100.000	110.000	0.000000

== Pipes ==

Name: OS
Group: BASE
From Node: Citrus
To Node: B7-Creek South
Length(ft): 65.00
Count: 2
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	36.00	36.00
Rise(in):	36.00	36.00
Invert(ft):	120.900	120.200
Manning's N:	0.012000	0.012000
op Clip(in):	0.000	0.000
ot Clip(in):	0.000	0.000

stream FHWA Inlet Edge Description:
rcular CMP: Mitered to slope

Downstream FHWA Inlet Edge Description:
ircular CMP: Mitered to slope

ta on inverts, Manning n, size and material from Hillsborough County SWMM model

There is no mitered end section option for RCP, so this one for CMP is used as best available data.

Name: S-13A
Group: BASE
From Node: B4
To Node: B5
Length(ft): 105.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	121.690	120.710
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
ot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
ircular Concrete: Groove end projecting

ownstream FHWA Inlet Edge Description:
ircular Concrete: Groove end projecting

Name: S-13B
Group: BASE
From Node: B4
To Node: B5
Length(ft): 105.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	121.750	120.860
Manning's N:	0.012000	0.012000
op Clip(in):	0.000	0.000
ot Clip(in):	0.000	0.000

stream FHWA Inlet Edge Description:
rcular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-14A
Group: BASE

From Node: B5
To Node: B6

Length(ft): 49.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	120.350	118.810
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-14B
Group: BASE

From Node: B5
To Node: B6

Length(ft): 105.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	120.350	118.810
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-15A
Group: BASE

From Node: B6a
To Node: B10

Length(ft): 49.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	18.00	18.00
Rise(in):	18.00	18.00
Invert(ft):	106.850	106.830
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-15B
Group: BASE

From Node: B6a
To Node: B10

Length(ft): 49.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	15.00	15.00
Rise(in):	15.00	15.00
Invert(ft):	106.770	106.680
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-16A
Group: BASE

From Node: B10
To Node: B7

Length(ft): 22.00
Count: 1
Friction Equation: Average Conveyance

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Automatic
Span(in):	22.00	22.00	Flow:	Both
Rise(in):	22.00	22.00	Entrance Loss Coef:	0.50
Invert(ft):	94.870	94.620	Exit Loss Coef:	1.00
Manning's N:	0.024000	0.024000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dn
			Stabilizer Option:	None

stream FHWA Inlet Edge Description:
rcular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Name: S-16B | From Node: B10 | Length(ft): 21.00
Group: BASE | To Node: B7 | Count: 1
Friction Equation: Average Conveyance

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Automatic
Span(in):	22.00	22.00	Flow:	Both
Rise(in):	22.00	22.00	Entrance Loss Coef:	0.50
Invert(ft):	94.970	94.810	Exit Loss Coef:	1.00
Manning's N:	0.024000	0.024000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dn
			Stabilizer Option:	None

stream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

wnstream FHWA Inlet Edge Description:
rcular Concrete: Square edge w/ headwall

Name: S-17A | From Node: B7 | Length(ft): 51.00
Group: BASE | To Node: NPDES | Count: 1
Friction Equation: Average Conveyance

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Automatic
Span(in):	48.00	48.00	Flow:	Both
Rise(in):	48.00	48.00	Entrance Loss Coef:	0.50
Invert(ft):	90.980	90.690	Exit Loss Coef:	1.00
Manning's N:	0.012000	0.012000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dn
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

wnstream FHWA Inlet Edge Description:
rcular Concrete: Square edge w/ headwall

Name: S-17B | From Node: B7 | Length(ft): 51.00
Group: BASE | To Node: NPDES | Count: 1
Friction Equation: Average Conveyance

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Automatic
Span(in):	48.00	48.00	Flow:	Both
Rise(in):	48.00	48.00	Entrance Loss Coef:	0.50
Invert(ft):	90.870	90.620	Exit Loss Coef:	1.00
Manning's N:	0.012000	0.012000	Bend Loss Coef:	0.00
Top Clip(in):	0.000	0.000	Outlet Ctrl Spec:	Use dc or tw
Bot Clip(in):	0.000	0.000	Inlet Ctrl Spec:	Use dn
			Stabilizer Option:	None

Upstream FHWA Inlet Edge Description:
rcular Concrete: Square edge w/ headwall

wnstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: S-20A | From Node: B1 | Length(ft): 91.00
Group: BASE | To Node: ND | Count: 1
Friction Equation: Average Conveyance

	UPSTREAM	DOWNSTREAM		
Geometry:	Circular	Circular	Solution Algorithm:	Automatic
Span(in):	48.00	48.00	Flow:	Both
			Entrance Loss Coef:	0.50

Rise(in):	48.00	48.00
Invert(ft):	115.320	114.600
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: S-20B
Group: BASE

From Node: B1
To Node: ND

Length(ft): 91.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	48.00	48.00
Rise(in):	48.00	48.00
Invert(ft):	115.480	114.730
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Downstream FHWA Inlet Edge Description:
Circular Concrete: Groove end projecting

Name: S-21
Group: BASE

From Node: B12
To Node: ND

Length(ft): 35.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	36.00	36.00
Rise(in):	36.00	36.00
Invert(ft):	123.160	122.950
Manning's N:	0.012000	0.012000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Downstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

Name: S-7
Group: BASE

From Node: NA2
To Node: B3

Length(ft): 37.00
Count: 1
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw
Inlet Ctrl Spec: Use dn
Stabilizer Option: None

	UPSTREAM	DOWNSTREAM
Geometry:	Circular	Circular
Span(in):	24.00	24.00
Rise(in):	24.00	24.00
Invert(ft):	122.320	122.070
Manning's N:	0.024000	0.024000
Top Clip(in):	0.000	0.000
Bot Clip(in):	0.000	0.000

Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Name: S-8
Group: BASE

From Node: B2
To Node: NB2

Length(ft): 101.00
Count: 2
Friction Equation: Average Conveyance
Solution Algorithm: Automatic
Flow: Both
Entrance Loss Coef: 0.50
Exit Loss Coef: 1.00
Bend Loss Coef: 0.00
Outlet Ctrl Spec: Use dc or tw

	UPSTREAM	DOWNSTREAM
Geometry:	Horz Ellipse	Horz Ellipse
Span(in):	54.00	54.00
Rise(in):	34.00	34.00
Invert(ft):	126.510	126.680
Manning's N:	0.012000	0.012000

```
Top Clip(in): 0.000          0.000                    Inlet Ctrl Spec: Use dn
Bot Clip(in): 0.000          0.000                  Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

Downstream FHWA Inlet Edge Description:
Horizontal Ellipse Concrete: Square edge with headwall

--------------------------------------------------------------------------------

        Name: S-9                  From Node: NB1          Length(ft): 344.00
       Group: BASE                   To Node: B2                Count: 1
                                                  Friction Equation: Average Conveyance
             UPSTREAM       DOWNSTREAM          Solution Algorithm: Automatic
    Geometry: Circular      Circular                          Flow: Both
    Span(in): 24.00         24.00               Entrance Loss Coef: 0.50
    Rise(in): 24.00         24.00                  Exit Loss Coef: 1.00
  Invert(ft): 123.900       123.640                Bend Loss Coef: 0.00
Manning's N: 0.024000       0.024000             Outlet Ctrl Spec: Use dc or tw
Top Clip(in): 0.000         0.000                 Inlet Ctrl Spec: Use dn
Bot Clip(in): 0.000         0.000               Stabilizer Option: None


Upstream FHWA Inlet Edge Description:
Circular CMP: Projecting

Downstream FHWA Inlet Edge Description:
Circular CMP: Projecting

================================================================================
=== Channels ===================================================================
================================================================================

        Name:                      From Node:              Length(ft): 0.00
       Group: BASE                   To Node:                   Count: 1

             UPSTREAM       DOWNSTREAM          Friction Equation: Average Conveyance
    Geometry: Trapezoidal   Trapezoidal       Solution Algorithm: Automatic
  Invert(ft): 0.000         0.000                             Flow: Both
TClpInitZ(ft): 9999.000     9999.000            Contraction Coef: 0.000
  Manning's N: 0.000000     0.000000              Expansion Coef: 0.000
Top Clip(ft): 0.000         0.000              Entrance Loss Coef: 0.000
Bot Clip(ft): 0.000         0.000                 Exit Loss Coef: 0.000
    Main XSec:                                  Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                   Inlet Ctrl Spec: Use dn
    Aux XSec1:                                 Stabilizer Option: None
 AuxElev2(ft):
    Aux XSec2:
Top Width(ft):
    Depth(ft):
Bot Width(ft): 0.000        0.000
 LtSdSlp(h/v): 0.00         0.00
 RtSdSlp(h/v): 0.00         0.00


--------------------------------------------------------------------------------

        Name: Creek-Channel        From Node: B7-Creek South  Length(ft): 3000.00
       Group: BASE                   To Node: B7                Count: 1

             UPSTREAM       DOWNSTREAM          Friction Equation: Average Conveyance
    Geometry: Trapezoidal   Trapezoidal       Solution Algorithm: Automatic
  Invert(ft): 120.200       98.000                            Flow: Both
TClpInitZ(ft): 9999.000     9999.000            Contraction Coef: 0.000
  Manning's N: 0.060000     0.060000              Expansion Coef: 0.000
Top Clip(ft): 0.000         0.000              Entrance Loss Coef: 0.000
Bot Clip(ft): 0.000         0.000                 Exit Loss Coef: 0.000
    Main XSec:                                  Outlet Ctrl Spec: Use dc or tw
 AuxElev1(ft):                                   Inlet Ctrl Spec: Use dn
    Aux XSec1:                                 Stabilizer Option: None
 AuxElev2(ft):
    Aux XSec2:
Top Width(ft):
    Depth(ft):
Bot Width(ft): 30.000       30.000
 LtSdSlp(h/v): 15.00        15.00
 RtSdSlp(h/v): 15.00        15.00


================================================================================
=== Drop Structures ============================================================
================================================================================

        Name: S-1B                 From Node: NA1          Length(ft): 115.00
       Group: BASE                   To Node: B7-Creek South    Count: 1

             UPSTREAM       DOWNSTREAM          Friction Equation: Average Conveyance
```

```
   Geometry: Circular       Circular                Solution Algorithm: Automatic
    Span(in): 36.00         36.00                                 Flow: Both
    Rise(in): 36.00         36.00                Entrance Loss Coef: 0.500
  Invert(ft): 115.450       114.930                  Exit Loss Coef: 1.000
Manning's N: 0.012000       0.012000               Outlet Ctrl Spec: Use dc or tw
op Clip(in): 0.000          0.000                    Inlet Ctrl Spec: Use dn
ot Clip(in): 0.000          0.000                     Solution Incs: 10

Upstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

wnstream FHWA Inlet Edge Description:
rcular Concrete: Square edge w/ headwall


* Weir 1 of 1 for Drop Structure S-1B ***
                                                                          TABLE
               Count: 1                        Bottom Clip(in): 0.000
                Type: Horizontal                  Top Clip(in): 0.000
                Flow: Both                     Weir Disc Coef: 3.200
            Geometry: Circular                Orifice Disc Coef: 0.600

            Span(in): 60.00                         Invert(ft): 123.400
            Rise(in): 60.00                   Control Elev(ft): 123.400


-------------------------------------------------------------------------------------------------
      Name: S-3                 From Node: B13                Length(ft): 81.00
     Group: BASE                  To Node: B7-Creek South          Count: 1

            UPSTREAM        DOWNSTREAM              Friction Equation: Average Conveyance
  Geometry: Circular        Circular                Solution Algorithm: Automatic
   Span(in): 36.00          36.00                                 Flow: Both
   Rise(in): 36.00          36.00                Entrance Loss Coef: 0.500
 Invert(ft): 122.960        122.070                  Exit Loss Coef: 1.000
Manning's N: 0.012000       0.012000               Outlet Ctrl Spec: Use dc or tw
op Clip(in): 0.000          0.000                    Inlet Ctrl Spec: Use dn
ot Clip(in): 0.000          0.000                     Solution Incs: 10

pstream FHWA Inlet Edge Description:
Circular Concrete: Square edge w/ headwall

wnstream FHWA Inlet Edge Description:
rcular Concrete: Square edge w/ headwall


** Weir 1 of 2 for Drop Structure S-3 ***
                                                                          TABLE
               Count: 1                        Bottom Clip(in): 0.000
                Type: Horizontal                  Top Clip(in): 0.000
                Flow: Both                     Weir Disc Coef: 3.200
            Geometry: Circular                Orifice Disc Coef: 0.600

            Span(in): 48.00                         Invert(ft): 127.440
            Rise(in): 48.00                   Control Elev(ft): 127.440

*** Weir 2 of 2 for Drop Structure S-3 ***
                                                                          TABLE
               Count: 1                        Bottom Clip(in): 0.000
                Type: Horizontal                  Top Clip(in): 0.000
                Flow: Both                     Weir Disc Coef: 3.200
            Geometry: Circular                Orifice Disc Coef: 0.600

            Span(in): 48.00                         Invert(ft): 126.820
            Rise(in): 48.00                   Control Elev(ft): 126.820


=================================================================================================
== Weirs ========================================================================================
=================================================================================================

      Name: B3-W                From Node: B3
     Group: BASE                  To Node: B4
      Flow: Both                    Count: 1
      Type: Vertical: Mavis      Geometry: Irregular

                    XSec: B3-Discharge
                Invert(ft): 126.800
     Control Elevation(ft): 126.800
    Struct Opening Dim(ft): 9999.00
                                          TABLE
          Bottom Clip(ft): 0.000
             Top Clip(ft): 0.000
       Weir Discharge Coef: 3.200
    Orifice Discharge Coef: 0.600


-------------------------------------------------------------------------------------------------
      Name: B3_W                From Node: B3
     Group: BASE                  To Node: B2
      Flow: Both                    Count: 1
      Type: Vertical: Fread      Geometry: Irregular
```

```
                XSec: B3-W
          Invert(ft): 125.500
Control Elevation(ft): 125.500
Struct Opening Dim(ft): 9999.00
                                        TABLE
      Bottom Clip(ft): 0.000
         Top Clip(ft): 0.000
   Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

```
      Name: B6-W                From Node: B6
     Group: BASE                  To Node: B6a
      Flow: Both                    Count: 1
      Type: Vertical: Mavis      Geometry: Irregular

                XSec: B6-Discharge
          Invert(ft): 110.100
Control Elevation(ft): 110.100
Struct Opening Dim(ft): 9999.00
                                        TABLE
      Bottom Clip(ft): 0.000
         Top Clip(ft): 0.000
   Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

```
      Name: B_SW                From Node: NB2
     Group: BASE                  To Node: B4
      Flow: Both                    Count: 1
      Type: Vertical: Fread      Geometry: Trapezoidal

    Bottom Width(ft): 80.00
 Left Side Slope(h/v): 4.00
Right Side Slope(h/v): 4.00
          Invert(ft): 130.000
Control Elevation(ft): 130.000
Struct Opening Dim(ft): 9999.00
                                        TABLE
      Bottom Clip(ft): 0.000
         Top Clip(ft): 0.000
   Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

```
      Name: C_SW                From Node: NC
     Group: BASE                  To Node: B4
      Flow: Both                    Count: 1
      Type: Vertical: Fread      Geometry: Trapezoidal

    Bottom Width(ft): 30.00
 Left Side Slope(h/v): 4.00
Right Side Slope(h/v): 4.00
          Invert(ft): 131.000
Control Elevation(ft): 131.000
Struct Opening Dim(ft): 9999.00
                                        TABLE
      Bottom Clip(ft): 0.000
         Top Clip(ft): 0.000
   Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

```
      Name: D_SW                From Node: ND
     Group: BASE                  To Node: B7
      Flow: Both                    Count: 1
      Type: Vertical: Fread      Geometry: Trapezoidal

    Bottom Width(ft): 68.00
 Left Side Slope(h/v): 4.00
Right Side Slope(h/v): 4.00
          Invert(ft): 114.500
Control Elevation(ft): 114.500
Struct Opening Dim(ft): 9999.00
                                        TABLE
      Bottom Clip(ft): 0.000
         Top Clip(ft): 0.000
   Weir Discharge Coef: 3.200
Orifice Discharge Coef: 0.600
```

Breaches

```
        Name:                          From Node:                        Count: 1
       Group: BASE                       To Node:                         Flow: Both

     Bottom Width(ft): 0.00            Water Surface Elev(ft): 0.000
   Left Side Slope(h/v): 0.00            Breach Duration(hrs): 0.00
  Right Side Slope(h/v): 0.00                      Power Coef: 0.00
  Bottom Breach Elev(ft): 0.000          Weir Discharge Coef: 0.000
    Top Breach Elev(ft): 0.000
```

Rating Curves

```
        Name:                          From Node:                        Count: 1
       Group: BASE                       To Node:                         Flow: Both

             TABLE          ELEV ON(ft)      ELEV OFF(ft)
         #1:                0.000            0.000
         #2:                0.000            0.000
         #3:                0.000            0.000
         #4:                0.000            0.000
```

Hydrology Simulations

```
        Name: 25YR24Hr
    Filename: T:\08449 - Hillsborough\030-02 SCLF General Services\1600 - Site ERP\ICPR Modeling\ExistingConditions\25YR

    Override Defaults: Yes
  Storm Duration(hrs): 24.00
        Rainfall File: Flmod
  Rainfall Amount(in): 8.40

me(hrs)        Print Inc(min)
-------------- --------------
.000           15.00
14.000         5.00
150.000        30.00
```

Routing Simulations

```
        Name: 25YR24HR            Hydrology Sim: 25YR24Hr
    Filename: T:\08449 - Hillsborough\030-02 SCLF General Services\1600 - Site ERP\ICPR Modeling\ExistingConditions\25YR

     Execute: Yes         Restart: No           Patch: No
 Alternative: No

      Max Delta Z(ft): 1.00                    Delta Z Factor: 0.00500
  Time Step Optimizer: 10.000
     Start Time(hrs): 0.000                     End Time(hrs): 150.00
  Min Calc Time(sec): 0.5000               Max Calc Time(sec): 60.0000
     Boundary Stages:                         Boundary Flows:

me(hrs)        Print Inc(min)
-------------- --------------
12.000         15.000
14.000         5.000
50.000         30.000

Group          Run
-------------- -----
BASE           Yes
```

REVISED EXISTING CONDITION OUTPUT DATA

Name	Group	Simulation	Max Time Flow hrs	Max Flow cfs	Max Delta Q cfs	Max Time US Stage hrs	Max US Stage ft	Max Time DS Stage hrs	Max DS Stage ft
B3-W	BASE	25YR24HR	0.00	0.000	0.000	150.00	125.513	25.33	122.873
B3_W	BASE	25YR24HR	0.00	0.000	-0.019	150.00	125.513	14.33	125.986
B6-W	BASE	25YR24HR	19.84	29.376	0.052	20.04	111.702	20.06	111.614
B_SW	BASE	25YR24HR	0.00	0.000	0.000	14.70	126.987	25.33	122.873
C_SW	BASE	25YR24HR	12.31	169.777	0.393	12.31	132.339	25.33	122.873
Creek-Channel	BASE	25YR24HR	17.58	127.849	-0.182	17.58	121.845	17.58	98.727
D_SW	BASE	25YR24HR	0.00	0.000	0.000	47.50	112.844	19.32	97.412
OS	BASE	25YR24HR	17.49	126.065	14.382	17.49	126.854	17.49	122.307
S-13A	BASE	25YR24HR	25.26	5.828	-0.036	25.33	122.873	13.80	121.842
S-13B	BASE	25YR24HR	25.15	5.312	-0.032	25.33	122.873	13.43	121.828
S-14A	BASE	25YR24HR	15.62	9.093	0.032	15.74	121.865	15.62	119.431
S-14B	BASE	25YR24HR	15.70	8.932	0.021	15.74	121.865	15.70	119.562
S-15A	BASE	25YR24HR	20.06	17.230	0.278	20.06	111.614	19.32	108.273
S-15B	BASE	25YR24HR	20.06	12.145	0.482	20.06	111.614	18.15	107.898
S-16A	BASE	25YR24HR	12.94	17.465	0.022	19.71	98.679	19.32	97.412
S-16B	BASE	25YR24HR	12.94	16.586	0.020	19.71	98.679	19.32	97.412
S-17A	BASE	25YR24HR	19.32	122.204	-8.178	19.32	97.412	19.32	94.141
S-17B	BASE	25YR24HR	19.32	123.952	-8.391	19.32	97.412	16.17	94.620
S-1B	BASE	25YR24HR	12.26	17.338	0.040	12.26	123.892	17.58	121.845
S-20A	BASE	25YR24HR	13.28	94.923	17.589	13.28	120.319	13.15	117.553
S-20B	BASE	25YR24HR	13.28	91.782	14.797	13.28	120.319	13.23	117.636
S-21	BASE	25YR24HR	0.00	60.776	60.776	0.00	128.000	0.00	125.467
S-3	BASE	25YR24HR	12.54	7.623	0.017	12.54	127.150	17.58	121.845
S-7	BASE	25YR24HR	91.75	0.000	-4.414	149.99	125.513	150.00	125.513
S-8	BASE	25YR24HR	0.00	0.000	0.003	14.70	126.817	14.70	126.987
S-9	BASE	25YR24HR	18.15	6.388	0.045	17.14	126.988	14.33	125.986

Name	Group	Simulation	Max Time Stage hrs	Max Stage ft	Warning Stage ft	Max Delta Stage ft	Max Surf Area ft2	Max Time Inflow hrs	Max Inflow cfs	Max Time Outflow hrs	Max Outflow cfs
B1	BASE	25YR24HR	13.28	120.319	121.000	-0.0349	514538	12.75	237.773	13.28	186.705
B10	BASE	25YR24HR	19.71	98.679	109.000	0.0034	17320	12.36	39.474	12.94	34.051
B12	BASE	25YR24HR	0.00	128.000	130.000	-0.2388	4368	12.50	8.374	0.00	60.776
B13	BASE	25YR24HR	12.54	127.150	129.000	0.0032	14375	12.33	7.981	12.54	7.623
B14	BASE	25YR24HR	25.00	126.945	128.000	0.0028	38725	12.00	11.233	0.00	0.000
B2	BASE	25YR24HR	14.33	125.986	127.000	0.0029	113344	12.00	72.304	0.00	0.000
B3	BASE	25YR24HR	150.00	125.513	127.000	-0.0153	76509	12.00	25.335	0.00	0.000
B4	BASE	25YR24HR	25.33	122.873	125.000	0.0008	4836172	12.50	501.614	25.26	11.140
B5	BASE	25YR24HR	15.74	121.865	124.500	0.0021	465700	12.00	270.198	15.70	18.025
B6	BASE	25YR24HR	20.04	111.702	120.000	0.0017	945727	12.08	441.487	19.84	29.376
B6a	BASE	25YR24HR	20.06	111.614	114.000	0.0050	3028	19.84	29.376	20.06	29.375
B7	BASE	25YR24HR	19.32	97.412	98.000	0.0050	1241326	13.50	393.580	19.32	246.156
B7-Creek South	BASE	25YR24HR	17.58	121.845	125.000	-0.0013	108961	17.41	127.890	17.58	127.849
Citrus	BASE	25YR24HR	17.49	126.854	128.000	-0.0240	294009	15.50	148.934	17.49	126.065
NA1	BASE	25YR24HR	12.26	123.892	129.000	0.0047	85937	12.00	30.276	12.26	17.338
NA2	BASE	25YR24HR	149.99	125.513	127.000	0.0027	416720	12.00	79.940	91.75	0.000
NB1	BASE	25YR24HR	17.14	126.988	128.000	0.0050	401959	12.25	108.047	18.15	6.388
NB2	BASE	25YR24HR	14.70	126.987	131.000	0.0011	224375	12.00	40.557	0.00	0.000
NC	BASE	25YR24HR	12.31	132.339	132.500	0.0032	146981	12.08	216.079	12.31	169.777
ND	BASE	25YR24HR	47.50	112.844	115.000	0.0076	605084	12.70	207.083	0.00	0.000
NPDES	BASE	25YR24HR	0.00	90.800	95.000	0.0000	59	19.32	246.156	0.00	0.000
SRA	BASE	25YR24HR	27.50	120.465	121.000	0.0029	455852	12.67	193.848	0.00	0.000

ATTACHMENT 3

REVISED WETLAND MAPS AND FIGURES

Figure 2.2
Land Use Map
(FLUCCS)

Legend

- Gopher Tortoise Burrow
- Landfill
- CONIFEROUS PINE (4410) (34.4 ac, 4.15 %)
- STREAMS AND WATERWAYS (5100) (6.6 ac, 0.79%)
- RESERVOIRS (5300) (91.6 ac, 11.01%)
- STREAM AND LAKE SWAMPS (6150) (8.7 ac, 1.04%)
- CYPRESS (6210) (0.9 ac, 0.1%)
- WETLAND SCRUB (6310) (0.05 ac, 0.01%)
- FRESHWATER MARSHES (6410) (1.9 ac, 0.23%)
- WET PRAIRIES (6430) (1.3 ac, 0.15%)
- EMERGENT AQUATIC VEGETATION (6440) (2.3 ac, 0.27%)
- DISTURBED LAND (7400) (117.1 ac, 14.07%)
- UTILITIES (8300) (0.6 ac, 0.07%)
- SOLID WASTE DISPOSAL (8350) (545.28 ac, 65.6%)

0 300 600 1,200 Feet

1:7,200

Source: Imagery - SWFWMD, 2006.

N

JONES EDMUNDS

For Informational Purposes Only

SHW-2
SHW-3
SHW-4
SHW-1
SHW-8
SB-7
SB-5
SB-4
SB-6
SHW-5
Section 11
Section 10
Section 12
Section 9
Section 8
Section 7
Phase V
Phase VI
Phase III
Phase IV
Phase II
Phase I
SB-1
SB-2
SB-3
SHW-7
SHW-6

Figure 2.3
Wetland Boundaries

Legend

- Gopher Tortoise Burrow
- Approved SHW

Approximate SHW

- SHGW
- SHW
- Landfill
- Section Boundary
- Approved Wetland Boundary
- Approved Wetland Boundary
- Upland-cut Drainage / Surface Water Ditch

0 300 600 1,200 Feet

1:7,200

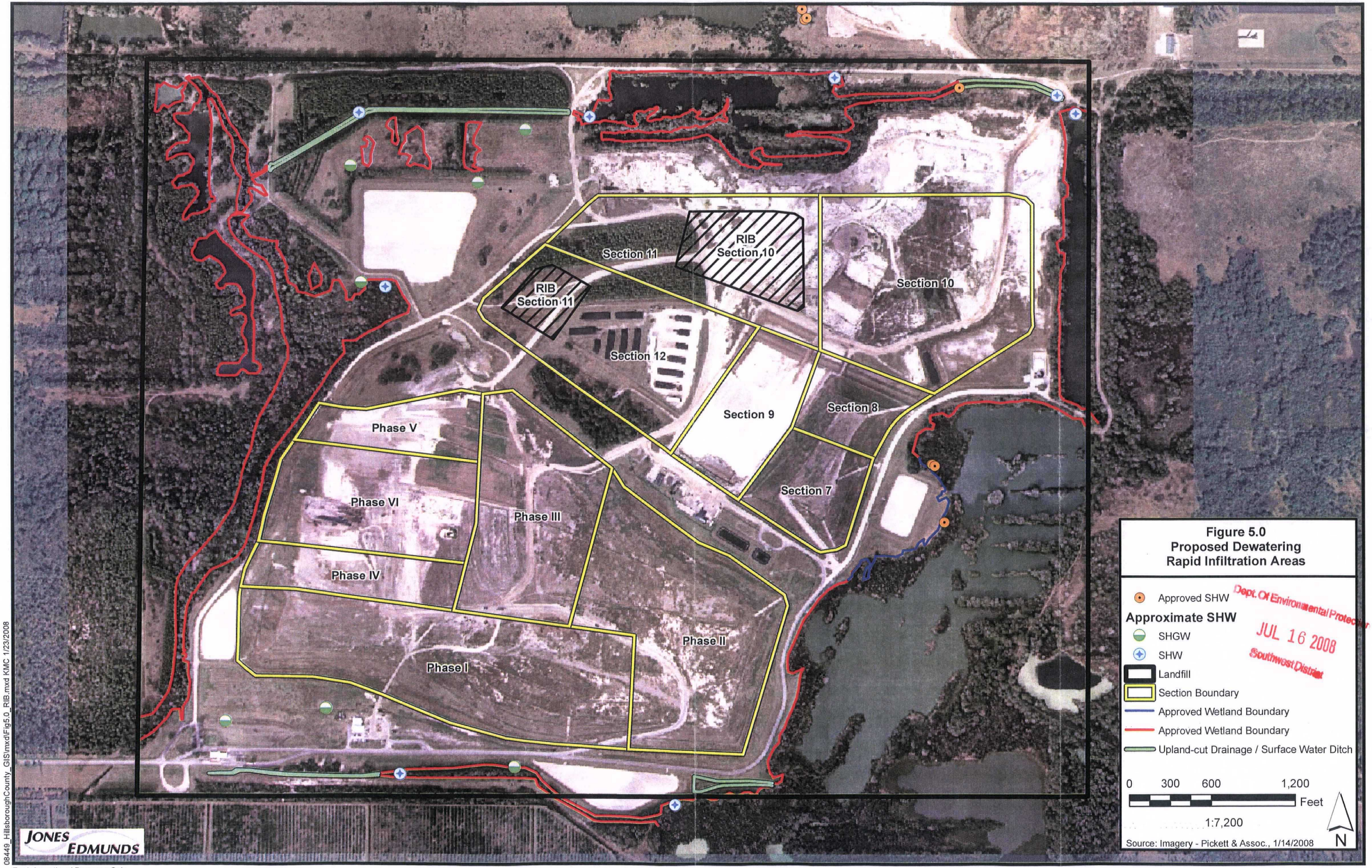
Source: Imagery - Pickett & Assoc., 1/14/2008

N

JONES EDMUNDS

08449_HillsboroughCounty_GIS\mxd\Fig2.3_WetlandBndy.mxd KMC 1/23/2008

For Informational Purposes Only



08449_HillsboroughCounty_GIS\mxd\Fig5.0_RIB.mxd KMC 1/23/2008

For Informational Purposes Only

SHW-8
595763.321,1254066.526

SHW-1
597421.874,1254037.079

SHW-2
599206.868,1245323.352

SHW-3
600823.467,1254188.635

SHW-4
600969.41,1254037.079

SB-7
596954.576,1253940.621

SB-5
595701.983,1253675.898

SB-4
596602.687,1253556.45

SB-6
595770.639,1252835.906

SHW-5
595950.395,1252804.913

Section 11

Section 10

Section 12

Section 9

Section 8

Section 7

Phase V

Phase VI

Phase III

Phase IV

Phase II

Phase I

SB-2
595527.94,1249748.896

SB-1
594825.519,1249656.607

SHW-7
596050.911,1249277.197

SB-3
596866.129,1249333.596

SHW-6
598050.503,1249061.857

JONES EDMUNDS

08449_HillsboroughCounty_GIS\mxd\Fig6.0_SHWT_LocMapy.mxd KMC 1/23/2008

For Informational Purposes Only

Figure 6.0
SHWT Determination Location Map

- Approved SHW

Approximate SHW

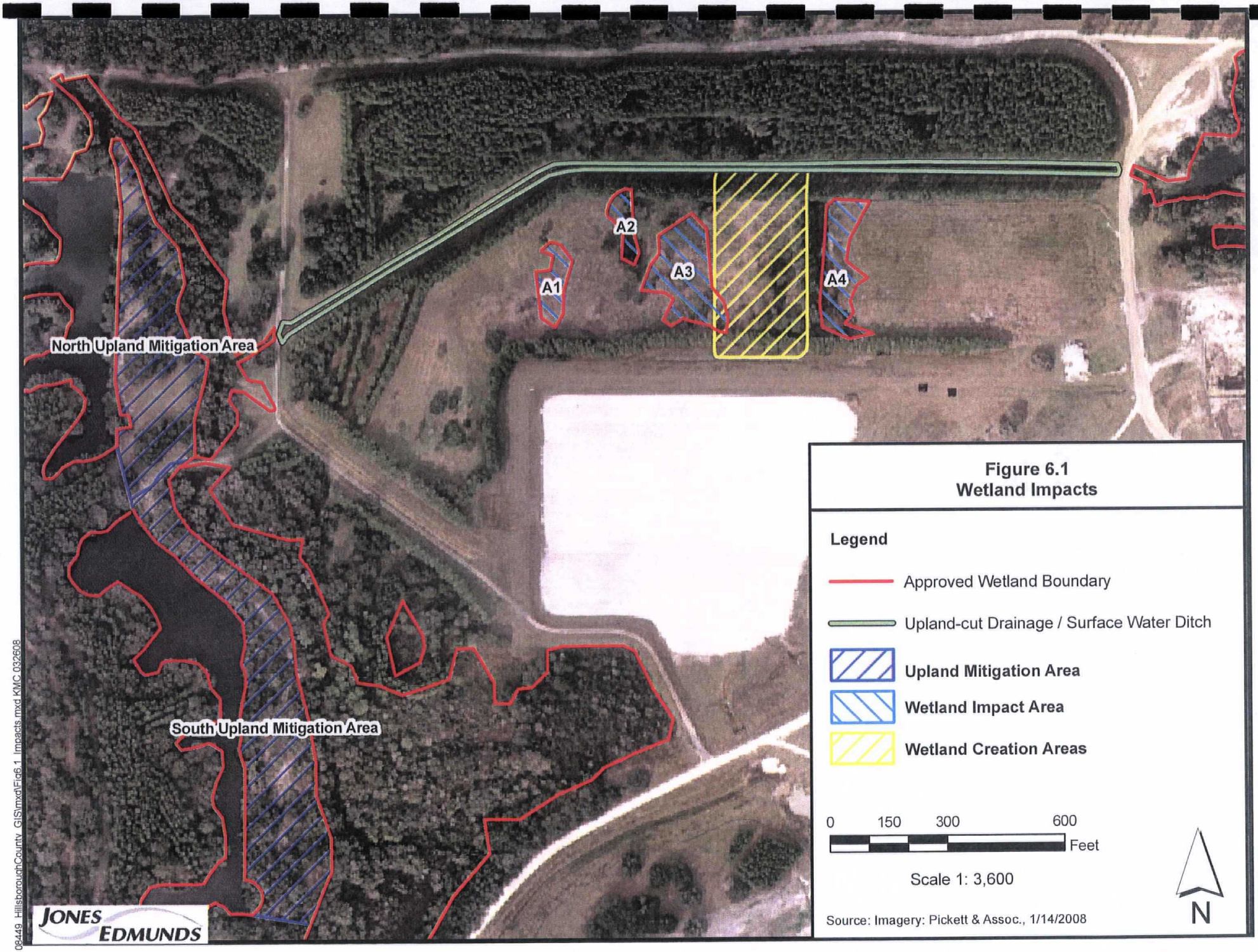
- SHGW (Easting, Northing)
- SHW (Easting, Northing)
- Landfill
- Section Boundary
- Approved Wetland Boundary
- Approved Wetland Boundary
- Upland-cut Drainage / Surface Water Ditch

0 300 600 1,200 Feet

1:7,200

N

Source: Imagery - Pickett & Assoc., 1/14/2008



08449 HillsboroughCounty GIS\mxd\Fig6.1 Impacts.mxd KMC 032608

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ATTACHMENT 4

CONTROL STRUCTURE LOCATIONS

MINE CUT 3

W.E. 110.1

WETLAND BOUNDARY (TYP.)

MATCH LINE THIS SHEET

POND J
NWL= 123.0
DWL$_{25YR}$= 125.9

CONTROL STRUCTURE:
TYPE "E" DBI W/GREASE BAFFLES
GRATE EL 126.1
3' SLOT N SIDE @ EL 123.7
7' SLOT N SIDE @ EL 123.0
INV EL 120.0

LITTORAL SHELF @ 121.0

S-14

INSTALL TURBIDITY CURTAIN

MINE CUT 2

CONST 280 LF OF 36" RCP @ 0.36%
MES INV ELEV 119.0

ELITURE ACCESS ROAD

W.E. 119.1

SILT FENCE

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

N

CAPACITY EXPANSION AREA

FINAL BUILD OUT

DRAINAGE BASIN TO POND J

REMOVE EXISTING 2 PIPES AND REPLACE W/NEW CONTROL STRUCTURE:
TYPE "H" DBI, GRATE ELEV. 111.1
3" SLOTS N & S SIDES @ ELEV. 110.1
INV ELEV. 107.0
85 LF OF 42" RCP @ 0.15%
MES @ ELEV. 106.8 ON WEST END

#13
E 598104.00
N 1254421.53
3.20

MINE CUT 3

W.E. 110.1

CONTROL STRUCTURE TYPE "E" DBI W/GREASE BAFFLES, GRATE EL. 115.5

18" SLOT N SIDE @ ELEV. 111.75
10" SLOT N SIDE @ ELEV. 110.75
36" RCP INV ELEV. 108.0

S-15A

S-15B

POND D

INSTALL TURBIDITY CURTAIN

INSTALL TURBIDITY CURTAIN

MATCH LINE THIS SHEET

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

N

Dept. Of Environmental Protection
JUL 16 2008
Southwest District

KEY PLAN

DWG 11
DWG 12
DWG 13
DWG 10
DWG 14
DWG 8
DWG 9

LTR.	DATE	REVISIONS	BY	APPRD.
1	6-25-08	REVISED PER FDEP COMMENTS	DLW	JDP

DESIGNED JDP
DRAWN DLW
CHECKED JET/JHO

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
324 S HYDE PARK AVE, TAMPA, FLORIDA 33606 / (813) 258-0703

HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS
POND J

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # P.E. # 47664

DATE 05/2008
SCALE AS SHOWN
PROJECT NO. 08449-030-02
DWG. NO. 11

Edited: 00/00/00 0:00 login N:\08449 Hillsborough County\030 - 02\1600\Contract Drawings\Civil\Site Wide_ERP\0844903002-C-11-POND-J.dwg Plotted: 7/14/08 12:54pm dwhite

NPDES DISCHARGE POINT

S-17

CONST MES INV ELEV 88.0

CONST 90 LF OF 24" RCP @ 1%

CONST TYPE "C" DBI GRATE ELEV = 93.0 2' SLOTS E & W SIDES ELEV 91.5 INV ELEV = 88.90

W.E. 89.9

W.E. 91.5

CONST MES INV ELEV 95.0

21" DIP SITE-16

S-16

CONST 100 LF OF 12" RCP @ 4% W/MES INV ELEV. 99.0 E END INV ELEV. 95.0 W END

EXISTING GRADE TO REMAIN

18" CMP SITE-18

CONST. 15' WIDE SPILLWAY AT ELEV.= 102.0

S-18

CONST MES INV ELEV 90.0

CONST 60'x30' CONCRETE RUBBLE RIP RAP

REPAIR 2-18" CMP AS NEEDED

CONST 130 LF OF 24" RCP @ 1%

DENSE

CONST TYPE "C" DBI GRATE ELEV = 97.0 2' SLOTS E & W SIDES ELEV 95.5 INV ELEV = 91.30

16" METAL PIPE

W.E. 95.5

SILT FENCE

#11
E 595105.15
N 12542 @ 0.0% W/MES INV EL 102.0
EL 96.12

CONST 42 LF OF 12" RCP

SILT FENCE

CONST 15' WIDE SPILLWAY @ ELEV. 103.0

CONST 50 LF OF 12" RCP @ 4% W/MES INV EL 100.0 W END AND INV EL 102.0 E END

10' BERM @ 105.0

EXISTING GRADE TO REMAIN

POND SED-7

10' BERM @ 107.0

POND SED-6

10' BERM @ 106.0

EXISTING GRADE TO REMAIN

POND SED-5

EXCAVATE BOTTOM TO 102.0

CONST. 15' WIDE SPILLWAY AT ELEV.= 104.0

CONST. 15' WIDE SPILLWAY AT ELEV.= 105.0

POND FINAL-SED

IMPROVE EXISTING BERM BY RAISING LOW AREA (APPROX. 250 LF) TO ELEVATION 116.4

CONSTRUCT 2 COURSES OF 8" CONCRETE BLOCKS ACROSS MOUTH OF SPILLWAY TO RAISE OVERFLOW ELEVATION FROM 114.5 TO 115.8. SPILLWAY WILL REMAIN AS EMERGENCY OVERFLOW AT ELEV. 115.8

POND D

NWL= 110.75

DWL 25YR= 115.4

S-19

SPILLWAY

PLUG EXISTING 18" RCP DISCHARGE PIPE FROM EXISTING CONTROL STRUCTURE TO ELIMINATE DISCHARGE.

Base
E 596445.60
N 1252612.38
EL 129.71

CONST. 40LF 7-36" RCP INCLUDE M.E.S. EACH END INV. ELEV.= 123.1 SE INV. ELEV. = 122.4 NW

S-21

REMOVE EXISTING 2 PIPES AND REPLACE W/NEW CONTROL STRUCTURE: TYPE "H" DBI, GRATE ELEV. 111.1 3' SLOTS N & S SIDES @ ELEV. 110.1 INV ELEV. 107.0 85 LF OF 42" RCP @ 0.15% MES @ ELEV. 106.8 ON WEST END

APPROXIMATE LOCATION OF EXISTING IMPOUNDMENT TO BE REMOVED

S-15A

S-15B

CONTROL STRUCTURE TYPE "E" DBI W/GREASE BAFFLES, GRATE EL. 115.5

18" SLOT N SIDE @ ELEV. 111.75
10" SLOT N SIDE @ ELEV. 110.75
36" RCP INV ELEV. 108.0

CONST 310 LF OF 36" RCP MES @ EAST INV ELEV. 107.0

TH-32

LITTORAL SHELF (BOTTOM EL. 109.0)

TH-42

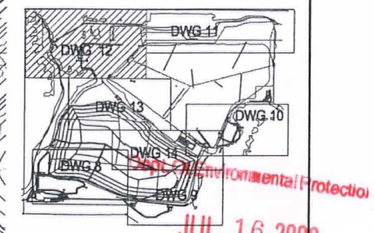
TS-3

MATCH EXISTING GRADE AT ELEV.= 109.0

GRAPHIC SCALE
0 50 100 200
SCALE IN FEET
1"=100'

N

KEY PLAN



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HILLSBOROUGH COUNTY
SOLID WASTE MANAGEMENT DEPARTMENT
SOUTHEAST COUNTY LANDFILL

STORMWATER MANAGEMENT PLANS POND D AND POLISHING PONDS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
JEFFREY D. PEQUEEN, P.E.
P.E. # 47664

DATE 05/2008
PROJECT NO. 08449-030-02
SCALE AS SHOWN
DWG. NO. 12