

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

AGENDA ITEM SUMMARY

Meeting Date:	October 16, 2007	<input checked="" type="checkbox"/> Consent	<input type="checkbox"/> Regular
		<input type="checkbox"/> Workshop	<input type="checkbox"/> Public Hearing

Department

Submitted By: Environmental Resources Management
Submitted For: Environmental Resources Management

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Task Order No. ERM07-02 to a continuing Contract (R2005-1057) with Alan Gerwig & Associates, Inc. (AGA) in the amount of \$131,118 to provide professional engineering design and permitting services in support of the restoration of Winding Waters Natural Area.

Summary: The BCC approved the Contract with AGA on June 7, 2005 (R2005-1057) and extended the Contract on May 1, 2007 (R2007-0613). Task Order No. ERM07-02 authorizes Alan Gerwig & Associates, Inc. to prepare permit applications to South Florida Water Management District, Turnpike Authority, and Northern Palm Beach County Improvement District, and to provide final engineering designs and construction plans for the recommended seepage barrier. This Task Order has 16.2% SBE participation. District 7 (JM)

Background and Justification: The approximate 550-acre Winding Waters Natural Area is located in north-central Palm Beach County immediately south of Dyer Park on Haverhill Road. The site is an upland/wetland mosaic comprised of pine flatwoods, wet prairie, cypress forest, and prairie hammock that has been highly impacted by agriculture. The proposed restoration project includes: a) creation of a 171-acre wetland system to expand/enhance impacted historic wetlands; b) backfilling and/or plugging of ditches and canals to restore a more natural hydrological regime; c) installation of new water control structures, modifications to existing water control structures, and/or installation of perimeter berms, seepage barriers and canals, as needed, to restore wetlands on the property without adversely impacting water levels on adjacent landowner properties; and d) physical removal and treatment of invasive exotic and native nuisance vegetation to maintain high quality wildlife habitat in the wetlands and associated uplands.

The BCC approved a Restoration Cost-Share Project Agreement providing for a 70% funding match up to \$1,500,000 from the Natural Resources Conservation Service on July 10, 2007 (R2007-1222) to accomplish items b, c, and d as described above. The professional engineering design and permitting services to be provided by Alan Gerwig & Associates, Inc. are required to finalize the design of above items b & c and obtain all necessary permits to construct the project. The Natural Areas Fund will be used to support design costs of the project.

Attachments:

1. Task Order No. ERM07-02 with Contract History and Budget Availability Statement
2. Contract Extension and Fee Schedule ((R2007-0613)

Recommended by:	<u>Richard E. Walsby</u> Department Director	<u>9/25/07</u> Date
Approved by:	<u>[Signature]</u> County Administrator	<u>[Signature]</u> Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2008	2009	2010	2011	2012
Capital Expenditures	\$131,118	_____	_____	_____	_____
Operating Costs	_____	_____	_____	_____	_____
External Revenues	_____	_____	_____	_____	_____
Program Income (County)	_____	_____	_____	_____	_____
In-Kind Match (County)	_____	_____	_____	_____	_____
NET FISCAL IMPACT	\$131,118	_____	_____	_____	_____
# ADDITIONAL FTE POSITIONS (Cumulative)	_____	_____	_____	_____	_____

Is Item Included in Current Budget? Yes X No _____
 Budget Account No.: Fund 3900 Department 381 Unit E433 Object 6505
 Program _____

B. Recommended Sources of Funds/Summary of Fiscal Impact:

Natural Areas Fund Reimbursement & the Capital Outlay Fund

C. Department Fiscal Review: *JS*

III. REVIEW COMMENTS

A. OFMB Fiscal and /or Contract Dev. and Control Comments:

John Orr 9-26
 OFMB *9/26/07*
Contract Development and Control 9/27/07

B. Legal Sufficiency:

James C. Wyzel 10/1/07
 Assistant County Attorney

**This item complies with current
 County policies.**

C. Other Department Review:

 Department Director

TASK ORDER

TASK ORDER: ERM07-02 CONSULTANT: Alan Gerwig & Associates, Inc.

ACCOUNT: 3002-381-E433-6504⁵⁸ CONTRACT: R2005-1057
R2006-0756, R2007-0613

[Fiscal approval of Budget Availability: See above]

PROJECT MANAGER: Steve Pisano PHONE: 561-233-2521

CONTRACT MANAGER: Juan Cueto PHONE: 561-233-2431

PROJECT NAME: Winding Waters Natural Area Restoration

LOCATION (DISTRICT): West Palm Beach (District 7)

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall design, permit, and prepare plans and specifications for the restoration of this site, and attend agency reviews, as described in the scope of services.

DELIVERABLE SCHEDULE: see proposal dated 9/18/07.

TASK ORDER TYPE: FIXED PRICE \$101,700.00 DUE DATE: 9/14/08
NOT-TO-EXCEED TRAVEL & GEOTECH EXPENSE \$29,418.00

TOTAL AMOUNT \$ 131,118.00 See spreadsheet dated 9/13/07
RETAINAGE: \$ 0.00

(Check 1 or both) for Subcontract Amounts:	Black	Hispanic	Women	White Male
M/WBE	<input type="checkbox"/>	\$ _____	\$ _____	\$ _____
SBE	<input checked="" type="checkbox"/>	\$ _____	\$ _____	\$ <u>21,222.00</u>

TOTAL SBE-M/WBE PARTICIPATION: \$ 21,222.00

CONSULTANT REP: [Signature] DATE: 9/20/07

DIVISION DIRECTOR: Alan Gerwig, David Gillinger BA Smith DATE: 9/24/07

APPROVED AS TO TERMS AND CONDITIONS:
ERM DIRECTOR: [Signature] DATE: 9/24/07

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY: _____ DATE: _____

BOARD OF COUNTY COMMISSIONERS: _____ DATE: _____
Addie L. Greene, Chairperson

12798 W. Forest Hill Boulevard
Suite 204
Wellington, FL 33414
Phone: (561) 792-9000
Fax: (561) 792-9901
CA No. 7969

Alan Gerwig & Associates, Inc.

Consulting Engineers

ENV. RES. MGMT.

Env. Enh. & Restoration

Natural Resources Stewardship

Resources Protection

Wetland Control

Office & Support Services

Director

Deputy Director

Other _____



September 18, 2007

Steve Pisano, Environmental Analyst
Palm Beach County Department
of Environmental Resources Management
2300 North Jog Road, 4th Floor
West Palm Beach, FL 33411

Re: Winding Waters Park
Professional Services Proposal

Dear Mr. Pisano:

Please find enclosed the scope and fee proposal for the above referenced project. Included are the following documents:

- Scope of Services and supporting Fee Proposal
- Project Schedule

The fee for the scope of services is as follows:

Engineering and Permitting Services (Task I and Task II)	\$101,700.00
Reimbursable (not to exceed fees)	\$29,418.00
Total Fee (including reimbursable fees)	\$131,118.00

We appreciate the opportunity to provide you and your staff with these professional services and look forward to working with you.

Sincerely,

Alan L. Gerwig, P.E., President
ALAN GERWIG & ASSOCIATES, INC.

Encl.

RECEIVED
SEP 19 2007

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ENVIRONMENTAL RESOURCES MANAGEMENT

**Scope of Services for PBC Dept. of Environmental Resource Management
Winding Waters Natural Areas**

Background:

The Winding Waters Natural Area previously known as Parcel-17 was originally developed by WCI Communities for Palm Beach County Environmental Resource Management (ERM) as a wetland marsh system with a deep water lake. The intent was to produce some 3.2 million cubic yards of fill for WCI's use and provide the ERM with a 170-acre wetland restoration project. This program was conceived in 2001 and had progressed through the permitting process with the obtaining of the South Florida Water Management District ERP Permit and permit negotiations with Northern Palm Beach County Improvement District. WCI has since withdrawn from the original proposed project and ERM now wishes to alter some of the original design concepts. These alternatives are in an effort to improve water quality, water quantity, wildlife habitat, and long term maintenance and public use of the Natural Area. In order to achieve these improvement goals, the following items shall be evaluated.

- a) Altering the flows east of the Turnpike to enter the project along the North boundary adjacent to Dyer Park and eliminating the EPB-9 Canal.
- b) Relocating the proposed water control structure currently located on the EPB-9 Canal to the Southeast corner of the property with the discharge into the EPB-10 Canal.
- c) Estimate the seepage from the wetland along the EPB-10 canal where a differential head will be present and where, further south, groundwater withdraws take place via public drinking wells. Conceptual measures for mitigating seepage (i.e. vertical seepage barriers) will be considered.
- d) Making changes to the EPB-10 canal that would add additional storm water inflow or reduce seepage from the WWNA. Including taking additional storm water discharge from the Solid Waste Authority Southwest water control structure and the Turnpike located along the South and West property line, and raising the level of the EPB-10 canal west of Haverhill Blvd."
- e) Staging up a North boundary ditch between Dyer Park and Winding Waters Natural Area. This is to create a hydraulic barrier adjacent to Dyer Park at the Northwest corner.
- f) Ground water analysis that was previously developed by WCI & the SWA associated with the Riviera Beach Well Field. Evaluate surface and groundwater data, ground water analysis, and evaporation and seepage losses to determine grading of the overall project for wetland plantings and marsh depths.

The Scope of services necessary to meet the improvement goals and evaluate the specific areas as listed above are noted in the following Tasks:

Task 1: Design Feasibility Stage

- Sub-item A: Review all previous permits and storm water calculations associated with the project. Obtain copies of the current permit modifications to the South Florida Water Management District. Review the tail water data from the project to the Ironhorse residential community.

- Sub-item B: Obtain copies of the Riviera Beach consumptive use permit and review the previous prepared ground water model and its scenarios with the approved Riviera Beach consumptive use permit. Compare ERM well data to the ground water model. Determine possible groundwater impacts to the site and the proposed wetland grades.

- Sub-item C: Evaluate the tail water modeling taking into consideration the residential community of Iron Horse, the Turnpike, Dyer Park and the proposed Winding Waters project itself. Evaluate this tail water summary and the relocating of the water control structure from EPB-9 located at Haverhill Blvd. to EPB-10 near Haverhill Blvd. Provide a formal report detailing the findings of this tail water study. Summarize the findings and provide for a recommendation and alternatives as may be necessary, based on the findings of the tail water study. Include in this evaluation study a review of the inflows of water to the EPB-10 canal. This review of the EPB-10 canal would be to determine whether additional waters from the Southwest Dyer landfill water control structure and waters from the Turnpike South of the EPB-9 could be diverted into the Winding Waters project. Establish and attend agency reviews of the drainage/inflow concepts with the Turnpike Authority, SFWMD, NPBID and SWA.

- Sub-item D: Estimate of seepage from the wetland is to be determined along the EPB-10 Canal where the differential head between the wetland and the canal control water surface elevation. Further, impacts from the withdrawals from the existing well field located to the south will be considered.

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Alan Gerwig & Associates, Inc.

Conceptual measures for limiting seepage (e.g. vertical seepage barriers) will be developed.

Sub-item E: Summarize an overall plan for allowing off site discharges from the Turnpike from Iron Horse and Dyer Park into the project from the North boundary ditch. Summarize the EPB-10 and Southwest Dyer landfill water control structure inflows into the Southwest portion of the Project. Review the summary and the findings with the Palm Beach County ERM staff.

Task I Lump Sum Total \$84,410.00

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Task II: Presentation, Design & Permitting

- Sub-item A: Present final plan and findings to Palm Beach County Solid Waste Authority, Northern Palm Beach County Improvement District, City of Riviera Beach, South Florida Water Management District, Florida Turnpike Authority and if necessary, the affected Home Owners Association, i.e. Lone Pine Estates, Iron Horse, as may be required.
- Sub-Item B: Finalize the design of the water control structure to discharge water at the Southeast corner of the project in to the EPB-10 Canal. The structure design to provide for operable conditions, should this be a third party permit condition.
- Sub-item C: Finalize the design of the water control structure to discharge water at the North Boundary from Turnpike north ditch.
- Sub-Item D: Prepare modifications to the construction plan incorporating all the changes to the construction documents as noted herein, including grading of the wetland areas, modifications of the internal weir structures and all other project modifications within the limits of the property.
- Sub- item E: Prepare and submit permit modifications to the South Florida Water Management District modifying the current ERP application to conform to the modifications outlined herein. This task includes up to three (3) RAI responses
- Sub-item F: Submit and prepare application to the Northern Palm Beach County Improvement District for the operation and maintenance of the weir structure as noted herein.
- Sub-item G: Prepare and submit to the Florida Turnpike Authority, plans for modification of the Turnpike swales adjacent to the Western boundary of the Winding Waters project.

Task II Lump Sum Total	\$ 43,418.00
Material Experiences	\$ 1,732.00
Lump Sum Total	\$ 129,560.00
* Total Reimbursable (not to exceed)	\$ 1,558.00

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Alan Gerwig & Associates, Inc.

* Estimated Reimbursable include, but are not limited to, mileage, travel expenses, postage, copies, etc.

Deliverables:

- Task I-A Copies of Existing Permits
Tail water Calculations

- Task I-B Copies of existing SFWMD Permit for Riviera Beach

- Task I-C Routing Plan
Additional Tail water Calculations

- Task I-D Tail water Findings and Report

- Task II-A Meeting Minutes and Summaries

- Task II-B Water Control Structure Design

- Task II-C Cross Sections of Ditches
North Ditch Water Control Structure Design

- Task II-D Modifications to Construction Plans. Plans will be submitted for review at the 60% and 90% design stage.

- Task II-E Permit Application Package – SFWMD

- Task II-F Permit Application Package – Turnpike Authority

- Task II-G Permit Application Package – NPBCI

Palm Beach County ERM will be provided with two (2) hard copies and one (1) CD (or other electronic format) copy of all deliverables (AUTOCAD dwg. Files, Word documents, and Excel spreadsheets), and six (6) copies of any signed and sealed plans. Any signed and sealed plans provided to permitting agencies would be part of the six (6) copies provided to ERM. Horizontal and Vertical datum should be NAD83 State Plane Coordinates and NGVD29.

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FINANCIAL MANAGEMENT PLAN

Alan Gerwig & Associates, Inc.
Consulting Engine

Project Palm Beach County DERM - Winding Water Park
Project No. Task Order Basis
PM _____

Date: 9-13-07

Task	Task Outline - Prime - Alan Gerwig & Associates, Inc.	TOTALS	Estimated Labor					
			Proj Man (Sr. PE)	Proj Manager, P.E.	Proj. Eng, P.E.	Design Eng	CADD Tech	CADD Tech
1-A	Review current permit modifications w/SFWMD	\$754.00	4	2				
1-A	Research of prev. permits and review prev. approved Wtr. Mgmt. calc.	\$246.00		2				
1-A	Review tail water calc.	\$627.00	3	2				
1-B	Review prev. report on well field obtain SFWMD permit (Riveria Bch)	\$873.00	3	4				
1-C	Determine flow to EPB-10 from Landfill	\$627.00	3	2				
1-C	Review / Study the storm water impact EPB 9 & Ironhorse	\$873.00	3	4				
1-C	Estab. & attend mtg. w/Turnpike Author.SFWMS, NPBCID, SWA	\$4,643.00	23	14				
1-D	Seepage Evaluation	\$6,428.00	8	44				
1-E	Summarize Finding & Rev W Staff, Tail water data, & Storm water Flows	\$881.00	5	2				
2-A	Estab. & attend mtg. w/Turnpike Authority Headquarters (Incl. travel exp. Divide equally for Sr. PM and PM)	\$377.00	2	1				
2-A	Estab. & attend mtg. w/ PBC SWA Author.	\$250.00	1	1				
2-A	Estab. & attend mtg. w/ SFWMD.	\$377.00	2	1				
2-A	Estab. & attend mtg. w/NPBCID.	\$373.00	1	2				
2-A	Estab. & attend mtg. w/POA'S assume 3 meetings	\$1,508.00	8	4				
2-C	Design water control structure & flow	\$377.00	2	1				
2-D	Develop x-section of North ditch & Design WCS	\$250.00	1	1				
2-E	Modify constr. plans to conform to mod.	\$373.00	1	2				
2-F	Prepare/Submit permit mod to SFWMD	\$377.00	2	1				
2-G	Prepare/Submit permit App to TurnPike (Incl. travel exp. Divide equally for Sr. PM and PM)	\$631.00	4	1				
2-H	Prepare/Submit permit App to NPBCID	\$377.00	2	1				
Task	Task Outline - Sub-consultant - O'Dell Inc.	TOTALS	Proj Man (Sr. PE)	Proj Manager, P.E.	Proj. Eng, P.E.	Design Eng	CADD Tech	CADD Tech
1-A	Review current permit modifications w/sfwmd	\$1,738.00		10	4			2
1-A	Research of prev. permits and review prev. approved Wtr. Mgmt. calc.	\$2,766.00		10	12	4		
1-A	Review tail water calc.	\$3,480.00	2	10	18			4
1-B	Review prev. report on well field obtain SFWMD permit (Riveria Bch)	\$4,248.00	2	14	22			2
1-C	Determine flow to EPB-10 from Landfill	\$7,544.00	2	14	36	12	8	8
1-C	Review / Study the storm water impact EPB 9 & Ironhorse	\$11,812.00	4	22	44	25	16	18
1-C	Estab. & attend mtg. w/Turnpike Author.SFWMS, NPBCID, SWA	\$4,644.00	3	13	26			2
1-D	Summarize Finding & Rev W Staff, Tail water data, & Storm water Flows	\$4,366.00		12	20	5	4	4
2-A	Estab. & attend mtg. w/Turnpike Authority Headquarters	\$762.00	2		4			2
2-A	Estab. & attend mtg. w/ PBC SWA Author.	\$762.00	2		4			2
2-A	Estab. & attend mtg. w/ SFWMD.	\$762.00	2		4			2
2-A	Estab. & attend mtg. w/NPBCID.	\$762.00	2		4			2
2-A	Estab. & attend mtg. w/POA'S assume 3 meetings	\$2,366.00	8		12			3
2-C	Design water control structure & flow	\$3,258.00	4	6	4	18		
2-D	Develop x-section of North ditch & Design WCS	\$3,684.00	4	8	4	20		
2-E	Modify constr. plans to conform to mod.	\$6,156.00	6	6	12	28	8	8
2-F	Prepare/Submit permit mod to SFWMD	\$5,852.00	4	4	14	28	8	8
2-G	Prepare/Submit permit App to TurnPike	\$8,078.00	4	10	20	38	8	8
2-H	Prepare/Submit permit App to NPBCID	\$5,706.00	4	10	16	16	8	8
Task Outline - Sub-consultant - Dunkelberger Engineering & Testing, Inc.		TOTALS	Proj Man (Sr. PE)	Proj Manager, P.E.	Proj. Eng, P.E.	Design Eng	CADD Tech	CADD Tech
1-D	Seepage Evaluation	\$27,860.00						
TOTAL HOURS		991.00	133	241	280	194	60	83
BILLING RATE			\$127.00	\$123.00	\$98.00	\$90.00	\$62.00	58.00
TOTAL DOLLARS		\$127,828.00	\$16,891.00	\$29,643.00	\$27,440.00	\$17,460.00	\$3,720.00	4,814.00

<p>Material Dollars Printing: \$1.30 x 300 shts, Xerox: \$0.15 x 3500 shts, Postage: \$1.20 per mailing Photos: \$0.30 per photo, Overnight Shipping: \$35.00 x 20 mailings</p> <p>Miscellaneous Dollars Travel, Lodging, Meals, Mileage, Etc. Mileage: \$0.445 per mile, Meals & Lodging \$95.00 per diem Travel expenses are not to exceed \$1,558.00 and are subject to prior approval by ERM.</p>	\$	1,558.00	\$1,732.00	<p style="text-align: center;">Summary</p> <p>Prime Consultant: \$21,222.00 Sub-Consultant: \$106,606.00 Material Expenses: 1,732 Labor Sub-total: \$129,560.00 Reimbursable Expenses: \$ 1,558.00</p> <hr/> <p>Grand Total: \$131,118.00</p>
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DE&T DUNKELBERGER ENGINEERING & TESTING, INC.

*Technical Proposal
& Fee Estimate*

To: Alan Gerwig, P.E.
From: Kevin E. Aubry, P.E.
Date: September 7, 2007
Subject: Work Scope – Seepage Evaluation
Winding Waters Natural Area

PROJECT CONSIDERATIONS

We understand that Palm Beach County Environmental Resource Management (ERM) is considering the design and construction of a created wetland within Winding Waters Natural Area. The wetland construction will include excavations for littoral shelves and filling of a perimeter berm to contain the wetland. Control water elevation for the wetland is expected to be +13.0 feet with respect to the National Geodetic Vertical Datum of 1929 (NGVD), whereas the existing ground level is approximately +16 feet NGVD. The perimeter berm crest is expected to be at elevation +17 feet NGVD. The EPB-10 Canal borders the proposed wetland. The canal is controlled at elevation +9.0 feet NGVD several miles downstream.

An estimate of seepage from the wetland is to be determined as part of the design effort. This is especially important along the EPB-10 Canal where the differential head is the largest. Conceptual measures for limiting seepage (e.g. vertical seepage barriers) are to be considered. Further, pumping from an existing wellfield located to the south may also impact seepage quantities. Dunkelberger Engineering & Testing, Inc. (DE&T) offers to provide an evaluation of potential seepage quantities and mitigative measures.

SCOPE OF WORK

Research of Existing Data

The study will begin with a review of existing subsurface data for the project vicinity. We understand that ERM has contracted with another geotechnical engineer for the subsurface exploration. Other potential sources of information include the US Geological Survey, the Solid Waste Authority of Palm Beach County, FL, the US Department of Agriculture Soil Conservation Service, and the permit file for the existing well field. Pertinent data from the literature search will be utilized to compile background information related to stratigraphy and hydrogeology for the regional setting of the project site, and for the subsequent development of a seepage model for the project.

Subsurface Exploration

Subsurface conditions will be explored by drilling a single Standard Penetration Test (SPT) boring to a depth of 100 feet below surface grade at a location along the EPB-10 Canal bank. The boring will be drilled using a truck-mounted drilling rig and mud rotary methods. Samples of the subsurface materials will be obtained continuously in the upper 15 feet and at 5-foot vertical intervals thereafter. The samples will be placed in sealed containers and transported to the laboratory. The borehole will be sealed with cement grout upon its completion.

Piezometer Installation

At the SPT location, three piezometers will be installed. Each piezometer will consist of a five-foot length of two-inch diameter, Schedule 40 PVC well screen that is flush joint coupled to a riser pipe of similar composition. A sand filter pack will surround the wellscreen, and the borehole annulus above the filter pack will be backfilled with cement grout. Depths of the piezometers and screened intervals will be selected after reviewing the stratigraphy disclosed in the SPT boring. For purpose of this fee estimate, we have assumed the piezometers will be 20, 35 and 50 feet deep.

Field Permeability Testing

The completed piezometers will be utilized to run field permeability tests. These will be conducted by removing a slug of water from the piezometer and measuring the recovery of the water column using a down-hole data logger. Constant head test methods will also be used as a check of the permeability by measuring the amount of water required to maintain a constant head in the piezometers.

Laboratory Testing

Samples from the borings will be examined by a geotechnical engineer and classified in accordance with the Unified Soil Classification System (ASTM D 2487). Representative samples from the borings will be tested for index properties such as moisture content and grain size distribution. The test results will be summarized in tables and grain size plots.

Seepage Modeling

The field and laboratory data will be used to develop a seepage model for the Winding Waters Park site. The model will utilize the computer program SEEP/W. This is a finite element program that performs seepage analysis and determines seepage paths and rates, phreatic surfaces, pore water pressures and exit gradients. Once the seepage model is created, the potential benefits of using a seepage barrier (such as a soil-bentonite wall) will be evaluated. The magnitude of the potential reduction in seepage quantities with associated costs for the construction of the seepage barriers will be evaluated.

The effects of pumping from the nearby well field will also be evaluated. This will include an estimation of the seepage from the wetland for various downstream boundary conditions using the seepage model. The downstream boundary conditions will be determined by the cone of influence of the well field, which will be selected as part of the research of existing data.

Summary Report

The results of the study will be compiled into a summary engineering report. The report will include the following information:

- A summary of the data obtained from the existing literature.
- Subsurface profile information from the exploratory boring.
- Piezometer installation details.
- Field permeability test results.
- Laboratory test results.
- Key findings from the seepage modeling.
- Evaluation of the amount of seepage to the EPB Canal.
- Evaluation of the influence of the adjacent well field pumping on the seepage characteristics of the wetland.
- Recommendations for the most appropriate methods for controlling seepage.

Schedule & Fee

Our schedule for completion of this assignment is provided on Attachment 1. Compensation for the work will be on a unit price basis, using the fee estimate shown on Attachment 2. The unit rates shown on that attachment are consistent with our current continuing services contract with Palm Beach County. The maximum limiting amount for the work will be \$27,860, which will not be exceeded without due cause and your prior written approval.

Invoices are due and payable upon receipt. Invoices not paid within 30 days of date rendered will be assessed a finance charge of one percent per month, or fraction thereof, for each month beyond 30 days past due. Invoices not paid within 60 days will result in DE&T stopping work until such invoices rendered are paid in full. Invoices not paid within 90 days of the date rendered will be referred for collection. Client will be responsible for all expenses incurred by DE&T in the collection of any unpaid invoice, including the actual attorneys' fees and costs charged by our legal counsel.

Other terms and conditions pertaining to the engagement of our services are discussed in the General Conditions, Attachment 2. The General Conditions are hereby incorporated into and made a part of this proposal.

____oOo____

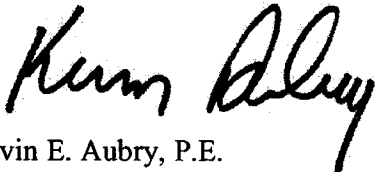
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DET appreciates the opportunity to submit this proposal and looks forward to rendering the services described herein. We trust that the proposal contents are clear and understandable. Should they require any clarification or amplification, however, please contact us.

If the proposal is satisfactory, kindly sign and return, intact, the acceptance copy provided for this purpose.

Very truly yours,

DUNKELBERGER ENGINEERING & TESTING, INC.



Kevin E. Aubry, P.E.
Geotechnical Services Manager

P6600\Geo Scope & Fee PP (Sept-07):kea

- Attachments: 1 - Project Schedule
2 - Fee Breakdown
3 - General Conditions

cc: Addressee (2) ... *via U.S. Mail*

Accepted this _____ day of _____, 2007.

Company

Signature

Name and Title

Geo Scope & Fee PP (Sept-07):kea

**WINDING WATERS NATURAL AREA
SEEPAGE EVALUATION
DUNKELBERGER ENGINEERING & TESTING, INC.**

Activity	Week											
	1	2	3	4	5	6	7	8	9	10	11	12
Notice to Proceed	█											
Stake Borings in Field	█											
Drilling Rig Mobilization		█										
Drill SPT Boring		█										
Piezometers & Field Permeability Testing			█									
Laboratory Work			█									
CADD Subsurface Profiles			█	█								
Seepage Analyses			█	█	█	█						
Prepare Draft Geotechnical Engineering Report						█	█					
Submit Draft Geotechnical Engineering Report								█				
Submit Final Geotechnical Engineering Report												█

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Proposal - Winding Waters Natural Area

FEE BREAKDOWN

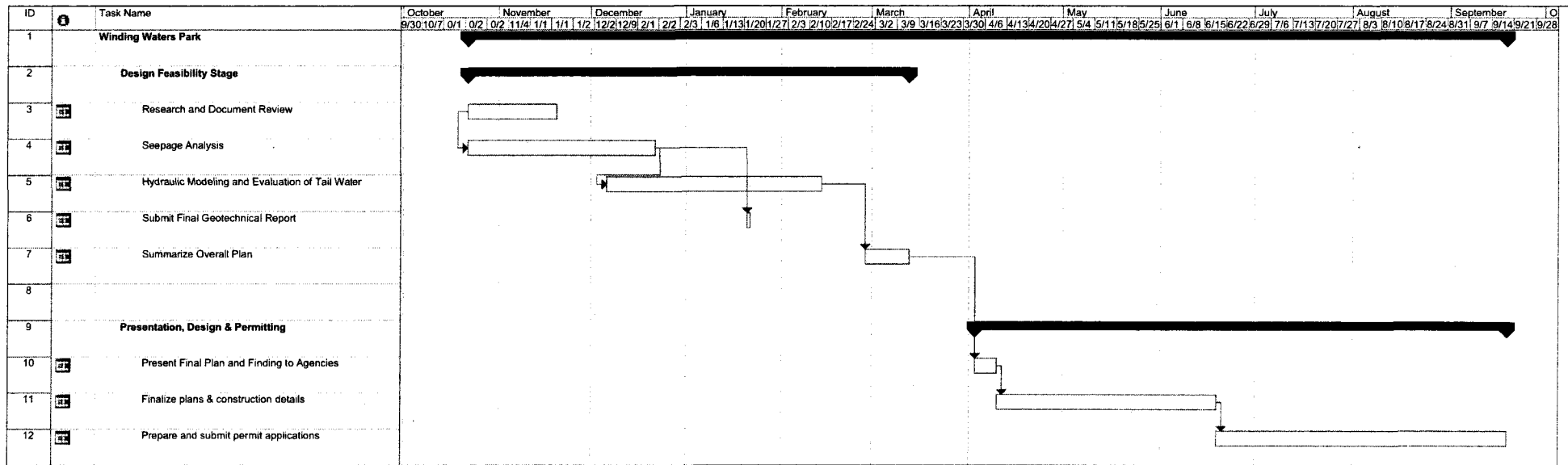
Seepage Evaluation

**Winding Waters Natural Area
Palm Beach County ERM, Florida**

ITEM DESCRIPTION		UNITS	AMOUNT	UNIT RATE	FEE
I. MOBILIZATION					
A. Stake Borings and Utility Clearance					
	1. Staff Engineer	hours	8	\$ 75.00	\$ 600.00
B. Drill Rig Mobilization					
	1. CME 55 Truck	each	1	\$ 300.00	\$ 300.00
SUBTOTAL - MOBILIZATION					\$ 900.00
II. FIELD EXPLORATION					
A. SPT Borings (1 @ 100 feet deep)					
	1. 0 to 50 feet deep	feet	50	\$ 11.00	\$ 550.00
	2. 50 to 100 feet deep	feet	50	\$ 12.00	\$ 600.00
B. Casing Installation					
	1. 0 to 50 feet deep	feet	0	\$ 4.00	\$ -
	2. 50 to 100 feet deep	feet	0	\$ 5.00	\$ -
C. Grout Seal Boreholes					
	1. 0 to 50 feet deep	feet	50	\$ 4.00	\$ 200.00
	2. 50 to 100 feet deep	feet	50	\$ 5.00	\$ 250.00
D. Rock Coring					
	1. 0 to 50 feet deep	feet	0	\$ 30.00	\$ -
	2. 50 to 100 feet deep	feet	0	\$ 35.00	\$ -
E. Undisturbed (Shelby Tube) Samples					
	1. 0 to 50 feet deep	each	0	\$ 125.00	\$ -
F. Extra SPT Samples (2.5 feet on center)					
	1. 0 to 50 feet deep	each	0	\$ 25.00	\$ -
	2. 50 to 100 feet deep	each	0	\$ 30.00	\$ -
	G. Staff Engineer	hours	8	\$ 75.00	\$ 600.00
SUBTOTAL - FIELD EXPLORATION					\$ 2,200.00
III. PIEZOMETERS					
A. Piezometers (1@20', 1@35', 1@50')					
		feet	105	\$ 30.00	\$ 3,150.00
B. Field Permeability Tests					
		each	3	\$ 500.00	\$ 1,500.00
C. Development of Piezometers					
		hours	8	\$ 150.00	\$ 1,200.00
D. Abandonment of Piezometers					
		hours	8	\$ 150.00	\$ 1,200.00
	E. Staff Engineer	hours	24	\$ 75.00	\$ 1,800.00
SUBTOTAL - PIEZOMETERS					\$ 8,850.00
IV. LABORATORY WORK					
A. Visual Engineering Classification					
	1. Staff Engineer	hours	2	\$ 75.00	\$ 150.00
B. Moisture Content Test					
		each	4	\$ 15.00	\$ 60.00
C. Organic Content Test					
		each	0	\$ 50.00	\$ -
D. Grain Size Distribution					
		each	4	\$ 65.00	\$ 260.00
E. Atterberg Limits					
		each	0	\$ 75.00	\$ -
SUBTOTAL - LABORATORY WORK					\$ 470.00
V. GEOTECHNICAL ENGINEERING					
A. Principal Engineer					
		hours	24	\$ 120.00	\$ 2,880.00
B. Senior Geotechnical Engineer					
		hours	40	\$ 105.00	\$ 4,200.00
C. Project Engineer					
		hours	80	\$ 90.00	\$ 7,200.00
D. CADD Drafting					
		hours	16	\$ 50.00	\$ 800.00
E. Word Processing and Clerical					
		hours	8	\$ 45.00	\$ 360.00
SUBTOTAL - GEOTECHNICAL ENGINEERING					\$ 15,440.00
TOTAL - SEEPAGE EVALUATION					\$ 27,860.00

DE&T

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Project: Project Schedule
 Date: Fri 9/14/07

Legend:
 Task: [White box]
 Progress: [Grey box]
 Milestone: [Diamond]
 Summary: [Thick black bar]
 Project Summary: [Thick black bar with arrow]
 External Tasks: [Dotted box]
 External Milestone: [Diamond with arrow]
 Deadline: [Down arrow]

Page 1

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May 9, 2007

Alan Gerwig & Associates, Inc.
12798 W. Forest Hill Boulevard
Wellington, Florida 33414
Attn: Alan Gerwig, P.E., President

**RE: CIVIL ENGINEERING SERVICES - ANNUAL AGREEMENT
RESOLUTION NO.: R2005-1057
ORIGINAL AGREEMENT DATED: June 7, 2005**

Dear Mr. Gerwig:

This letter serves as your "Notice to Proceed" with the above referenced Annual Service Renewal, which was approved by the Board of County Commissioners (Board) on May 1, 2007 (R2007-0613).

The County User Departments will be in touch with you when your services are required.

If you have any questions please feel free to contact me, at 561-684-4149.

Sincerely,

A handwritten signature in cursive script that reads "David Young".

David Young, P.E.
Special Projects Manager

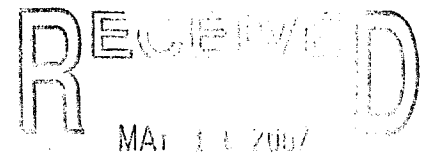
DY:jd

Attachment

pc: Administrative Services, Fiscal (NTP)
Contract Development & Control
Finance Department
CCNA File (w/original)
Charles Rich, Director Engineering Services
John Chesher, Director of Facilities
Bevin Beaudet, Director of Water Utilities
Richard Walesky, Director of E.R.M
Bruce Pelly, Director of Airports
Reading File

ec: Omelio A. Fernandez, P.E., Director, Engineering/Public Works Ops.
Rose Ann Clements, EA II, Roadway Production Div.
Jorge Hernandez, EA III, Roadway Production Division

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ENVIRONMENTAL RESOURCES MANAGEMENT

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**Department of Engineering
and Public Works**

P.O. Box 21229
West Palm Beach, FL 33416-1229
(561) 684-4000
www.pbcgov.com

**Palm Beach County
Board of County
Commissioners**

Addie L. Greene, Chairperson

Jeff Koons, Vice Chair

Karen T. Marcus

Warren H. Newell

Mary McCarty

Burt Aaronson

Jess R. Santamaria

County Administrator

Robert Weisman

"An Equal Opportunity
Affirmative Action Employer"

12798 W. Forest Hill Boulevard
Suite 204
Wellington, FL 33414
Phone: (561) 792-9000
Fax: (561) 792-9901

Alan Gerwig & Associates, Inc.
Consulting Engineers



R2007 0613

February 8, 2007

Palm Beach County Board of Commissioners
C/O: Engineering & Public Works Department
2300 N. Jog Road
West Palm Beach, FL 33411-2745
Attention: David Young, P.E., Special Projects Manager

MAY 01 2007

RE: CIVIL ANNUAL AGREEMENT (R2005-1057) DATED JUNE 7, 2005

Dear Mr. Young:


This letter serves as our official notification of interest in continuing our Agreement with Palm Beach County for professional services as specified in the above reference, for the period of June 7, 2007 through June 6, 2008.

We are in agreement that all provisions in the original Agreement remain in full force and effect. Per your request, we are enclosing an updated fee schedule, State Registration and all appropriate affidavits. An Insurance Certificate for General, Automobile, and Professional Liability will be sent to directly from our insurance agent.

Please indicate your acceptance of this proposal by proper signature below and returning same as fully executed to this office.

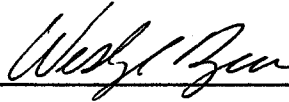
Sincerely,

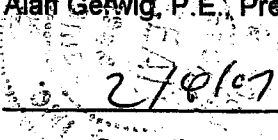
Alan Gerwig & Associates, Inc.



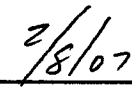
Alan Gerwig, P.E., President

Attest:





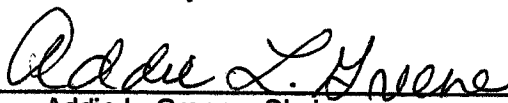
DATE



DATE


CORPORATE
SEAL

Accepted by:
Palm Beach County Board of Commissioners

BY: 

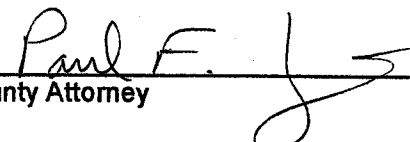
Addie L. Greene, Chairperson

Attest:
Sharon R. Bock, Clerk and Comptroller

BY: 

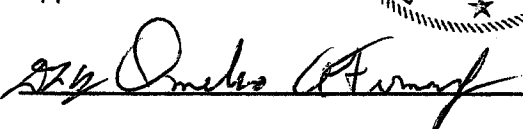
Deputy Clerk

Approved As To Form & Legal Sufficiency:

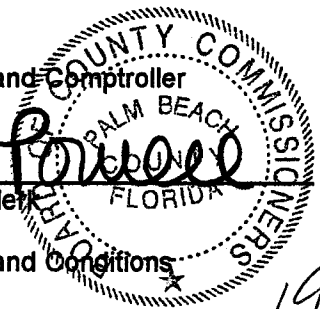


County Attorney

Approved as to Terms and Conditions



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**Civil Engineering Services
Task Order Basis - Fee Schedule**

Alan Gerwig & Associates, Inc.

6/7/07 → 6/6/08

12798 W. Forest Hill Blvd., Suite 204
Wellington, FL 33414
Contact: Alan Gerwig, P.E., President

Phone: 561-792-9000
Fax: 561-792-9901
e-mail: agerwig@aga-engineering.com

Fee Schedule - Fiscal Year 2007			
		Raw Rate	* Burdened Rate
Sr. Project Manager	Alan Gerwig, P.E.	\$46.50	\$127.00
Project Manager	Robert Priolo, P.E.	\$45.00	\$123.00
Project Engineer (P.E.)	Patrick Lear, P.E.	\$35.92	\$98.00
Project Engineer (P.E.)	Jill Skaggs, P.E.	\$36.06	\$99.00
Project Engineer (E.I.)	Simon Coleman, E.I.	\$32.69	\$90.00
Jr. Engineer	Curt Campbell, E.I.	\$27.46	\$75.00
	Sarah Noorjahan, E.I.	\$24.49	\$67.00
	Tom Stangle, E.I.	\$26.44	\$72.00
Engineer Tech/CADD	Joe Rommel	\$22.50	\$62.00
	Michael Gambarrotti	\$20.00	\$55.00
	Kim Christoff	\$21.25	\$58.00

* Rounded

Multiplier:

Salary 1.00
Overhead & Fringe 1.45
Subtotal 2.45
12% Profit 0.29
Total 2.74

02

Alan Gerwig & Associates, Inc. will provide "Additional Services, as Authorized and Approved by the Owner, Palm Beach County".