

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2012	2013	2014	2015	2016
Capital Expenditures	_____	_____	_____	_____	_____
Operating Costs	<u>\$503,168</u>	_____	_____	_____	_____
External Revenues	_____	_____	_____	_____	_____
Program Income (County)	_____	_____	_____	_____	_____
In-Kind Match (County)	_____	_____	_____	_____	_____
NET FISCAL IMPACT	<u>\$503,168</u>	_____	_____	_____	_____
# ADDITIONAL FTE POSITIONS (Cumulative)	_____	_____	_____	_____	_____

Is Item Included in Current Budget? Yes No _____
 Budget Account No.: Fund 3652 Department 381 Unit M045 Object 3120
 Program _____

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

Beach Improvement Fund

C. Department Fiscal Review:

[Handwritten signature]

III. REVIEW COMMENTS

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

[Handwritten signature]
 OFMB *[Handwritten date: 9/23/11]*

[Handwritten signature]
 Contract Development and Control

B. Legal Sufficiency:

[Handwritten signature] *[Handwritten date: 9/23/11]*
 Assistant County Attorney

This item complies with current County policies.

C. Other Department Review:

 Department Director

TASK ORDER

TASK ORDER: 1435-02 CONSULTANT: Taylor Engineering, Inc.

5019-LSUC-008

ACCOUNT: 3652-381-M045-3120 CONTRACT: R2010-1435

[Fiscal approval of Budget Availability: Jim Plummer]

PROJECT MANAGER: Kim Miranda PHONE: 561-233-2465

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

PROJECT NAME: Jupiter/Carlin Shore Protection Project – Geotechnical Borrow Area Investigation

LOCATION/DISTRICT #: Jupiter / District 1

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall assess borrow areas for the Jupiter/Carlin Shore Protection Project, as described in the Scope of Work.

DELIVERABLES: See scope of work dated September 7, 2011.

TASK ORDER TYPE: FIXED PRICE \$209,781.90 DUE DATE: 10/30/2012
NOT-TO-EXCEED \$293,386.00

*TOTAL AMOUNT \$ 503,167.90 *See attached proposal dated 9/7/2011

(Check where appropriate)
for Contract and Subcontract Amounts:

	Black	Hispanic	Women	Other (specify)	White Male
M/WBE (State) <input checked="" type="checkbox"/>	\$ _____	\$ _____	\$ <u>29,139.00</u>	\$ _____	
SBE-M/WBE* <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	
SBE <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	\$ _____

*certified as both an SBE and a State MBE

TOTAL SBE-M/WBE PARTICIPATION: \$29,139.00

CONSULTANT REP: [Signature] DATE: 9/8/11

DIVISION DIRECTOR: [Signature] DATE: 9-13-11

APPROVED AS TO TERMS AND CONDITIONS

ERM DIRECTOR: [Signature] DATE: 9/13/11

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY: [Signature] DATE: 9/23/11

BOARD OF COUNTY COMMISSIONERS: _____ DATE: _____

Karen T. Marcus, Chair

T A Y L O R E N G I N E E R I N G I N C

September 7, 2011

Ms. Kimberly Miranda
Palm Beach County
2300 North Jog Road
4th Floor
West Palm Beach, FL 33411-2743

EMAILED

Re: Jupiter/Carlin Segment
Palm Beach County Shore Protection Project
Potential Borrow Areas Investigation and Assessment
Revised Proposal (September 2011)

Dear Ms. Miranda,

As per the county's request, please find enclosed our latest revised proposed scope of work (Attachment A) and revised cost proposal (Attachment B) for assessing the Singer Island borrow area and finding/assessing an alternate borrow area northeast of Jupiter Inlet. The fixed fee portion of the work equals \$209,781.90 and the not-to-exceed portion of the work equals \$293,386.00. Note that one of our subcontractors, Environmental Services, Inc., is a state certified WBE.

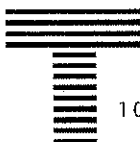
Please contact me at 904-256-1341 or at mkrecic@taylorengeering.com if you have any questions or require additional information.

Sincerely,



Michael R. Krecic, P.E.
Director of Coastal Engineering

Attachments



**Jupiter/Carlin Segment
Palm Beach County Shore Protection Project
Potential Borrow Areas Investigation and Assessment**

**Scope of Work
Revised September 2011**

Overview

Palm Beach County currently has one borrow area for the Jupiter/Carlin segment of the Palm Beach County Shore Protection Project. The county requests characterization of the remaining volume of sand within the Singer Island borrow area and reconnaissance- and detailed-level investigations of areas northeast of Jupiter Inlet to ensure an adequate supply of sand for the upcoming Jupiter/Carlin project.

Assumptions

We have developed our scope of services with the following understandings and assumptions:

- Palm Beach County will provide Taylor Engineering the following items:
 - Singer Island borrow area Juno Beach post-dredge survey in AutoCAD2000-compatible and PDF formats
 - Existing vibracore logs, gradation analyses, calcium carbonate analyses, visual shell content, photographs of vibracores, and color analyses for vibracores for Singer Island borrow area in PDF formats
 - Vibracore logs, gradation analyses, calcium carbonate analyses, visual shell content, photographs of vibracores, and color analyses for vibracores shown in Figure 1 (attached)
- The detailed sand source investigation phase will target finding 1.5 million cubic yards of beach compatible sand.
- Sonographics, Inc. will subcontract to both Morgan & Eklund, Inc. and RWParkinson Consulting, Inc. Morgan and Eklund's proposal includes Sonographics' field work time for sidescan sonar, magnetometer, and seismic surveys. It also includes Sonographics' time for processing sidescan sonar and magnetometer survey data. RWParkinson Consulting's proposal includes Sonographics' processing time of seismic survey data only.
- The bathymetric surveying activities and deliverables will conform to the March 2004 update of the Bureau of Beaches and Coastal Systems (BBCS) *Monitoring Standards for Beach Erosion Control Projects*.
- Sidescan sonar, magnetometer, and seismic surveys and vibracore collection activities and analyses will conform to current Florida Department of Environmental Protection (FDEP) requirements.

- Archaeological work will meet Florida State Historic Preservation Office and Department of Army Civil Works standards.
- Palm Beach County will provide results of reef delineation near proposed sand search area. We assume this survey will prove sufficient to meet permitting agency requirements.
- The geological and geophysical work will require prospecting permits from the Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE). At the time of this proposal, BOEMRE does not require a permit application fee. These permits will require periodic status reports to BOEMRE.
- This scope of work excludes any additional field work to respond to county, SHPO, USACE, or other agency comments after completion of bathymetric, seismic, magnetometer, and sidescan sonar surveys.
- We will not collect additional native beach samples.
- We have not budgeted for a borrow site excavation impact analysis; should the county require, we will develop a scope and budget of the impact analysis upon determining the number of borrow sites and their locations.
- We have not budgeted for seeking a lease agreement with BOEMRE for Outer Continental Shelf (OCS) sands. We will develop a scope and budget for that work, should the county elect to pursue a borrow area northeast of Jupiter Inlet.

Scope of Work

Task 1 Singer Island Borrow Area Investigation

Taylor Engineering and our subcontractor, RWParkinson Consulting, Inc. (Randy Parkinson, Ph.D., P.G.), will perform a desktop assessment of the existing vibracores and seismic data. From this review, we will design a vibracore and seismic survey plan. This plan will include obtaining up to 8 additional vibracores and about 40 line miles of seismic information. Our subcontractors, Morgan and Eklund and Sonographics, will conduct a sub-bottom seismic (CHIRP) survey in the Singer Island borrow area. We have estimated two days to collect seismic data. Our subcontractor, American Vibracore Services, Inc. (AVS), will collect up to 8, 20-foot deep vibracores to help with interpreting the seismic data and meeting the FDEP's 1,000-ft maximum spacing between vibracores. AVS will collect and analyze vibracore samples according to current FDEP requirements. Taylor Engineering and RWParkinson Consulting will evaluate the seismic survey, vibracores, and post-construction (i.e., after Juno Beach construction) bathymetry to identify specific areas with the greatest probability of containing beach quality sand. Once identified, we will quantify the obtainable (with a dredge) volume of beach

compatible sand remaining in the borrow area. We will also estimate the percentage of rock and possible screening methods.

Task 1 Deliverables

- Vibracore summary report in PDF format. The report will include
 - Summary of field operations including field logs
 - Photographs, core logs, gradation curves, etc. to current FDEP standards
 - Vibracore sample laboratory analyses including
 - Core logging by a Florida Registered Professional Geologist
 - Photodocumentation of the core sections
 - Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)
 - Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format
- Draft borrow area report in PDF and MS Word formats for county comment. Report will include
 - Assessment of native beach compatibility
 - Characterization of potential borrow area sediments
 - Delineation of potential borrow area boundaries including maximum depth of cut
 - Sediment isopach maps
- Final borrow area report in PDF format

Table 1 Task 1 List of Subcontractors and Their Costs

Subcontractor	Cost
AVS	\$31,288
Morgan & Eklund (and Sonographics)	\$8,742.30
RWParkinson Consulting (and Sonographics)	\$14,390

Subtask 1-1 Boat Rental for Task 1

Morgan & Eklund and Sonographics will rent a boat for two days to perform the work associated with Task 1. Boat rental costs will not exceed \$3,500 per day.

Table 1-1 Subtask 1-1 List of Subcontractors and Their Costs

Subcontractor	Not-to-Exceed Cost
Morgan & Eklund (and Sonographics)	\$7,000

Task 2 Jupiter Inlet Reconnaissance-Level Sand Search Investigation

This task includes performing a reconnaissance-level sand search investigation of an area northeast of Jupiter Inlet (see Figure 1) defined by the county. For this phase, we propose to collect bathymetric, seismic, sidescan sonar, and magnetometer surveys with 250-foot line spacing over the entire area. Because a significant portion of this area lies within federal waters, we will need to seek BOEMRE geological and geophysical permits.

Subtask 2A Desktop Study

Taylor Engineering and its subcontractor, RWParkinson Consulting (and Sonographics), will assess existing vibracore and seismic data. From this review, we will design a reconnaissance-level geologic (up to 20 vibracores) and seismic (about 50 line miles) survey.

Subtask 2A Deliverables

- Reconnaissance-level geologic and seismic survey plan in PDF format

Table 2A Subtask 2A List of Subcontractors and Their Costs

Subcontractor	Cost
RWParkinson Consulting (and Sonographics)	\$8,655

Subtask 2B Reconnaissance-Level Field Survey

Our subcontractors, Morgan & Eklund and Sonographics, will collect concurrent bathymetric and seismic surveys. Morgan & Eklund will post-process the bathymetric data. RWParkinson Consulting and Sonographics will post-process and assess the seismic information. We have estimated two days to collect the field data. Before collecting the data, we will prepare and submit a geophysical permit application to BOEMRE. Finally, we will prepare a status report for submission to BOEMRE as a condition of the prospecting permit.

Subtask 2B Deliverables

- One signed and sealed hard copy of bathymetric survey
- Electronic copy on CD or DVD of bathymetric survey data and seismic survey profile lines records
- Electronic copy of BOEMRE permit application and status report in PDF format



Figure 1 Proposed Sand Search Investigation Area

Table 2B Subtask 2B List of Subcontractors and Their Costs

Subcontractor	Cost
Morgan & Eklund (and Sonographics)	\$17,962.30
RWParkinson Consulting (and Sonographics)	\$1,625

Subtask 2B-1 Boat Rental for Subtask 2B

Morgan & Eklund and Sonographics will rent a boat for four days to perform the work associated with Task 2B. Boat rental costs will not exceed \$3,500 per day.

Table 2B-1 Subtask 2B-1 List of Subcontractors and Their Costs

Subcontractor	Not-to-Exceed Cost
Morgan & Eklund (and Sonographics)	\$14,000

Subtask 2C Collect Additional Vibracores

Our subcontractor, AVS, will collect up to 20, 20-foot deep vibracores. AVS will collect and analyze vibracore samples according to current FDEP requirements. These additional vibracores will help with interpreting collected seismic data. Before collecting the data, we will prepare and submit a geological permit application to BOEMRE. Finally, we will prepare a status report for submission to BOEMRE as a condition of the prospecting permit.

Subtask 2C Deliverables

- Vibracore summary report in PDF format. The report will include
 - Summary of field operations including field logs
 - Photographs, core logs, gradation curves, etc. to current FDEP standards
 - Vibracore sample laboratory analyses including
 - Core logging by a Florida Registered Professional Geologist
 - Photodocumentation of the core sections
 - Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)
 - Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format
- Electronic copy of BOEMRE permit application and status report in PDF format

Table 2C Subtask 2C List of Subcontractors and Their Costs

Subcontractor	Not-to-Exceed Cost
AVS	\$68,720

Subtask 2D Data Review, Reporting, and Coordination

Taylor Engineering and its subcontractors, RWParkinson Consulting and Sonographics, will review the collected data. We will characterize the offshore sediments, determine native beach compatibility, and delineate offshore sand deposits suitable for detailed evaluation.

We will coordinate with Palm Beach County, FDEP, and USACE representatives during this investigation. As such, we have included one trip to the FDEP in Tallahassee.

Subtask 2D Deliverables

- Draft report summarizing analyses and recommendations in PDF and MSWord formats
- Final report summarizing analyses and recommendations in PDF format

Table 2D Subtask 2D List of Subcontractors and Their Costs

Subcontractor	Cost
RWParkinson Consulting (and Sonographics)	\$8,565

Task 3 Jupiter Inlet Detailed-Level Sand Search Investigation

This task includes performing a detailed-level sand search investigation of areas northeast of Jupiter Inlet. For this phase, we propose to collect seismic, sidescan sonar, and magnetometer surveys with 100-foot line spacing over a 4,000 foot by 4,000 foot area or equivalent.

Subtask 3A Desktop Study

Taylor Engineering and RWParkinson Consulting (and Sonographics) will design a detailed-level geologic (up to 52 vibracores) and seismic (about 40 line miles) survey based on results of Task 2. Note that the seismic data and reconnaissance vibracores will guide these additional data needs.

Subtask 3A Deliverables

- Detailed-level geologic and seismic survey plan in PDF format

Table 3A Subtask 3A List of Subcontractors and Their Costs

Subcontractor	Cost
RWParkinson Consulting (and Sonographics)	\$3,110

Subtask 3B Detailed-Level Field Survey

Our subcontractors, Morgan & Eklund and Sonographics, will collect concurrent seismic, sidescan sonar, and magnetometer surveys. Morgan & Eklund and Sonographics will also post-process the sidescan sonar and magnetometer surveys. We have estimated two days to collect the field data. RWParkinson Consulting and Sonographics will post-process and assess the seismic information. ESI will provide an underwater archaeologist for the duration of the survey. The archaeologist will review data, as collected, to determine dive targets and will make recommendations about areas that warrant additional evaluation. In addition, ESI will prepare a report to meet applicable state and federal standards regarding a Phase I archaeological investigation. We assume the permit application submitted to BOEMRE during the reconnaissance phase will suffice for this phase. Finally, we will prepare a status report for submission to BOEMRE as a condition of the prospecting permit.

Subtask 3B Deliverables

- Electronic copy on CD or DVD seismic survey profile lines and records
- Sidescan sonar and magnetometer survey target report, including tables of the sidescan anomalies, and field methods and results, and mosaics of the data within the areas of interest, in PDF and MSWord formats
- Geo Tiff file
- Drawing files (.DWG) of debris and bottom features
- Archaeological report in PDF and MSWord formats

Table 3B Subtask 3B List of Subcontractors and Their Costs

Subcontractor	Cost
ESI	\$9,209
Morgan & Eklund (and Sonographics)	\$13,482.30
RWParkinson Consulting (and Sonographics)	\$1,280

Subtask 3B-1 Boat Rental for Subtask 3B

Morgan & Eklund and Sonographics will rent a boat for four days to perform the work associated with Task 3B. Boat rental costs will not exceed \$3,500 per day.

Table 3B-1 Subtask 3B-1 List of Subcontractors and Their Costs

Subcontractor	Not-to-Exceed Cost
Morgan & Eklund (and Sonographics)	\$14,000

Subtask 3C Collect Additional Vibracores

Our subcontractor, AVS, will collect up to 52, 20-foot deep vibracores. AVS will collect and analyze vibracore samples according to current FDEP requirements. These additional vibracores will help with interpreting collected seismic data and ensure vibracore spacing meets the FDEP’s 1,000-foot requirement. We assume the permit application submitted to BOEMRE during the reconnaissance phase will suffice for this phase. Finally, we will prepare up to two status reports for submission to BOEMRE as a condition of the prospecting permit.

Subtask 3C Deliverables

- Vibracore summary report in PDF format. The report will include
 - Summary of field operations including field logs
 - Photographs, core logs, gradation curves, etc. to current FDEP standards
 - Vibracore sample laboratory analyses including
 - Core logging by a Florida Registered Professional Geologist
 - Photodocumentation of the core sections
 - Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)
 - Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format

Table 3C Subtask 3C List of Subcontractors and Their Costs

Subcontractor	Not-to-Exceed Cost
AVS	\$145,872

Note: AVS cost assumes equipment mobilization to the site has already occurred under Subtask 2C.

Subtask 3D Diver Verification of Magnetic Anomalies

Should ESI identify potentially significant targets under Subtask 3B, ESI will mobilize a dive crew to identify and assess the targets. Because of the water depth in the survey area, ESI will investigate no more than three dive targets per day for up to five field days (and 15 dive targets).

Subtask 3D Deliverables

- No additional scheduled deliverables. The archaeological report prepared under Subtask 3B will include diver survey results.

Table 3D Subtask 3D List of Subcontractors and Their Costs

Subcontractor	Cost/Day	Not-to-Exceed Cost
ESI	\$3,986	\$19,930

Subtask 3E Data Review, Reporting, and Coordination

Taylor Engineering and RWParkinson Consulting (and Sonographics) will review the collected data. We will characterize the offshore sediments, determine native beach compatibility, and delineate offshore sand deposits suitable for possible use. We will define the geometry (e.g. lateral boundaries and excavation depths) of the borrow site(s). We will conduct overfill analyses and examine sand color to determine borrow material compatibility with the native beach sand. We assume the borrow site(s) will, in total, comprises about 0.57 square miles, allows a 5-foot dredge cut, and contains at least 1.5 million cubic yards of beach compatible sand.

Note that we have not budgeted for a borrow site excavation impact analysis; should the county require, we will develop a scope and budget of the impact analysis upon determining the number of borrow sites and their locations.

We will coordinate with Palm Beach County, FDEP, and USACE representatives during this investigation. As such, we have included one trip to the FDEP in Tallahassee.

Subtask 3E Deliverables

- Draft report summarizing analyses and recommendations in PDF and MSWord formats
- Final report summarizing analyses and recommendations in PDF format

Table 3E Subtask 3E List of Subcontractors and Their Costs

Subcontractor	Cost
RWParkinson Consulting (and Sonographics)	\$11,300



August 30, 2011

Proposal #090628d

**Taylor Engineering, Inc.
1675 Palm Beach Lakes Blvd. Suite 210
West Palm Beach, Fl. 33401**

**Re: Singer Island Borrow Area
Palm Beach County, Florida**

Attn: Mike Krecic P.E.

American Vibracore Services, Inc. is pleased to submit this proposal to provide professional geotechnical services for the above mentioned project.

We understand that project objectives are to establish geotechnical characteristics at the Singer Island Borrow Area offshore Palm Beach County, Florida. We further understand that 8 vibracore samples are proposed at this time.

Our Scope of work will be the following:

1. Mobilize vibracore vessel "Thunderforce" to the project site.
2. Mobilize vibracore crew to the site.
3. Perform 8 vibracores to depths of up to 20 feet below the seafloor or refusal at locations provided by Taylor Engineering.
4. Cores will be extracted using a pneumatic vibracore unit that utilizes a 4" diameter barrel, resulting in a core diameter of approximately 3.625".
5. A penetrometer will be utilized to record all coring.
6. Demobilize vessel and equipment
7. Summarize field operations in a brief report.
8. Vibracore sample laboratory analysis. All analysis will be performed at AVS's Corps of Engineers certified lab, and per current FDEP requirements:
 - Split all cores
 - Core logging by a Florida Registered Professional Geologist.
 - Photodocumentation of the core sections
 - Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)

- Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format.
9. Report submittal to include field logs, penetrometer reports, photographs, core logs, gradation curves, etc to current FDEP standards. All final deliverables including final electronic logs and reports will be directed by a Florida Registered Professional Geologist.

A breakdown of fees will be the following:

Mob/Demob	\$8,000.00
Perform 8 vibracores @ \$1,900.00/ea =	\$15,200.00
Laboratory Analysis @ \$886.00 per core	\$7,088.00
Final Report	\$1,000.00
Technician	10hrs @ \$60.00 hr = \$600.00
Clerical	5 hrs @ \$40.00 hr = \$200.00
Project Manager	2 hrs @ \$100.00 hr = \$200.00

We appreciate the opportunity to be of service to you and if you have any questions or comments, please don't hesitate to call our office.

Pricing on this proposal is good for 90 days.

Sincerely,



Sean Kemnuir,
Vice-President of Operations
American Vibracore Services, Inc.



June 10, 2011

Proposal #100624b

TAYLOR ENGINEERING, INC.
10151 Deerwood Park Blvd., Bldg. 300, Suite 300,
Jacksonville, FL 32256

Re: Jupiter Inlet Borrow Area
Palm Beach County, Florida

Attn: Mike Krecic, P.E.
(904) 256-1341

American Vibracore Services, Inc. is pleased to submit this proposal to provide professional geotechnical services for the above mentioned project.

We understand that project objectives are to establish geotechnical characteristics at the borrow area northeast of Jupiter Inlet, offshore Palm Beach County, Florida. We further understand that up to 72 vibracore samples in 2 phases are proposed at this time.

Our Scope of work will be the following:

1. Mobilize vibracore vessel "Thunderforce" to the project site.
2. Mobilize vibracore crew to the site.

Recon Phase:

3. Perform up to 20 reconnaissance phase vibracores to depths of up to 20 feet below the seafloor or refusal, at locations provided by Taylor Engineering.
4. Cores will be extracted using a pneumatic vibracore unit that utilizes a 4" diameter barrel, resulting in a core diameter of approximately 3.625".
5. A penetrometer will be utilized to record all coring.
6. Vibracore sample laboratory analysis. All analysis will be performed at AVS's Corps of Engineers certified lab, and per current FDEP requirements:
 - Split all cores
 - Core logging by a Florida Registered Professional Geologist.
 - Photodocumentation of the core sections

- Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)
 - Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format.
7. Report submittal to include field logs, penetrometer reports, photographs, core logs, gradation curves, etc to current FDEP standards. All final deliverables including final electronic logs and reports will be directed by a Florida Registered Professional Geologist.

Detail Phase:

8. Perform up to 52 detail phase vibracores to depths of up to 20 feet below the seafloor or refusal, at locations provided by Taylor Engineering.
9. Cores will be extracted using a pneumatic vibracore unit that utilizes a 4" diameter barrel, resulting in a core diameter of approximately 3.625".
10. A penetrometer will be utilized to record all coring.
11. Demobilize vessel and equipment
12. Summarize field operations in a brief report.
13. Vibracore sample laboratory analysis. All analysis will be performed at AVS's Corps of Engineers certified lab, and per current FDEP requirements:
- Split all cores
 - Core logging by a Florida Registered Professional Geologist.
 - Photodocumentation of the core sections
 - Gradation analysis at strata changes (approx 4 samples per core)
 - Calcium carbonate content analysis (approx 2 samples per core)
 - Post-carbonate content gradation analysis (approx 1 samples per core)
 - Visual shell content (approx 4 samples per core)
 - Munsell color designation (approx 4 samples per core)
 - Lab reports submitted in gINT format.
14. Report submittal to include field logs, penetrometer reports, photographs, core logs, gradation curves, etc to current FDEP standards. All final deliverables including final electronic logs and reports will be directed by a Florida Registered Professional Geologist.

A breakdown of fees will be the following:

Mob/Demob **\$12,000.00**

Recon Phase:

Perform up to 20 vibracores @ \$1,900.00/ea =
costs not to exceed \$38,000.00

Laboratory Analysis on up to 20 cores @ \$886.00 per core
costs not to exceed \$17,720.00

Recon phase report **\$1,000.00**

Technician 10hrs @ \$60.00 hr = \$600.00
Clerical 5 hrs @ \$40.00 hr = \$200.00
Project Manager 2 hrs @ \$100.00 hr = \$200.00

Subtotal Recon Phase \$68,720.00

Detail Phase:

Perform up to 52 vibracores @ \$1,900.00/ea =
costs not to exceed \$98,800.00

Laboratory Analysis on up to 52 cores @ \$886.00 per core
costs not to exceed \$46,072.00

Detail phase report **\$1,000.00**

Technician 10hrs @ \$60.00 hr = \$600.00
Clerical 5 hrs @ \$40.00 hr = \$200.00
Project Manager 2 hrs @ \$100.00 hr = \$200.00

Subtotal Detail Phase \$145,872.00

We appreciate the opportunity to be of service to you and if you have any questions or comments, please don't hesitate to call our office.

Pricing on this proposal is good for 90 days.

Sincerely,



Sean Kemnuir,
Vice-President of Operations
American Vibracore Services, Inc.

ENVIRONMENTAL SERVICES, INC.

2800 N. 5th Street, Suite 302
St. Augustine, FL 32084

Phone 904-824-5494 * Fax 904-470-2112

www.environmentalservicesinc.com

26 July 2011

Michael R. Krecic, P.E.
Director of Coastal Engineering
Taylor Engineering, Inc.
10151 Deerwood Park Blvd., Bldg. 300, Suite 300
Jacksonville, FL 32256

RE: Underwater Archaeological Assessment and Diver Investigation of the Palm Beach County Borrow Area, Palm Beach County, Florida

Dear Mr. Krecic:

Thank you for considering Environmental Services, Inc. (ESI). Pursuant to our recent communication, we are pleased to enclose the attached proposal for Underwater Archaeological Assessment and Diver Investigation of the Palm Beach County Borrow Area (27° 0' 32" N, 80° 1' 40" W). Please note under our Terms section at the end of the proposal that, as the client, you assure ESI that we have permission to work in the survey area.

We are prepared to proceed upon receipt of the signed contract. Please approve the proposal by signing the enclosed document and returning it to me by mail, fax (904-824-5364), or e-mail (bhandley@esinc.cc). We look forward to working with you.

Please contact me should you have any questions. Thank you for selecting ESI to assist with your archaeological consulting needs.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.



Brent M. Handley, MA, RPA
Vice President

ENVIRONMENTAL SERVICES, INC.

**CONTRACT FOR SERVICES
ESI PROJECT NO. EP10035.00**

The following Contract for Services is an agreement between Environmental Services, Inc., (ESI) and Taylor Engineering, Inc. (Client) with the terms specified herein. ESI agrees to perform the following tasks for the associated fee.

Project Name: Palm Beach County Borrow Area
Project Location: Palm Beach County, Florida

SCOPE OF SERVICES

FIXED FEE

Task 1.	Underwater Archaeological Assessment <i>(See Appendix A for Task 1 Fee Schedule)</i>	\$9,209.00
	<p>Tasks to be performed in conjunction with the remote sensing survey will include preparation of a research design, obtaining a 1A-32 research permit, prediction of site probability zones, field investigations, preparation of a final report and Florida Master Site File forms. Diver investigations of potentially significant targets will be conducted if identified during the survey. Prior to commencement of the Phase I archaeological investigation, a testing strategy will be formulated.</p> <p>The testing strategy will be based on: a review of the Florida Master Site File for the presence of previously recorded sites within or near the study area; an examination of maps and nautical charts for the area; perusal of aerial photographs to identify anomalies; and a detailed investigation of previous archaeological and historic research pertaining to the region's maritime past. This may include perusal of records at the U.S. Hydrographic Office, as well as historical libraries and archives in Tallahassee and Jupiter. In addition, such variables as subsistence adaptation and marine resource extraction strategies of regional prehistoric inhabitants, as they are now known, will be considered.</p> <p>All work will be performed in accordance with criteria established in compliance with the National Historic Preservation Act of 1966, as amended; the Archaeological and Historic Preservation Act of 1979, as amended; and the Abandoned Shipwreck Act of 1987. Furthermore, the Advisory Council on Historic Preservation regulations, 36 CFR Part 800, as revised, will be adhered to. All work will meet Florida State Historic Preservation Office (SHPO) and USACE Civil Works standards</p> <p>Remote Sensing of the project area will be conducted by ESI, Sonographics, and Morgan & Eklund. An ESI archaeologist will be present on the research vessel for the duration of the survey (2 days</p>	

ENVIRONMENTAL SERVICES, INC.

Page 2

Palm Beach County Borrow Area
EP10035.00
26 July 2011

<p>maximum). The archaeologist will review data, as collected, to determine dive targets, will make recommendations about areas that warrant additional survey (if any), and will ensure that track line intervals and equipment settings meet regulatory standards.</p> <p>Bathymetric, seismic, side scan sonar, and magnetometer data will be collected using equipment provided by Sonographics and Morgan & Eklund. All data will be recorded digitally, will be geo-referenced, and will be provided to ESI. Using the aforementioned geophysical sensors, survey lines will be run over the proposed borrow areas. If a potentially significant target or targets are identified during the remote sensing phase of the project, a diver investigation (Phase Ib) to identify and assess the targets will be initiated (see Task 2).</p> <p>A final project report will be prepared to meet applicable state and federal standards regarding content and quality. The following topics will be addressed in the ESI final report, not necessarily in the order shown:</p> <ul style="list-style-type: none">- Introduction- Environmental Background- Project Description- Background Research- Research Design and Methodology- Constraints on Investigation- Study Goals- Results- Conclusions and Recommendations- Bibliography- Appendices (as needed) <p>Additionally, all appropriate maps, charts, drawings, photographs, and other illustrations will be incorporated, as well as tables, figures, and completed site file forms. Drafts will be made available for review and comment prior to submittal of the final documents, if desired.</p> <p>Graphic artists will prepare state-of-the-art maps, charts, photographs, and illustrations to accompany the final report.</p>	
---	--

ENVIRONMENTAL SERVICES, INC.

Page 3

Palm Beach County Borrow Area
 EP10035.00
 26 July 2011

	<p>Sonographics and Morgan & Eklund will provide ESI graphics illustrating results from the remote sensing survey. Combined, these graphics will include, but are not necessarily limited to, project location maps, site maps, a side scan sonar mosaic, a magnetic contour map, appropriate photographs or illustrations, environmental maps, and other visual aids as necessary, depending upon the findings of the fieldwork.</p> <p>Site forms for each prehistoric and historic site encountered during the investigation will be prepared for inclusion in the final report and to be submitted separately to the Florida Archaeological Site File. All sites will be assessed according to federal and state standards and defined through the use of the categories established on the forms.</p> <p>Additionally, ESI archaeologists will communicate with the staff of the Florida State Historic Preservation Office, Palm Beach County, and USACE regarding the review process, completing any necessary negotiations on behalf of the client to achieve a timely review and resolution of the project.</p> <p><i>ESI electronic final reports (e-reports) are now available and will be provided unless hard copies are requested as per the terms listed. Upon request, a hardcopy in lieu of or in addition to the electronic version will be provided to the client at no extra cost. Any reports requested beyond that will be charged \$50 per report copy. Cost will be raised to \$100 for any report that exceeds 100 pages. Proposal cost includes delivery of reports to the necessary county and/or state agencies at no extra charge</i></p>	
<p>Task 2.</p>	<p>Diver Investigation of Remote Sensing Targets (if necessary) <i>(See Appendix B for Task 2 Fee Schedule)</i></p> <p>Should potentially significant targets be identified during the remote sensing phase of the project, a diver investigation (Phase Ib) to identify and assess the targets will be initiated at a later date agreed upon by ESI and the client. Due to the water depth in the survey area, ESI will investigate no more than three dive targets per day. The dive team will include two divers, a safety diver, and a vessel captain.</p> <p>If a site is initially considered to be potentially eligible for listing on the <i>National Register of Historic Places</i> (NRHP) and avoidance is impossible, a second phase of testing (under separate contract) will</p>	<p>\$3,986.00/day (5-day max)</p>

ENVIRONMENTAL SERVICES, INC.

Page 4

Palm Beach County Borrow Area
EP10035.00
26 July 2011

	<p>be recommended to fully evaluate the site. The goal of this phase of investigation will be to determine whether the site is, in fact, eligible for the National Register. This procedure is required by state and federal regulations. The results of the diver survey will incorporated into the report of investigations.</p> <p><i>This task includes a 5-day maximum. Any additional diving days will warrant a change order.</i></p>	
--	--	--

ESI will work on the basis described above using the outlined costs for each task. Our cost for Task 1 is **\$9,209.00**. Our cost for Task 2 is **\$3,986.00** a day (5-day max). Diver Investigations are contingent upon identifying potentially significant targets in the proposed area of dredging.

Additional services not specifically addressed herein will be invoiced on a time and materials basis at standard ESI hourly rates. We will provide you with a written proposal for these tasks if, or when, they become necessary. **We are prepared to proceed upon receipt of the signed contract.**

ESI is committed to providing quality service to our clients. Every project is reviewed by a senior technical manager to ensure that the work has been performed in compliance with our goal of providing superior service and solutions to our clients.

ENVIRONMENTAL SERVICES, INC.

Page 5

Palm Beach County Borrow Area
EP10035.00
26 July 2011

Project Name: Palm Beach County Borrow Area
Project Location: Palm Beach County, Florida


Task 1: Underwater Archaeological Assessment Fee: \$9,209.00
Task 2: Diver Investigation of Remote Sensing Targets (if necessary) Fee: \$3,986.00/day
(5-day max)

TERMS:

- ESI will complete the work described above in a timely manner unless delayed by Client's request, lack of information, or intervening factors beyond our control.
- Client assures ESI that it has permission to work on the subject property and will advise ESI of proper procedures for accessing subject property.
- **ESI will maintain a minimum \$1,000,000 errors and omissions (professional liability) insurance; \$1,000,000 per occurrence and \$2,000,000 aggregate general liability insurance for the duration of the project. If any additional insurance requirements are necessary, please return the specifications with the signed proposal. They will become a part of this contract as agreed by both parties.**
- Outside services and expenses such as subcontractors and special purchases will be invoiced with a handling fee of 15 percent.
- Client will provide ESI with any special billing formats or considerations with the signed contract.
- Billing is done monthly. **Payment is due immediately upon receipt of the invoice;** after 30 days the Client agrees to pay 1.5 percent late fee per month or portion thereof on unpaid balances. Unpaid balances after 60 days from the date of the invoice may result in work stoppage until overdue accounts are resolved.
- Failure to pay within 60 days from the date of invoice will be considered by ESI to be a breach of contract, and ESI may cease work and withhold all work product immediately without penalty from the Client.
- Any disputes regarding payment for services will be resolved in a court in the county of the ESI office responsible for the work. Client agrees to pay all legal fees and other collection costs incurred by ESI to collect unpaid invoices.
- ESI rates change on March 1 of each year.
- **This proposal is valid for a period of 60 days following the date of issuance.**

TERMS ACCEPTED:

ENVIRONMENTAL SERVICES, INC.

SIGNATURE: _____	SIGNATURE:  _____
NAME: _____	NAME: Brent M. Handley, MA, RPA _____
FIRM: _____	FIRM: Environmental Services, Inc. _____
TITLE: _____	TITLE: Vice President _____
DATE: _____	DATE: 15 June 2011 _____

Purchase Order # _____
Client Project File # _____

BILLING ADDRESS AND CONTACT IF DIFFERENT FROM ABOVE:

Proposal is valid for 60 days from the date of issuance.

ENVIRONMENTAL SERVICES, INC.

SCHEDULE OF LABOR AND EXPENSE RATES

<u>POSITION</u>	<u>RATE</u>	<u>EXPENSE</u>	<u>CHARGE</u>
		Travel	
<i>Technical</i>			
Technician	\$38-58/Hour	Vehicle Mileage Rate	\$0.445/Mile
Project Scientist	\$47-84/Hour	Travel Expenses	Cost
Senior Scientist	\$56-121/Hour		
Senior Project Manager	\$87-129/Hour	Copies	
Principal	\$100-200/Hour	Photocopy Per Page	\$0.15
		Color Copy Per Page	\$1.50 8 1/2 x 11
			\$2.50 8 1/2 x 14
<u>Administrative</u>			
Administrative Assistant	\$37-62/Hour		\$3.00 11 x 17
		Full Size Copy Per Page	\$1.60 24 x 36 b/w
			\$3.00 36 x 48 b/w
<u>Geo-graphics</u>			
Geographics	\$62-101/Hour		\$35.00 24 x 36 color
			\$70.00 36 x 48 color
<u>EXPENSE</u>	<u>CHARGE</u>	Blueprints or Xerox Per Page	\$2.50
Additional Services		Aerial Photography	\$50 0 - 15 acres
CADD/GIS Usage	\$30.00/Hour		\$100 16 - 50 acres
Global Positioning System	\$250.00/Day		\$200 51 - 100 acres
Local Courier Service	\$13.00/Delivery		\$300 101 - 999 acres
			\$500 1000 + acres
		Fax Per Page	\$0.50

ENVIRONMENTAL SERVICES, INC.

APPENDIX A

Table 1: Task 1 Fee Schedule

Staff	Bill Rate	Task 1.1 - Coordination Hours	Task 1.2 - Fieldwork Hours	Task 1.3 - Analysis Hours	Task 1.4 - Report Hours	Proposed Hours / Units	Proposed Subtotal Cost
LABOR							
Brent Handley, Principal	\$137.00	2			3	5.00	\$685.00
John Morris, Senior Project Manager	\$96.00	8	20	8	40	76.00	\$7,296.00
Melissa Dye, Project Scientist	\$49.00	4		2	8	14.00	\$686.00
Graphics	\$56.00				7	7.00	\$392.00
Admin/Accting	\$50.00	1			2	3.00	\$150.00
Total							\$9,209.00

ENVIRONMENTAL SERVICES, INC.

APPENDIX B

Table 2: Task 2 Fee Schedule (Daily Cost Breakdown)

Staff	Bill Rate	Fieldwork/ Office Hours	Proposed Cost Daily Rate 3 Targets	Proposed Cost Max 5 Days Max 15 Targets
LABOR				
Brent Handley, Principal	\$137.00	2	\$274.00	\$1,370.00
John Morris, Senior Project Manager	\$96.00	10	\$960.00	\$4,800.00
Nicole Morris, Senior Scientist – Safety Diver	\$60.00	10	\$600.00	\$3,000.00
Melissa Dye, Project Scientist	\$49.00	10	\$490.00	\$2,450.00
Graphics	\$56.00	2	\$112.00	\$560.00
Admin/Accting	\$50.00	1	\$50.00	\$250.00
Labor Subtotal (1)			\$2,486.00	\$12,430.00
29' Dive Boat/Pilot Day Rate				
			\$1,250.00	\$6,250.00
Labor Subtotal (2)			\$3,736.00	\$18,680.00
EXPENSES				
	Unit Price			
Diving Equipment: hand held magnetometer; and pump/dredge probe	\$250.00		\$250.00	\$1,250.00
Subtotal Expenses			\$250.00	\$1,250.00
GRAND TOTAL				
			\$3,986.00	\$19,930.00



MORGAN & EKLUND, INC.
 PROFESSIONAL SURVEY CONSULTANTS

September 7, 2011

Taylor Engineering, Inc.
 Attn: Mr. Michael Krecic, P.E.
 10151 Deerwood Park Blvd.
 Bldg. 300, Suite 300
 Jacksonville, FL 32256

RE: Palm Beach County Borrow Area Bathymetric, Seismic, Sidescan Sonar and Magnetometer Surveys

Dear Mike:

Morgan & Eklund, Inc. (in conjunction with Sonographics, Inc.) is pleased to provide you with the following proposal to furnish professional hydrographic survey services for the above-referenced project.

Our costs for the above-referenced survey tasks are as follows:

I. Jupiter Inlet Borrow Area Survey

Reconnaissance level seismic and bathymetric survey with E-W survey lines spaced at 250' line spacing or 50 line miles \pm .

A. Mobilization and Demobilization

	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
Project Surveyor 8 hours @ \$75.00/hr	\$ 600.00	
Two Man Survey Crew 8 hours @ \$115/hr.....	\$ 920.00	
46' Survey Boat 2 days @ \$3,500/day.....		\$ 7,000.00
RTK/GPS System 1 day @ \$350/day	\$ 350.00	
TSS Motion Compensator 1 day @ \$200/day	\$ 200.00	
Submersible Tide Gauge 1 day @ \$45/day	\$ 45.00	
Digital Echosounder 1 day @ \$85/day	\$ 85.00	
	\$ 2,200.00 LSF	\$ 7,000.00 NTE

B. Field Survey

	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
Chief Surveyor 4 hours @ \$135/hr	\$ 540.00	
Project Surveyor 24 hours @ \$75.00/hr	\$ 1,800.00	
Two Man Survey Crew 24 hours @ \$115.00/hr	\$ 2,760.00	
46' Survey Boat 2 days @ \$3,500.00/days.....		\$ 7,000.00
RTK/GPS System 2 days @ \$350/day.....	\$ 700.00	
TSS Motion Compensator 2 days @ \$200.00/day.....	\$ 400.00	
Submersible Tide Gauge 2 days @ \$45.00/day.....	\$ 90.00	
Digital Echosounder 2 days @ \$85.00/day.....	\$ 170.00	
Hypack Navigation Software 2 days @ \$50.00/day.....	\$ 100.00	
	\$ 6,560.00 LSF	\$ 7,000.00 NTE

C. Data Reduction, Draft Bathymetric Contour Map

Chief Surveyor 4 hours @ \$135/hr	\$ 540.00
Project Surveyor 20 hours @ \$75.00/hr	\$ 1,500.00
Computer Technician 20 hours @ \$65/hr	\$ 1,300.00
	\$ 3,340.00

Total I, A-C.....\$ 12,100.00 LSF \$14,000.00 NTE

D. Sonographics, Inc. (Field Survey)

Reconnaissance level survey with E-W survey lines spaced at 250' line spacing or approximately fifty-four (54) line miles; estimate two (2) field days **plus one (1) additional day** for mobilization and demobilization.

	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
Geophysicist 32 hours @ \$92.50/hr	\$ 2,960.00	
Edge Tech 512i Sub-bottom Profiler System 3 days @ \$750/day.....	\$ 2,250.00	
EPC Labs HSP-100 Thermal Seismic Recorder 3 days @ \$130/day.....	\$ 390.00	
Thermal Recorder Film 2 Rolls @ \$60/roll.....	\$ 120.00	
Transit ✓ 120 miles x 2 days @ \$0.445/mile.....	\$ 106.80	
Per Diem 25% of M&I @ \$17.75 x 2 days	\$ 35.50	
	\$ 5,862.30 LSF	N/A
Total I, A-D.....	\$17,962.30 LSF	\$14,000.00 NTE

II. Detailed Survey of Jupiter Inlet Borrow Area @ 100' line spacing, 4,000' x 4,000' (Thirty [30] line miles ±) Seismic, sidescan and magnetometer survey collected together

A. Mobilization/Demobilization

	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
46' Survey Boat 2 days @ \$3,500/day.....	\$ 7,000.00	

B. Field survey

Chief Surveyor 4 hours @ \$135/hr	\$ 540.00	
Project Surveyor 24 hours @ \$75.00/hr	\$ 1,800.00	
46' Survey Boat 2 days @ \$3,500.00/day	\$ 7,000.00	
DGPS System 2 days @ \$350/day.....	\$ 700.00	
Total II, A-B.....	\$ 3,040.00 LSF	\$14,000.00 NTE

C. Data Reduction/Drafting

Chief Surveyor	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
4 hours @ \$135/hr	\$ 540.00	
Computer Technician		
16 hours @ \$65/hr	\$ 1,040.00	
	\$ 1,580.00 LSF	

Total II, A-C.....\$ 4,620.00 \$14,000.00

D. Sonographics, Inc. (Field Survey)

Geophysicist	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
24 hours @ \$92.50/hr	\$ 2,220.00	
EdgeTech 512i Sub-Bottom Profiler System		
2 days @ \$750/day.....	\$ 1,500.00	
EPC Labs HSP-100 Thermal Seismic Recorder		
2 days @ \$130/day.....	\$ 260.00	
EdgeTech 4200-FS Side-scan Sonar System		
2 days @ \$650/day.....	\$ 1,300.00	
Geometrics G-882 cesium magnetometer system		
2 days @ \$275/day.....	\$ 550.00	
Transit		
120 miles x 2 days		
@ \$0.445/mile.....	\$ 106.80	
Per Diem		
25% of M&I		
@ \$17.75 x 2 days	\$ 35.50	
	\$ 5,972.30 LSF	

*E. Sonographics Inc. Data Reduction and Mapping
 (Side-scan & Magnetometer)*

Geophysicist	
34 hours @ \$85/hr	\$ 2,890.00 LSF

Total II, D-E.....\$ 8,862.30 LSF

Total II A-E\$13,482.30 LSF \$14,000.00 NTE

III. Singer Island Borrow Area Seismic Survey 11,146' x 1,429' (Thirty [30] line miles ±) on 100' Line Spacing

A. Field survey (does not include bathymetric survey)

	<u>Lump Sum Fee</u>	<u>Not to Exceed</u>
Chief Surveyor 4 hours @ \$135/hr	\$ 540.00	
Project Surveyor 24 hours @ \$75.00/hr	\$ 1,800.00	
46' Survey Boat 2 days @ \$3,500.00/day		\$ 7,000.00
DGPS System 2 days @ \$350/day	\$ 700.00	
	\$ 3,040.00 LSF	\$ 7,000.00 NTE

B. Data Reduction/Drafting

Chief Surveyor 4 hours @ \$135/hr	\$ 540.00
Computer Technician 16 hours @ \$65/hr	\$ 1,040.00
	\$ 1,580.00

C. Sonographics, Inc. (Field Only)

Geophysicist 24 hours @ \$92.50/hr	\$ 2,220.00
EdgeTech 512i Sub-Bottom Profiler System 2 days @ \$750/day	\$ 1,500.00
EPC Labs HSP-100 Thermal Seismic Recorder 2 days @ \$130/day	\$ 260.00
Transit 120 miles x 2 days @ \$0.445/mile	\$ 106.80
Per Diem 25% of M&I @ \$17.75 x 2 days	\$ 35.50
	\$ 4,122.30 LSF

Total III A-C.....\$ 8,742.30 LSF \$ 7,000.00 NTE

Total I - III.....\$40,186.90 Lump Sum Fee \$35,000.00 NTE

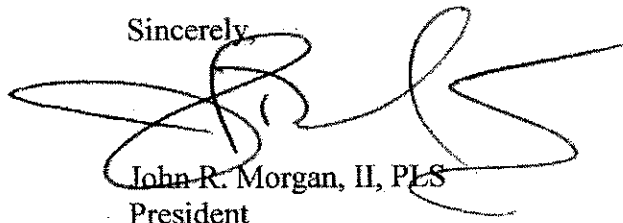
Taylor Engineering, Inc.
September 7, 2011
Page (6)

Cost Summary

	Lump Sum Fee	Not to Exceed
I. Jupiter Inlet Borrow Area Survey	\$17,962.30	\$14,000.00
II. Detailed Survey of Jupiter Inlet Borrow Area	\$13,482.30	\$14,000.00
III. Singer Island Borrow Area Seismic Survey	\$ 8,742.30	\$ 7,000.00
TOTAL I-III	\$40,186.90	\$35,000.00

As always, Morgan & Eklund, Inc. is looking forward to working with Taylor Engineering, Inc. and Palm Beach County on these projects.

Sincerely,



John R. Morgan, II, PLS
President

JRM:sm

SONOGRAPHICS

Remote Sensing Excellence

September 7, 2011

John Morgan
Morgan & Eklund
8745 U.S. Hwy 1, P.O. Box 1420
Wabasso, Fl. 32970

Dear John:

SONOGRAPHICS, Inc. is pleased to respond to your request for a combined Cultural Resource and Geophysical Surveys using Side-Scan Sonar, Magnetometer and Sub-bottom Profiler offshore Jupiter, Florida. We propose to provide the following:

SCHEDULE OF COSTS:

I. Jupiter Inlet Investigation Survey
Reconnaissance level survey with E-W survey lines spaced at 250' line spacing or approximately 54 line miles; estimate 2 field days plus mobilization and demobilization.

- A. Morgan & Eklund, Inc. (see attached proposal/Field Survey)
- B. Morgan & Eklund, Inc. (see attached proposal/Data Reduction)
- C. Field Survey

Geophysicist
32 hours @ 92.50/hr.....\$ 2,960.00

EdgeTech 512i Sub-bottom Profiler System
3 days @ \$750.00/day.....\$ 2,250.00

EPC Labs HSP-100 Thermal Seismic Recorder
3 days @ \$130.00.....\$ 390.00

Thermal Recorder Film
2 Rolls @ \$60.00/roll.....\$ 120.00

Transit
120 miles x 2 days @ 0.445/mi.....\$ 106.80
Per Diem
25% of M&I @ \$17.75 x 2 days.....\$ 35.50

Total I C.....\$ 5,862.30

D. Seismic Post Processing to be billed through Randall Parkinson.

DELIVERABLES (To Randall Parkinson):

- 1) Review and interpretation of Digital Sub-bottom profile Data and Mapping of unconsolidated sand with the aid of core borings and or probes.
- 2) Isopach data in the form of XYZ files for importation to contour mapping software.
- 3) Digital profiles of each survey line with seismic horizons outlined in the form of HTML/JPEG files with active local grid and WGS 84 Lat. Lon. Coordinates.
- 4) Hard copy Seismic Profiles of each survey line.

DELIVERABLES (To Morgan & Eklund):

None

II. Detailed Survey of Jupiter Inlet Borrow Area @ 100' line spacing, 4,000' x 4,000' (estimate 2 days) Seismic, side-scan and magnetometer survey collected together

- A. Morgan & Eklund, Inc. (see attached proposal/Field Survey)
- B. Morgan & Eklund, Inc. (see attached proposal/Data Reduction)
- C. Field Survey

Geophysicist	
24 hours @ 92.50/hr.....	\$ 2,220.00
EdgeTech 512i Sub-bottom Profiler System	
2 days @ \$750.00/day.....	\$ 1,500.00
EPC Labs HSP-100 Thermal Seismic Recorder	
2 days @ \$130.00.....	\$ 260.00
EdgeTech 4200-FS Side-scan Sonar System	
2 days @ \$650.00/day.....	\$ 1,300.00
Geometrics G-882 cesium magnetometer system	
2 days @ 275.00/day.....	\$ 550.00
Transit	
120 miles x 2 days @ 0.445/mi.....	\$ 106.80
Per Diem	
25% of M&I @ \$17.75 x 2 days.....	\$ 35.50
	\$ 5,972.30

D1. Data Reduction and Mapping (Side-scan & Magnetometer)

Geophysicist
34 hours @ 85.00/hr.....\$ 2,890.00

D. D2. Seismic Post Processing to be billed through Randall Parkinson.

Total II C & D.....\$ 8,862.30

DELIVERABLES (To Randall Parkinson):

- 1) Review and interpretation of Digital Sub-bottom profile Data and Mapping of unconsolidated sand with the aid of core borings and or probes.
- 2) Isopach data in the form of XYZ files for importation to contour mapping software.
- 3) Digital profiles of each survey line with seismic horizons outlined in the form of HTML/JPEG files with active local grid and WGS 84 Lat. Lon. Coordinates.
- 4) Hard copy Seismic Profiles of each survey line.

DELIVERABLES (To Morgan & Eklund):

- 1) Review and interpretation of Digital Side-Scan Sonar Data and positions for Mapping, target report and Geo Tiff file.
- 2) Drawing files (.DWG) of debris and bottom features.
- 3) Review and interpretation of Magnetometer data and mapping as required.

III Singer Island Borrow Area Seismic Survey (11,146' x 1,429')

- A. Morgan & Eklund, Inc. (see attached proposal/Field Survey)
- B. Morgan & Eklund, Inc. (see attached proposal/Data Reduction)
- C. Field Survey (30 – 40 Line miles)

Geophysicist
24 hours @ 92.50/hr.....\$ 2,220.00

EdgeTech 512i Sub-bottom Profiler System
2 days @ \$750.00/day.....\$ 1,500.00

EPC Labs HSP-100 Thermal Seismic Recorder
2 days @ \$130.00.....\$ 260.00

Transit
120 miles x 2 days @ 0.445/mi.....\$ 106.80

Per Diem
25% of M&I @ \$17.75 x 2 days.....\$ 35.50

Total III C.....\$ 4,122.30

D. Seismic Post Processing to be billed through Randall Parkinson.

DELIVERABLES (To Randall Parkinson):

- 1) Review and interpretation of Digital Sub-bottom profile Data and Mapping of unconsolidated sand with the aid of core borings and or probes.**
- 2) Isopach data in the form of XYZ files for importation to contour mapping software.**
- 3) Digital profiles of each survey line with seismic horizons outlined in the form of HTML/JPEG files with active local grid and WGS 84 Lat. Lon. Coordinates.**
- 4) Hard copy Seismic Profiles of each survey line.**

DELIVERABLES (To Morgan & Eklund):

None

If I can be of further assistance please do not hesitate to call. Quotation is valid for 90 days.

Sincerely,

**F. N. "Rick" Horgan
SONOGRAPHICS, INC.**



RWParkinson Consulting Inc.

MEMORANDUM

TO: Michael Krecic
Taylor Engineering, Inc.
FROM: Randall W. Parkinson, Ph.D., P.G.
SUBJECT: Updated Proposal: Singer Island Region
Offshore borrow area
Palm Beach County
DATE: June 3, 2011

This document is an updated proposal to conduct geological and geophysical tasks in association with the “detailed” analysis of a potential offshore borrow area(s) proximal to Singer Island. The proposal reflects the combined efforts of *RWParkinson Consulting, Inc.*, and *Sonographics, Inc.*, to collect and analyze the data necessary to delineate a potential borrow area(s).¹

The scope of work and associated fee estimate (see attached spreadsheet) proposed herein summarize the tasks required to complete the geological and geophysical elements as described in your original 2010 request. This proposal has benefited from several review-revise iterations completed in response to County comments provided to us over the past year.

Scope of Work

1. Detailed investigation
 - a. desktop study of existing core and seismic data
 - b. design of detailed geologic (+8 cores) and geophysical (+40 line miles) survey
 - c. assess geologic and geophysical data
 - d. report results - assessment of native beach compatibility, characterization of potential borrow area sediments, delineation of potential borrow area boundaries including MDC and sediment isopach maps

Fees

Fees to complete this work: \$14,390. See attached spreadsheet for details.

¹ The scope of work and fees prepared by Sonographics herein does not include geophysical data acquisition (aka field work). This element of the project is contained in a companion proposal submitted by Morgan and Eklund.

Palm Beach County
Offshore Borrow Area Delineation
Combined Fee Estimate
RWParkinson Consulting, Inc. and Sonographics, Inc.
 Prepared June 24, 2010; updated June 1, 2011

Task Description	RWParkinson		Subtotal	Task Total	Sonographics		Subtotal	Task Total	Grand Total		
	Staff Person	RWP			FNH	Subtotal					
	Hourly Rate	\$130			\$85						
Task 1: Detailed Singer Island Area											
1a - Desktop study			3,640	12,350		\$170	\$2,040	\$14,390			
(1) Acquire existing core and seismic data	6								2		
(2) Review existing core and seismic data (i.e., ATM, SEA)	12										
(3) Inspect existing vibracores	10										
1b - Design detailed survey			1,300			\$340					
(1) Prepare vibracore plan (± 8)	4								4		
(2) Collaborate with Sonographics (integrate seismic survey, SHPO requirements)	4										
(3) Collaborate with Taylor (i.e., logistics, SHPO, marine ops)	2										
1c - Assessment			2,860			\$1,020					
(1) Review vibracores logs and sediment samples	10								12		
(2) Inspect vibracores	10										
(3) Collaborate with Sonographics (sediment types, correlation)	2										
1d - Reporting			4,550		\$510						
(1) Characterize BA sedimentology/stratigraphy	8					3					
(2) Assess BA compatibility	4										
(3) Summarize BA specifications (i.e., boundaries, MDC, isopachs [xyz files], buffers)	12					3					
(4) Collaborate with Taylor (i.e., composite granularmetrics, overfill ratio)	11										
Total Task 3 Hours :		95			24						
Total :		\$12,350			\$2,040						

SONOGRAPHICS

Remote Sensing Excellence

May 27, 2011

Randall W Parkinson
R. W. Parkinson Consulting, Inc.
2018 Melbourne Ct. Suite 205
Melbourne, Fl. 32901

Dear Randy:

SONOGRAPHICS, Inc. is pleased to respond to your request for assistance with the Post Analysis and Mapping of Seismic data collected during the Geophysical Survey using Side-Scan Sonar, Magnetometer and Sub-bottom Profiler offshore Singer Island, Florida. We propose to provide the following:

SCHEDULE OF DELIVERABLES:

- 1) Review and interpretation of Digital Sub-bottom profile Data and Mapping of unconsolidated sand with the aid of core borings and or probes.
- 2) Isopach data in the form of XYZ files for importation to contour mapping software.
- 3) Digital profiles of each survey line with seismic horizons outlined in the form of HTML/JPEG files with active local grid and WGS 84 Lat. Lon. Coordinates.
- 4) Hard copy Seismic Profiles of each survey line.

SCHEDULE OF COSTS:

Detail 30 – 40 mile Seismic Survey	Seismic Post Processing \$2,040.00 (24 hours)
------------------------------------	--

Data collection survey will be billed through Morgan & Eklund.

If I can be of further assistance please do not hesitate to call. Quotation is valid for 90 days.

Sincerely,

F. N. "Rick" Horgan
SONOGRAPHICS, INC.



RWParkinson Consulting Inc.

MEMORANDUM

TO: Michael Krecic
Taylor Engineering, Inc.
FROM: Randall W. Parkinson, Ph.D., P.G.
SUBJECT: Updated Proposal/Jupiter Inlet offshore borrow area
Palm Beach County, Florida
DATE: June 10, 2011

Please find herein an updated proposal to conduct geological and geophysical tasks in association with the delineation of offshore borrow areas proximal to Jupiter Inlet (Figure 1). The proposal reflects the combined efforts of *RWParkinson Consulting, Inc.* and *Sonographics, Inc.* to design field surveys and assess data collected during “reconnaissance-level” and “detailed” investigations of potential offshore borrow areas.¹

The scope of work and associated fee estimate (see attached spreadsheet) proposed herein summarizes the tasks required to complete the geological and geophysical elements as described in your original 2010 request. This proposal reflects the results of several review-revise iterations completed in response to County comments provided to us over the past year.

Scope of Work

1. Reconnaissance-level investigation
 - a. desktop study of existing core and seismic data
 - b. design of geologic (± 20 cores) and geophysical (54 line miles) survey
 - c. assess geologic and geophysical data
 - d. report results – characterization of offshore sediments, native beach compatibility, delineation of offshore sand deposits suitable for additional evaluation
2. Detailed investigation
 - a. design of geologic (± 52 cores) and geophysical (30 to 40 line miles) survey
 - b. assess geologic and geophysical data
 - c. report results - assessment of native beach compatibility, characterization of potential borrow area sediments, delineation of potential borrow area boundaries including MDC and sediment isopach maps

Fees

1. Reconnaissance-level investigation: \$18,845
2. Detailed investigation: \$15,690

See attached spreadsheet for details.

¹ The scope of work and fees prepared by Sonographics herein does not include geophysical data acquisition (aka field work). This element of the project is contained in a companion proposal submitted by Morgan and Eklund.

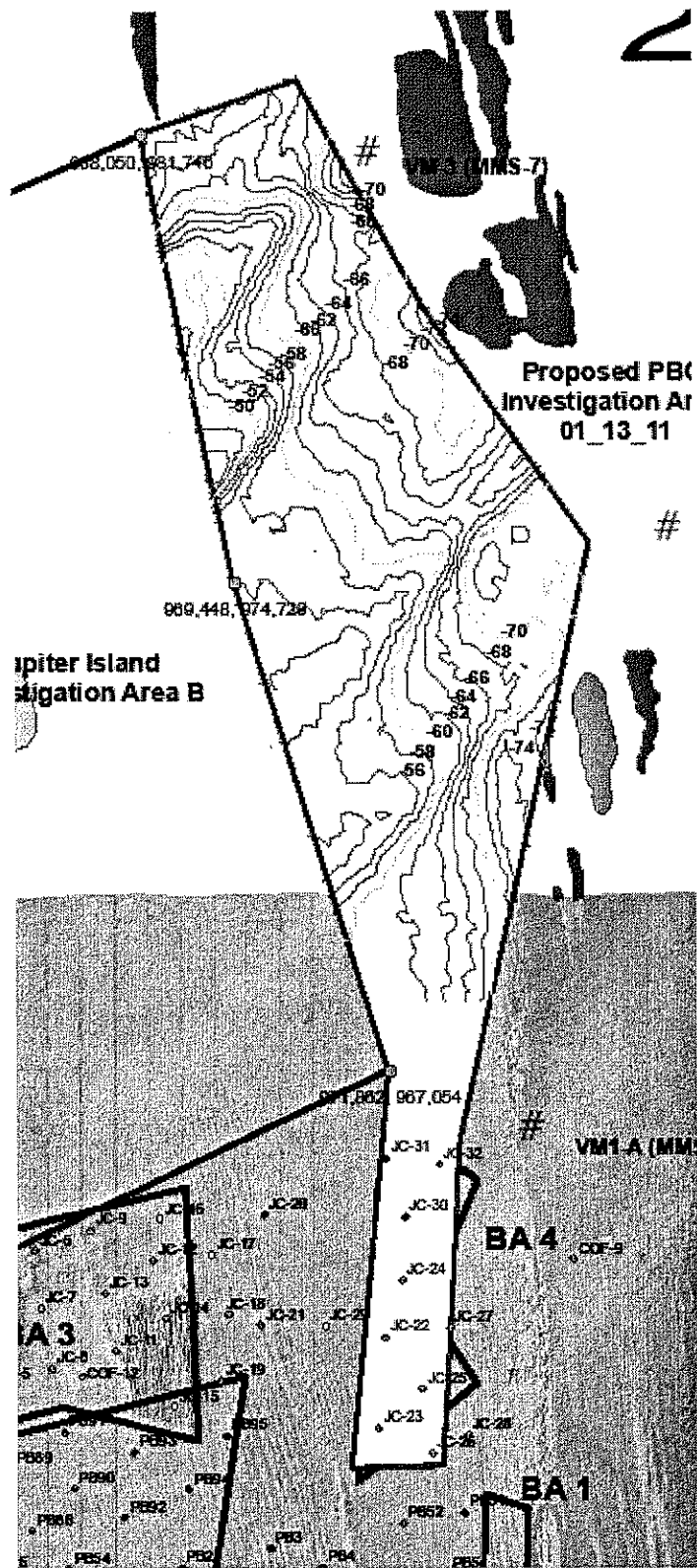


Figure 1 – Proposed Palm Beach County offshore borrow area proximal to Jupiter Inlet, Florida.

Palm Beach County
Offshore Borrow Area Delineation/Jupiter Inlet
Combined Fee Estimate
RWParkinson Consulting, Inc. and Sonographics, Inc.
Prepared June 24, 2010; Updated June 10, 2011

	RWParkinson		Sonographics		Grand Total	
Staff Person	RWP	Subtotal	FNH	Subtotal	Task Total	
Hourly Rate	\$130.00		\$85			
Task Description						
Task 1: Reconnaissance-Level Survey						
1a - Desktop study						
(1) Acquire existing core and seismic data	6	5,720		\$170	\$18,845	
(2) Review existing core and seismic data (i.e., CPE, ATM, SEA)	24		2			
(3) Inspect existing vibracores	14					
1b - Design reconnaissance survey						
(1) Prepare vibracore plan (+ 20)	8	2,340		\$425		
(2) Design seismic survey (54 miles)	8		5			
(3) Coordinate with Taylor regarding logistics and marine ops, & etc.	2					
1c - Assessment						
(1) Review vibracore logs and samples	15	3,770		\$1,105		
(2) Inspect vibracores	10		13			
(3) Review and interpret sub-bottom data (sediment types, correlation)	4					
1d - Reporting						
(1) Characterize BA sedimentology/stratigraphy	8	4,550		\$765		
(2) Characterize native beach sedimentology	4		5			
(3) Assess BA compatibility	4					
(4) Compile BA specifications (boundaries, MDC, isopachs [xyz files], buffers)	8		4			
(5) Collaborate with Taylor (i.e., composite granularmetrics, overfill ratio)	11					
Total Task 1 Hours :	126		29			
Total :	\$16,380		\$2,465			
Task 2: Detailed Survey						
2a - Design detailed survey						
(1) Prepare vibracore plan (+52)	12	2,600		\$510		
(2) Design seismic survey (30 to 40 mile) ; address SHPO requirements	6		6			
(3) Coordinate with Taylor regarding logistics, SHPO, marine ops, and etc.	2					
2b - Assessment						
(1) Review vibracores logs and samples	38	6,500		\$1,020		
(2) Inspect vibracores	10		12			
(3) Review and interpret sub-bottom data (sediment types, correlation)	2					
2c - Reporting						
(1) Characterize BA sedimentology/stratigraphy	8	4,550		\$510		
(2) Assess BA compatibility	4		3			
(3) Summarize BA specifications (i.e., boundaries, MDC, isopachs [xyz files], buffers)	12		3			
(4) Collaborate with Taylor (i.e., composite granularmetrics, overfill ratio)	11					
Total Task 2 Hours :	105		24			
Total :	\$13,650		\$2,040			

SONOGRAPHICS

Remote Sensing Excellence

May 27, 2011

Randall W Parkinson
R. W. Parkinson Consulting, Inc.
2018 Melbourne Ct. Suite 205
Melbourne, Fl. 32901

Dear Randy:

SONOGRAPHICS, Inc. is pleased to respond to your request for assistance with the Post Analysis and Mapping of Seismic data collected during the combined Cultural Resource and or Geophysical Surveys using Side-Scan Sonar, Magnetometer and Sub-bottom Profiler offshore Jupiter, Florida. We propose to provide the following:

SCHEDULE OF DELIVERABLES:

- 1) Review and interpretation of Digital Sub-bottom profile Data and Mapping of unconsolidated sand with the aid of core borings and or probes.
- 2) Isopach data in the form of XYZ files for importation to contour mapping software.
- 3) Digital profiles of each survey line with seismic horizons outlined in the form of HTML/JPEG files with active local grid and WGS 84 Lat. Lon. Coordinates.
- 4) Hard copy Seismic Profiles of each survey line.

SCHEDULE OF COSTS:

	Seismic Post Processing
Reconnaissance 54 mile Seismic Survey	\$2,465.00 (29 hours)
Detail 30 – 40 mile Seismic Survey	\$2,040.00 (24 hours)

Survey and Side-scan / Magnetometer post processing will be billed through Morgan & Eklund, Inc.

If I can be of further assistance please do not hesitate to call. Quotation is valid for 90 days.

Sincerely,

F. N. "Rick" Horgan
SONOGRAPHICS, INC.

TAYLOR ENGINEERING, INC.
 COST SUMMARY
 P2009-108: JUPITER CARLIN BORROW AREA ANALYSIS - LS TASKS

I. LABOR COST

Description	Man-Hours												Cost
	CEO	Pres	VP	Sr Adv	Director	Sr Prof	Proj Prof	Prof	Editor	Sr Tech	Tech	Admin	
Hourly Burdened Rate	295.00	214.00	183.00	166.00	147.00	120.00	101.00	82.00	89.00	92.00	76.00	47.00	
Task 1: Singer Island Borrow Area Investigation													
1.1 Vibracore/seismic survey plan development					4.0	2.0							828.00
1.2 Borrow area design			2.0		8.0	40.0		40.0		8.0			10,358.00
1.3 Review/QC/Coordination			2.0		4.0	8.0						2.0	2,008.00
1.4 Report			2.0		8.0			24.0	4.0			4.0	4,054.00
Task 1 Totals			6.0		24.0	50.0		64.0	4.0	8.0		6.0	17,248.00
Subtask 2A: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Desktop Study													
2A.1 Vibracore/seismic survey plan development					2.0	2.0							534.00
2A.2 Review/QC/Coordination			2.0		4.0	8.0						2.0	2,008.00
2A.3 Report					2.0	2.0			1.0			1.0	670.00
Subtask 2A Totals			2.0		8.0	12.0			1.0			3.0	3,212.00
Subtask 2B: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Field Survey													
2B.1 Review/QC/Coordination			2.0		8.0	8.0						2.0	2,596.00
2B.2 BOEMRE geophysical permit application					12.0	8.0			8.0			4.0	3,648.00
2B.3 BOEMRE status report					8.0			12.0	8.0			4.0	3,084.00
Subtask 2B Totals			2.0		28.0	16.0		12.0	16.0			10.0	9,328.00
Subtask 2D: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Data Review, Reporting, and Coordination													
2D.1 Review/QC/Coordination			2.0		8.0	8.0		24.0				2.0	4,564.00
2D.2 Preliminary borrow area design			1.0		4.0	12.0		24.0					4,179.00
2D.3 Report			2.0		8.0	8.0		40.0	4.0			8.0	6,514.00
2D.4 FDEP meeting and preparation time					12.0			12.0				1.0	2,795.00
Subtask 2D Totals			5.0		32.0	28.0		100.0	4.0			11.0	18,052.00
Subtask 3A: Jupiter Inlet Detailed-Level Sand Search Investigation - Desktop Study													
3A.1 Vibracore/seismic survey plan development					2.0	2.0							534.00
3A.2 Review/QC/Coordination			2.0		4.0	8.0						2.0	2,008.00
3A.3 Report			1.0		2.0	2.0			1.0			1.0	853.00
Subtask 3A Totals			3.0		8.0	12.0			1.0			3.0	3,395.00
Subtask 3B: Jupiter Inlet Detailed-Level Sand Search Investigation - Field Survey													
3B.1 Review/QC/Coordination			2.0		10.0	10.0						2.0	3,130.00
3B.2 BOEMRE status report					8.0			12.0	8.0			4.0	3,084.00
Subtask 3B Totals			2.0		18.0	10.0		12.0	8.0			6.0	6,214.00
Subtask 3E: Jupiter Inlet Detailed-Level Sand Search Investigation - Data Review, Reporting, and Coordination													
3E.1 Review/QC/Coordination			2.0		8.0	8.0		24.0				2.0	4,564.00
3E.2 Borrow area design			1.0		4.0	40.0		40.0					6,851.00
3E.3 Report			2.0		8.0	8.0		40.0	4.0			8.0	6,514.00
3E.4 FDEP meeting and preparation time					12.0			12.0				1.0	2,795.00
Subtask 3E Totals			5.0		32.0	56.0		116.0	4.0			11.0	22,724.00
LABOR TOTALS — HOURS			25.0		150.0	184.0		304.0	14.0	32.0		50.0	759.0
LABOR TOTALS — COST			4,575.00		22,050.00	22,080.00		24,928.00	1,246.00	2,944.00		2,350.00	\$80,173.00

TAYLOR ENGINEERING, INC.
 COST SUMMARY
 P2009-108: JUPITER CARLIN BORROW AREA ANALYSIS - LS TASKS

II. OTHER DIRECT COSTS

Description	Quantity	Unit Cost	Direct Cost	Burden	Burdened Cost
Task 1: Singer Island Borrow Area Investigation					
Subcontract: AVS	1.0	31,288.00	31,288.00	1.00	31,288.00
Subcontract: Morgan & Eklund (and Sonographics)	1.0	8,742.30	8,742.30	1.00	8,742.30
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	14,390.00	14,390.00	1.00	14,390.00
Subtask 2A: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Desktop Study					
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	8,655.00	8,655.00	1.00	8,655.00
Subtask 2B: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Field Survey					
Subcontract: Morgan & Eklund (and Sonographics)	1.0	17,962.30	17,962.30	1.00	17,962.30
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	1,625.00	1,625.00	1.00	1,625.00
Subtask 2D: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Data Review, Reporting, and Coordination					
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	8,565.00	8,565.00	1.00	8,565.00
Subtask 3A: Jupiter Inlet Detailed-Level Sand Search Investigation - Desktop Study					
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	3,110.00	3,110.00	1.00	3,110.00
Subtask 3B: Jupiter Inlet Detailed-Level Sand Search Investigation - Field Survey					
Subcontract: Environmental Services	1.0	9,209.00	9,209.00	1.00	9,209.00
Subcontract: Morgan & Eklund (and Sonographics)	1.0	13,482.30	13,482.30	1.00	13,482.30
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	1,280.00	1,280.00	1.00	1,280.00
Subtask 3E: Jupiter Inlet Detailed-Level Sand Search Investigation - Data Review, Reporting, and Coordination					
Subcontract: RWParkinson Consulting (and Sonographics)	1.0	11,300.00	11,300.00	1.00	11,300.00
TOTAL OTHER DIRECT COSTS					129,608.90
TOTAL PROJECT COST					\$209,781.90

TAYLOR ENGINEERING, INC.
 COST SUMMARY
 P2009-108: JUPITER CARLIN BORROW AREA ANALYSIS - NTE TASKS

I. LABOR COST

Description	Man-Hours												Cost
	CEO	Pres	VP	Sr Adv	Director	Sr Prof	Proj Prof	Prof	Editor	Sr Tech	Tech	Admin	
Hourly Burdened Rate	285.00	214.00	183.00	166.00	147.00	120.00	101.00	82.00	89.00	92.00	76.00	47.00	
Subtask 2C: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Collect Additional Vibracores													
2C.1 Review/QC/Coordination			2.0		8.0	8.0		24.0				2.0	4,564.00
2C.2 BOEMRE geotechnical permit application					12.0	8.0				8.0		4.0	3,648.00
2C.3 BOEMRE status report					8.0			12.0		8.0		4.0	3,084.00
Subtask 2C Totals			2.0		28.0	16.0		36.0		16.0		10.0	11,296.00
Subtask 3C: Jupiter Inlet Detailed-Level Sand Search Investigation - Collect Additional Vibracores													
3C.1 Review/QC/Coordination			2.0		8.0	8.0		40.0				2.0	5,875.00
3C.2 BOEMRE status report (2)					16.0			24.0		16.0		8.0	6,168.00
Subtask 3C Totals			2.0		24.0	8.0		64.0		16.0		10.0	12,043.00
Subtask 3D: Jupiter Inlet Detailed-Level Sand Search Investigation - Diver Verification Survey													
3D.1 Review/QC/Coordination			1.0		2.0							1.0	524.00
LABOR TOTALS — HOURS			5.0		54.0	24.0		100.0		32.0		21.0	236.0
LABOR TOTALS — COST			915.00		7,936.00	2,880.00		8,200.00		2,944.00		987.00	\$23,864.00

II. OTHER DIRECT COSTS

Description	Quantity	Unit Cost	Direct Cost	Burden	Burdened Cost
Subtask 1-1: Boat Rental for Task 1					
Morgan & Eklund (and Sonographics)	2.0	3,500.00	7,000.00	1.00	7,000.00
Subtask 2B-1: Boat Rental for Task 2B					
Morgan & Eklund (and Sonographics)	4.0	3,500.00	14,000.00	1.00	14,000.00
Subtask 2C: Jupiter Inlet Reconnaissance-Level Sand Search Investigation - Collect Additional Vibracores					
Subcontract: AVS	1.0	68,720.00	68,720.00	1.00	68,720.00
Subtask 3B-1: Boat Rental for Task 3B					
Morgan & Eklund (and Sonographics)	4.0	3,500.00	14,000.00	1.00	14,000.00
Subtask 3C: Jupiter Inlet Detailed-Level Sand Search Investigation - Collect Additional Vibracores					
Subcontract: AVS	1.0	145,872.00	145,872.00	1.00	145,872.00
Subtask 3D: Jupiter Inlet Detailed-Level Sand Search Investigation - Diver Verification Survey					
Subcontract: Environmental Services	5.0	3,986.00	19,930.00	1.00	19,930.00
TOTAL OTHER DIRECT COSTS					269,522.00
TOTAL PROJECT COST					\$293,386.00

Taylor Engineering, Inc.
Continuing Contract for Coastal and Marine Engineering

Contract R2010-1435 dated September 14, 2010 for period of two years expires on September 13, 2012.

Contract Amendment No. 1 (R2011-0062) dated 1-11-11 changes IG Language and Period of Service clause.

SBE-M/WBE Goal 19.0% (14% SBE/Woman; 5% SBE/Asian)

Task order summary:

TASK NUMBER	TOTAL/ SBE and/or MWBE AMOUNT	TASK DUE DATE	TASK DESCRIPTION	APPROVED BY/DATE
AMENDMENT NUMBER 1			Inspector General language and Period of Service clause changes	BCC 1/11/2011
1435-01	250,782.07 190,358.07	3/31/2012	2011 Sea Turtle Monitoring	BCC 3/1/2011
1435-02	503,167.90 29,139.00	10/30/2012	Jupiter/Carlin Shore Protection Project - Geotechnical Borrow Area Investigation	BCC

Total: 753,949.97

SBE-MBE: 219,497.07

SBE-MBE Participation: 29.1%

Report Date & Filename: 09/08/11