



**II. FISCAL IMPACT ANALYSIS**

**A. Five Year Summary of Fiscal Impact:**

<b>Fiscal Years</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>
<b>Capital Expenditures</b>	_____	_____	_____	_____	_____
<b>Operating Costs</b>	<u>196,985</u>	_____	_____	_____	_____
<b>External Revenues</b>	_____	_____	_____	_____	_____
<b>Program Income (County)</b>	_____	_____	_____	_____	_____
<b>In-Kind Match (County)</b>	_____	_____	_____	_____	_____
<b>NET FISCAL IMPACT</b>	<u>196,985</u>	_____	_____	_____	_____
<b># ADDITIONAL FTE POSITIONS (Cumulative)</b>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Is Item Included in Current Budget? Yes X No \_\_\_\_\_ M015

Budget Account No.: Fund 3652 Department 381 Unit M037 Object 3120  
 Program \_\_\_\_\_

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

3652-381-M037-3120	Singer Island Erosion Control	\$74,965
3622-381-M015-3120	Ocean Ridge Shoreline Protection	\$122,020

**C. Department Fiscal Review:** *JP*

**III. REVIEW COMMENTS**

**A. OFMB Fiscal and /or Contract Administrator Comments:**

*John D. ... 2/13/09* *John J. ... 2/11/09*  
 OFMB *MSN 2/12/09 CN 2/10/09* Contract Dev. and Control *2/13/09*

**B. Legal Sufficiency:**  
*James ... 2/18/09*  
 Assistant County Attorney

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

**C. Other Department Review:**  
 \_\_\_\_\_  
 Department Director

Attachment 1

**TASK ORDER**

TASK ORDER: 0410-08 CONSULTANT: Taylor Engineering, Inc.  
3652-381-M015-3120 \$122,020.00

ACCOUNT: 3652-381-M037-3120 \$74,965.00 CONTRACT: R2008-0410  
[Fiscal approval of Budget Availability: See below]

PROJECT MANAGER: Carly De Maye PHONE: 561-233-2503

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

PROJECT NAME: 2009 Sea Turtle Monitoring – Singer Island and Ocean Ridge

LOCATION/DISTRICT #: Singer Island & Ocean Ridge / Districts 1 & 4

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall monitor sea turtle nesting along the beaches of Singer Island and Ocean Ridge, as described in the Scope of Work.

DELIVERABLES: See proposal dated 1/28/09.

TASK ORDER TYPE: FIXED PRICE DUE DATE: 1/31/2010

TOTAL AMOUNT \$ 196,985.00 See attached spreadsheet dated 1/28/09

(Check where appropriate)  
for Contract and Subcontract Amounts:

	Black	Hispanic	Women	Other (specify)	White Male
M/WBE (State) <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	
SBE-M/WBE* <input type="checkbox"/>	\$ _____	\$ _____	\$ _____	\$ _____	
SBE <input checked="" type="checkbox"/>	\$ _____	\$ _____	\$ <u>191,445.00</u>	\$ _____	\$ _____

\*certified as both an SBE and a State MBE

TOTAL SBE-M/WBE PARTICIPATION: \$ 191,445.00

CONSULTANT REP: [Signature] DATE: 01/28/2009

DIVISION DIRECTOR: \_\_\_\_\_ DATE: \_\_\_\_\_

APPROVED AS TO TERMS AND CONDITIONS:

ERM DIRECTOR: [Signature] DATE: 2/5/09

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY: \_\_\_\_\_ DATE: \_\_\_\_\_

BOARD OF COUNTY COMMISSIONERS: \_\_\_\_\_ DATE: \_\_\_\_\_

John F. Koons, Chairman

3

TAYLOR ENGINEERING INC

- ENV. RES. MGMT.
- Env. Enh. & Restoration
- Natural Resources Stewardship
- Resource Protection
- Mosquito Control
- Finance & Support Services
- Director
- Deputy Director
- Other \_\_\_\_\_

January 28, 2009

Ms. Carly de Maye, Environmental Program Supervisor  
 Sea Turtle Protection Section  
 Palm Beach County  
 Department of Environmental Resources Management  
 2300 N Jog Road, 4th Floor  
 West Palm Beach, FL 33411

Re: 2009 Sea Turtle Monitoring at Singer Island and Ocean Ridge, Palm Beach County

Dear Ms. de Maye,

Taylor Engineering is pleased to present the proposal for the project referenced above. Exhibit A contains our proposed Scope of Work and Exhibit B contains our proposed fees.

Taylor Engineering will team with DB Ecological Services, Inc. on this project. This team provides a high level of local monitoring experience. D.B. Ecological Services will provide all monitoring and reporting services. As requested by Palm Beach County, Taylor Engineering's role is restricted to providing only limited project oversight and invoicing services over the duration of the project. We propose to execute the scope of work described in Exhibit A for a fixed, lump sum fee of \$196,985.00. Note that we will not charge you any fees for executing *Additional Tasks D, E, and F* described in Exhibit A.



We look forward to continue serving Palm Beach County on this project. Please contact me if you have any questions.

Sincerely,

Rajesh Srinivas, Ph.D., P.E.  
 Vice President

Enclosures

RECEIVED  
 JAN 29 2009

ENVIRONMENTAL RESOURCES MANAGEMENT  
 4

Exhibit A  
Scope of Work  
Palm Beach County Sea Turtle Monitoring – Singer Island and Ocean Ridge

In support of current and anticipated State and Federal permit requirements issued to Palm Beach County for the Singer Island Erosion Control Project and the Ocean Ridge Shoreline Protection Project, Taylor Engineering (TE) intends to subcontract DB Ecological Services (DB) to provide sea turtle monitoring services. DB has over 20 years of experience conducting sea turtle monitoring and research throughout Florida. The TE/DB team (hereafter referred to as the CONSULTANT) provides a beneficial combination of resources and skills to fulfill the monitoring needs for Palm Beach County (COUNTY).

The CONSULTANT shall monitor sea turtle nesting along two beaches in Palm Beach County. In order to provide cost calculations for the various permit requirements for each shoreline protection project area, the COUNTY has divided the beach into two segments:

- A. Segment 1 (Singer Island North) – the southern property boundary of John D. MacArthur Beach State Park to the northern property boundary of the Oasis condominium (~1.25 mile; Attachment 1)
- B. Segment 2 (Ocean Ridge) – 1500 feet north of the South Lake Worth Inlet to Adams Road (~2.25 miles; Attachment 2)

The CONSULTANT shall obtain all Florida Fish and Wildlife Conservation Commission (FWC) permits required for sea turtle monitoring, including authorization for nest relocation and to screen nests with restraining cages. All standard sea turtle permit required reports shall be submitted to FWC by the CONSULTANT. The CONSULTANT shall utilize trained and experienced staff to conduct all monitoring activities. All data shall be collected and entered into a computerized data management system, quality control and assurance conditions satisfied, and then submitted to the COUNTY as set forth in this Scope of Work. All data entered will be summarized by the CONSULTANT in an annual report. The COUNTY may, at its discretion, conduct independent surveys and observe data collection and analysis techniques for the purpose of comparing and validating compliance with FWC guidelines and this contract. Proven and unjustifiable discrepancies of more than 10% on 10% of observations on a given day may be cause for contract termination.

All sea turtle crawl data shall be entered into the COUNTY's web-based data management system (database). The COUNTY shall provide sufficient training on use of the database and will provide the necessary ongoing technical support, but not the equipment or software necessary to operate the database. In the event the COUNTY's database fails to function as designed, the CONSULTANT and the COUNTY shall determine mutually agreeable alternatives for data management and reporting. All data collected in the field shall be recorded on printed survey forms, approved by the COUNTY. All physical beach monitoring data shall be compiled, stored, and submitted as outlined in each Task.

In order to maintain consistency in data collection techniques, the CONSULTANT shall be provided a set of COUNTY sea turtle monitoring guidelines, containing specific definitions and monitoring criteria. The CONSULTANT shall be required to follow the same methodology

unless written approval has been given for alternate methods. The CONSULTANT (including all monitoring staff) shall also be required to have read and understood the guidelines and to attend an early season consistency meeting with COUNTY staff. Additional training and/or clarification of monitoring criteria shall be provided as necessary.

The following tasks shall be performed:

Task 1: Daily Nesting Surveys and Beach Monitoring

Daily surveys for sea turtle monitoring activity shall be conducted for all zones between March 1 and October 31. Locations of all marked nests are to be collected with the use of a real-time corrected, differential GPS unit (DGPS) with sub-meter accuracy; locations of all non-nesting emergences and unmarked nests are to be collected with either a WAAS enabled handheld GPS unit (the unit model must be approved, in advance, by the COUNTY) or with a real-time corrected, differential GPS unit (DGPS) with sub-meter accuracy. GPS data shall be uploaded to the database within one week of data collection and examined for accuracy of content and position and for real-time correction. If necessary, data may be post-processed to obtain sub-meter accuracy using a base station approved by the COUNTY. Each occurrence where post-processing is necessary, as well as the steps taken to identify and resolve the problem, shall be reported to the COUNTY with the appropriate monthly data submittal.

The following parameters shall be recorded for each crawl encountered on a daily survey form approved by the COUNTY:

- A. Date
- A. Start and end time of survey
- B. Weather conditions during survey
- C. Survey zone
- D. Species of turtle
- E. Crawl type
- F. Estimated distance from the egg chamber or landward extent of the non-nesting emergence to the high water line
- G. Estimated distance from the egg chamber or landward extent of the non-nesting emergence to the toe of dune
- H. Number of abandoned body pits
- I. Number of abandoned egg chambers
- J. Any obstructions (natural or man-made) encountered by the turtle and the turtle's response to that obstruction

Additionally, each nest record must contain a designation of marked/staked (yes/no) and clutch located (yes/no). If the nest is marked, a unique nest identification number must be assigned according to the COUNTY's naming convention (species, date, marked nest number {for the day, in that zone, expressed as a letter}, beach; example: CC-060308-4B-OR is the second marked nest on June 3, 2008 in survey zone 4 at Ocean Ridge).

If authorized by the FWC Marine Turtle Permit, nests may be relocated for conservation purposes, in accordance with FWC guidelines. All relocated nests must be marked for

evaluation, regardless of species or marking rotation. Relocated nests shall be identified by the addition of "R" after the marked nest number (example: CC-060308-4BR-OR).

Zone boundary markers will be maintained by the CONSULTANT in the dune at historical locations within the entire survey area, and maintained throughout the nesting season.

Frequency: Daily from March 1 through October 31.

Data Reporting: Each crawl record, including all parameters mentioned above, shall be entered into the COUNTY's database within one business day of collection. If the database is malfunctioning, the CONSULTANT will immediately notify the COUNTY. Raw datasheets are to be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal. All original or post-processed GPS datafiles shall be submitted with the appropriate monthly data submittal. Any crawl location that cannot be corrected through real-time or post-processing shall be reported to the COUNTY with the appropriate monthly data submittal.

Task 2: Weekly Shorebird Surveys

A weekly survey for shorebird activity shall be conducted for all zones between April 1 and September 30. Shorebird surveys shall be conducted independently of all sea turtle nesting survey activities and in accordance with FWC guidelines. The following parameters shall be recorded for each shorebird observance on a shorebird survey form approved by the COUNTY:

- B. Date of survey
- C. Start and end time of survey
- D. Weather conditions during survey
- E. Survey zone
- F. Species of shorebird
- G. Number
- H. Activity
  - a. Loafing
  - b. Feeding
  - c. Nesting
  - d. Courtship behavior

If nesting activities are observed, the CONSULTANT must notify the COUNTY within 12 hours. The COUNTY, in consultation with FWC, will then decide if protective action must be taken. Credentials of all staff conducting shorebird surveys must be submitted to and approved by the COUNTY and the FWC Regional Biologist prior to April 1.

Frequency: Once a week from April 1 to September 30.

Data Reporting: All shorebird activity shall be summarized in an Excel spreadsheet or Access database, as directed by the COUNTY, and submitted with the appropriate monthly data submittal.

### Task 3: Escarpment Mapping

Weekly visual surveys for escarpment formation shall be conducted for the entire survey area. Escarpments steeper than 60° that exceed 18 inches in height for a distance of 100 feet or greater shall be mapped as a line feature with DGPS. The average height of any escarpments meeting the above criteria shall be estimated and the maximum height measured. These data shall be recorded on printed data forms approved by the COUNTY.

Frequency: Weekly from March 1 to September 30.

Data Reporting: A summary of all surveys, including date and time, environmental conditions (winds, tide, and sea state), zone, average height, and maximum height and length of the escarpments (as a Microsoft Excel file), as well as GIS line features of escarpments (as ArcMap shapefiles in NAD83, Florida East) and the original GPS datafiles shall be included with each monthly data submittal.

### Task 4: High Water Line and Toe of Dune Mapping

Each month (during typical, non-storm conditions), the most recent high water line shall be mapped with DGPS for the entire survey area. In July (during typical, non-storm conditions), the toe of the dune or seaward vegetation line shall be mapped once with DGPS for the entire survey area.

Frequency: Monthly from March 1 to September 30 (for high water line) and once between July 1 and July 31 (for toe of dune).

Data Reporting: GIS line features of the high water line and toe of dune (as ArcMap shapefiles in NAD83, Florida East) and the original GPS datafiles shall be included with the appropriate monthly data submittal.

### Task 5: Nest Evaluations and Monitoring

Selected nests shall be located, marked, tracked throughout the incubation period, and nest contents evaluated, if applicable. Nests shall be marked approximately 2 feet west of the egg chamber using a 2 foot (or larger) painted wooden stake. An additional painted wooden stake shall be placed at the toe of the dune in the dune vegetation. Precise measurements (distance and bearing) shall be made to the dune stake and recorded on the datasheet. If nest poaching occurs, an alternate staking method, proposed by the CONSULTANT and approved by the COUNTY, shall be implemented in high-risk poaching areas.

The clutch for each marked nest shall be located by digging a maximum of 10 narrow holes. If the clutch is not found, the approximate location shall be marked and monitored throughout the incubation period.

The nest marking rotation for each species within each beach segment shall be developed in consultation with the COUNTY prior to the start of each sea turtle nesting season. The goal shall



be to randomly mark a sufficient number of nests in order to evaluate a statistically meaningful number of nests in the fill and non-fill areas (mark approximately 150 nests per treatment in order to evaluate approximately 125 nests per treatment); all nests shall be marked in Segment 2. The nest marking protocol shall take into account variable nesting densities in the fill and non-fill areas to ensure similar sample sizes for each treatment. Historic and predicted trends shall be used to formulate the protocol. A running count shall be maintained and the beach shall be surveyed in the same direction each day to ensure randomization. By June 15 of each nesting season, current data shall be compared to predictions and, as necessary, adjustments made to the marking protocol to ensure a sufficient number of evaluated nests.

When sufficient numbers of nests are available, the following minimum numbers of nests shall be marked for each species:

- A. Segment 1
  - a. Loggerhead – 150, approximately every 4<sup>th</sup> nest
  - b. Green – 150, all nests
  - c. Leatherback – 25, all nests
- B. Segment 2
  - a. Loggerhead – 250, all nests
  - b. Green – 20, all nests
  - c. Leatherback – 15, all nests

If fewer nests are available, all nests shall be marked.

In addition to the nest marking schedule, any nest, regardless of species or marking rotation, laid in a vehicle access or within 10 feet of a lifeguard tower, shall be marked for protection purposes. To identify these nests as protected (unless they would have been marked as part of the marking rotation), they shall be assigned a nest ID as described in Task 1, with the addition of "P" after the marked nest number (example: CC-060308-4BP-OR). These nests shall be checked daily for the parameters mentioned below, but shall not be evaluated for reproductive success. All stakes shall be removed either 72 hours post-emergence or after 70 days post-deposition, whichever occurs first. All protected nests shall be assigned a nest fate of "Protected".

Every marked nest shall be checked daily for:

- A. Presence of nest stakes – if the nest stake is missing, the stake shall be reset, that day, using either the distance and bearing information recorded in the database or GPS coordinates, unless continued stake loss due to ongoing, extreme tidal events is likely
- B. Evidence of overwash – overwash events shall be categorized as to severity using the following criteria:
  - a. 1 = overwash over the egg chamber but less than 1 meter west of the egg chamber
  - b. 2 = overwash extent greater than 1 meter west of the egg chamber
- C. Evidence of predation – all depredation events, by a mammalian predator or nesting turtle, that involve loss of viable eggs and/or hatchlings (not just loss of hatchlings) shall be recorded using the following parameters:
  - a. Predator species
  - b. Number of eggs lost
  - c. Incubation stage at time of depredation

- i. Pre-hatchling emergence
- ii. Post-hatchling emergence

All predated nests shall be assigned a fate of "Predated" on the first instance of egg loss, even if viable eggs remain intact; these nests shall not be evaluated for reproductive success. Depredation events by non-mammalian predators, such as crabs, birds, or ants, shall be recorded only in the comments section; these nests shall be evaluated for reproductive success. If hatchlings are depredated after leaving the chamber, but before entering the water, the number of depredated hatchlings and the predator, shall be recorded in the comments section; these nests shall be evaluated for reproductive success.

- D. Evidence of hatchling emergence – each marked nest, older than 45 days post-deposition, shall be checked daily for hatchling emergence. If emergence is noted, the estimated number of emerged hatchlings shall be recorded.
- E. Evidence of disorientation – all hatchling emergences (not just those from marked nests) shall be evaluated for disorientation. A disorientation report shall be completed for any amount of disoriented hatchlings. All disorientation events shall be recorded on the FWC Marine Turtle Disorientation Incident Report form and faxed or emailed to the COUNTY and FWC within 24 hours of observation; the original form shall be mailed to FWC within one week of observation.

All appropriate information shall be recorded daily on a nest inspection datasheet (automatically generated by the database).

Each marked nest shall be evaluated for reproductive success no earlier than 72 hours post-emergence or 70 days post deposition (80 days for leatherbacks), whichever is earlier, in accordance with FWC guidelines. For each marked nest, the following parameters shall be recorded on a hatch success form approved by the COUNTY:

- A. Number of hatched eggs
- B. Number of unhatched eggs
- C. Number of pipped live eggs
- D. Number of pipped dead eggs
- E. Number of live hatchlings
- F. Number of dead hatchlings
- G. Number of spacer eggs
- H. Depth to the top of the chamber (inches)
- I. Depth to the bottom of the chamber (inches)

Each marked nest shall be assigned a fate according to the following codes:

- A. Hatched (H) – hatched, eggs found
- B. Hatched, emergence not observed (HNO) – hatched, emergence not observed, eggs found
- C. Predated (PD) – predated, any number of eggs lost
- D. Protected (PR) – marked solely for protection or project purposes
- E. Poached (PV) – poached, any number of eggs lost
- F. Washout (WO) – eroded prior to anticipated or actual emergence, any number of eggs lost
- G. Lost (L) – not evaluated due to erosion after anticipated or actual emergence or proximity to a viable nest, all marking stakes removed and GPS coordinates unavailable, etc

- H. Could Not Locate (CNL) – eggs unable to be located
- I. Scavenged (SCV) – predated after hatchling emergence, any number of eggs lost
- J. Turtle Scattered (TS) – eggs scattered by nesting female, any number of eggs lost

For nests assigned a fate of “Lost”, an explanation of the circumstances must be entered into the comments section (example: nest eroded on 9/21 from Hurricane Xavier at 74 days post-deposition). If hatchling emergence is not observed after 70 days (80 days for leatherbacks), the nest site shall be excavated to locate the clutch. A nest fate of “Could Not Locate” may only be used after a 4’x4’x4’ area has been excavated. All relocated nests must be marked and evaluated, regardless of species or marking rotation.

Frequency: Daily from March 1 until the last marked nest is evaluated.

Data Reporting: Each nest inspection event and hatch success record, including the above mentioned parameters, shall be entered into the COUNTY’s database within one business day of collection. Raw nest inspection sheets and hatch success datasheets are to be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal.

#### Task 6: Compaction

Once prior to April 30, the CONSULTANT shall take sediment compaction readings at each DEP survey monument and half-monument throughout the survey area. Three sampling stations shall be established on each transect at high, mid, and low beach between the toe of the dune and the high water line. If less than 50 feet of dry beach are present, the sampling stations may be reduced to only high and low beach. In areas of existing dune restoration projects, compaction stations shall also be established at the mid-dune face and seaward base of the dune (in the fill). At each station, five (5) replicate sediment compaction measurements shall be made using a cone penetrometer at three (3) depths (0-6”, 6-12”, and 12-18”); the sand shall be excavated from the sampling station between each depth reading. Penetrometers are to be provided by the CONSULTANT and approved by the COUNTY prior to use. All compaction data (transect ID, beach position, sampling depth, and compaction measurements {in psi}) shall be recorded on a compaction monitoring datasheet provided by the COUNTY. All compaction data shall be entered into an Access database by the COUNTY.

Frequency: Once prior to April 30.

Data Reporting: The raw compaction datasheets shall be included with the appropriate monthly data submittal.

#### Task 7: Survey Zone Characterization

In July (during typical, non-storm conditions), a digital photograph of at least 2 megapixel resolution shall be taken at each survey zone marker. These photos shall be taken facing north, west, and south (total of three photos per zone marker) while standing at the high water line at

each zone marker and should be representative of the typical conditions in that survey zone. All photographs shall be labeled by zone marker, direction, and date (example: IOR\_south\_yymmdd).

Frequency: Once between July 1 and July 31.

Data Reporting: Digital photographs shall be submitted in .jpg format with the appropriate data submittal. Photos shall be in focus and free of glare in order to properly characterize beach conditions.

Task 8: Program Management, Quality Assurance/Quality Control, and Reporting

All raw data reporting forms shall be checked for accuracy and clarity by a CONSULTANT supervisor or senior staff member and all problems resolved within one business day of data collection. Data shall be entered into the COUNTY's database and each entry verified for accuracy by two (2) different people within four (4) weeks of data collection. Persons performing data entry and all verification checks shall initial and date each raw datasheet. Alternative methods for data verification and quality assurance may be implemented by the CONSULTANT if approved in advance by the COUNTY.

A summary of all problems encountered associated with any task and problem resolution shall be included with each monthly data submittal. All deliverables and invoices shall be submitted on or before the 15<sup>th</sup> of each month following the month of data collection in order to receive payment.

Task 9: Annual Report

Two hard copies and one electronic copy (in Microsoft Word and Excel format) of a final annual report for each segment shall be prepared by the CONSULTANT and submitted to the COUNTY by December 31. This data summary shall include the following in tabular, graphic, and/or written form, as applicable:

- A. A description of the study area and data collection methods
- B. Labeled photos of each survey zone depicting typical beach conditions
- C. The total number of crawls (by type) for each species in each zone
- D. A summary of overwash events and a correlation of number of overwash events as compared to hatchling emergence success by beach type (fill, non-fill)
- E. The total number of nests of each species evaluated for reproductive success in each zone
- F. A summary of the following parameters by zone and species:
  - a. Clutch size
  - b. Hatched eggs
  - c. Unhatched eggs
  - d. Pipped dead eggs
  - e. Pipped live eggs
  - f. Live hatchlings
  - g. Dead hatchlings
  - h. Spacer eggs

- i. Hatch success
  - j. Emergence success
- G. A summary of the number of nests, by species, lost to erosion or affected by predation in each zone
- H. A summary of compaction monitoring
- I. A summary of shorebird data by zone
- J. A summary of protected nests by zone
- K. A brief description and explanation of any problems encountered or unusual events (hurricanes, erosion, construction, etc) that may have affected data collection efforts or results
- L. A comparison of key data to previous years
  - a. Total number of crawls
  - b. Nesting density
  - c. Hatch success
  - d. Emergence success
  - e. Erosion rates
  - f. Predation rates
  - g. Disorientation events
- M. A summary of construction activities, if applicable
- N. Recommendations for future monitoring activities to improve the quality of the COUNTY's sea turtle program

Examples of final reports are available at <http://www.co.palm-beach.fl.us/erm/permitting/sea-turtles/reports.htm>.

#### Deliverables and Invoices

All deliverable reports or data submittal and invoices shall be submitted by no later than the fifteenth (15<sup>th</sup>) of each month following the month of data collection unless a date certain is provided herein in order for the CONSULTANT to receive payment from the COUNTY.

#### ADDITIONAL TASKS/CONDITIONS: Tasks/Conditions Specific to Segment 2 (Ocean Ridge)

In addition to the standard sea turtle monitoring work described above, the CONSULTANT must complete the following additional monitoring tasks for Segment 2 (Ocean Ridge):

##### Additional Task A: Nest Relocation

Nests deposited within 250 feet of the north jetty of the South Lake Worth Inlet and within 900 feet of the south jetty of the South Lake Worth Inlet must be relocated to an appropriate incubation area prior to 9:00 AM on the date deposited. All relocated nests must be marked as described in Task 1 and evaluated as described in Task 5. Relocation and incubation areas are shown on Attachment 2. An estimated 5 nests per season shall require relocation. The CONSULTANT must be able to obtain a FWC permit authorizing relocation activities.

Frequency: As required when nests are deposited within the relocation area.

Data Reporting: Observer, relocation start and end time, number of eggs, and egg chamber dimensions shall be recorded on a datasheet approved by the COUNTY. Raw datasheets shall be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal. Data reporting shall occur in accordance with Tasks 1 and 5.

#### Additional Task B: Caging Activities

The egg chamber must be located for all nests deposited within the groin field (Attachment 2) as described in Task 5; if the nest marker is lost during incubation, it must be reset using sub-meter accurate DGPS coordinates and the top of the egg chamber reconfirmed, as described in Task 5, prior to cage deployment. After 45 days of incubation, a restraining cage must be placed over the egg chamber. The cage must be closed at sunset, checked once between 11:00 PM and 1:00 AM, and opened at sunrise every day, per FWC guidelines. The cage will be removed 72 hours post-emergence, during nest excavation, not upon nest emergence. Cage design must be in accordance with FWC guidelines and must be approved by the COUNTY prior to the first deployment. An estimated 20 nests per season shall require caging, with an estimated 5 nests requiring cages at any given time. The CONSULTANT must be able to obtain a FWC permit authorizing restraining cage activities.

Frequency: As required when nests are deposited within the groin field.

Data Reporting: Observer, cage open, check, and close times, emergence, and position of hatchlings within the cage shall be recorded on a datasheet approved by the COUNTY. Raw datasheets shall be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal. Data reporting shall occur in accordance with Tasks 1 and 5.

#### Additional Task C: Beach Cleaning Activities

Daily coordination with the beach cleaner must occur in Segment 2. Two signs, one each located north and south of the South Lake Worth Inlet, must be changed daily to indicate that the daily nesting survey has been conducted in the area and that beach cleaning activities may begin. In addition to nest marking as described in Task 1, all nests deposited in Segment 2 require additional staking for protection from beach cleaning equipment. Nests deposited on the open beach must be marked with four stakes to create a 10 foot perimeter around the nest location; nests deposited within 20 feet of the toe of the dune must be marked with two stakes placed east of the nest location to create a 10 foot buffer. If any perimeter stakes are lost, they must be replaced daily prior to beach cleaning activities.

Frequency: Daily from March 1 through October 31.

Data Reporting: The beach cleaning clear time(s) shall be recorded on the daily survey datasheet used for Task 1. Raw datasheets shall be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the

COUNTY, with the appropriate monthly data submittal. Data reporting shall occur in accordance with Task 1.

Additional Task D: Sand Transfer Plant/Construction Coordination

Daily coordination with sand transfer plant or construction personnel must occur indicating that the daily nesting survey has been completed in the area (Attachment 2) and either sand transfer plant or construction activities may begin. Daily coordination may be accomplished through either a daily phone call to sand transfer plant or construction personnel, visual coordination with sand transfer plant or construction personnel, or use of beach cleaning signage, whichever is authorized by the COUNTY at that time (all three methodologies may be used throughout the nesting season).

Frequency: Daily from March 1 through October 31.

Data Reporting: The sand transfer plant clear time shall be recorded on the daily survey datasheet used for Task 1. Raw datasheets shall be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal. Data reporting shall occur in accordance with Task 1.

Additional Task E: Total Crawl Length

The total crawl length (ie. the total round trip distance traveled by the turtle above the high water line) must be estimated for every crawl.

Frequency: Daily from March 1 through October 31.

Data Reporting: The total crawl length shall be recorded on the daily survey datasheet used for Task 1. Raw datasheets shall be provided to the COUNTY weekly by fax or email until the COUNTY is confident in the quality of the data provided, and then, upon notice from the COUNTY, with the appropriate monthly data submittal. Data reporting shall occur in accordance with Task 1.

Additional Task F: Pre-construction Meeting

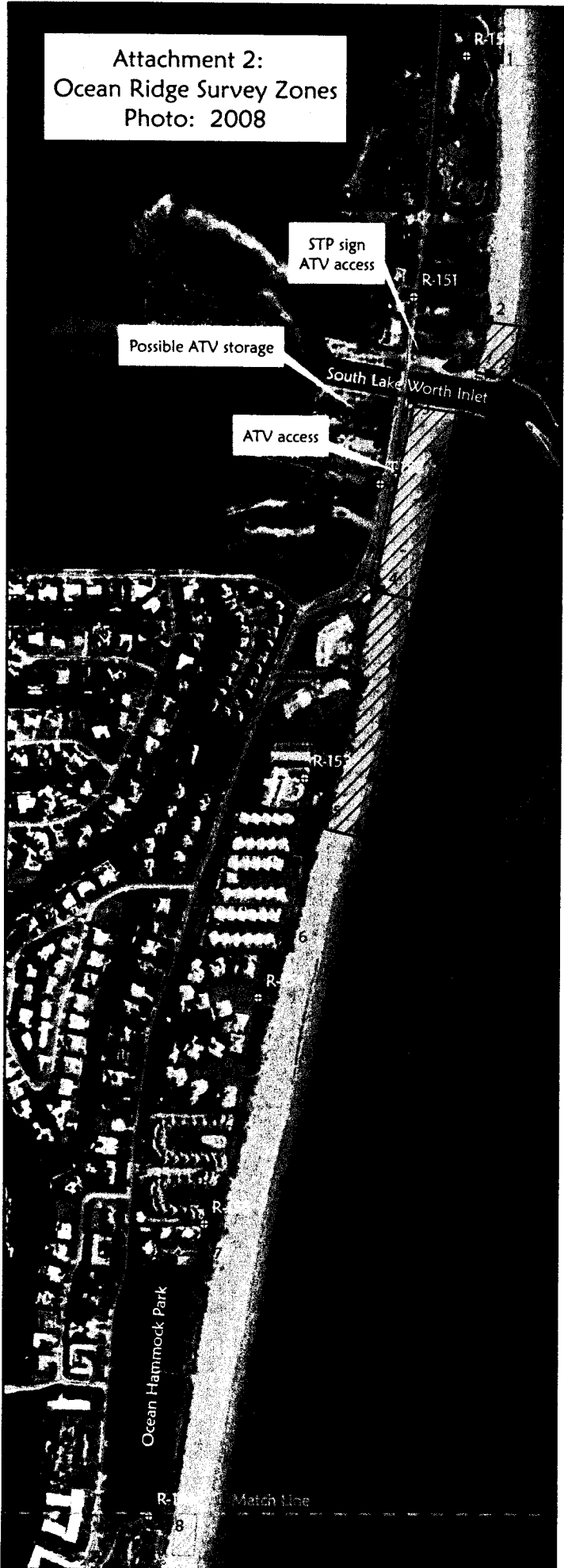
The CONSULTANT will be required to attend a pre-construction meeting for the South Lake Worth Inlet Sand Transfer Plant Reconstruction and Jetty Rehabilitation Project, scheduled to occur in Spring 2009.

Frequency: Once prior to construction initiation.

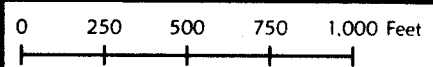
Data Reporting: A copy of the pre-construction attendance sheet shall be provided to the COUNTY with the appropriate monthly data submittal.

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Attachment 2:  
Ocean Ridge Survey Zones  
Photo: 2008

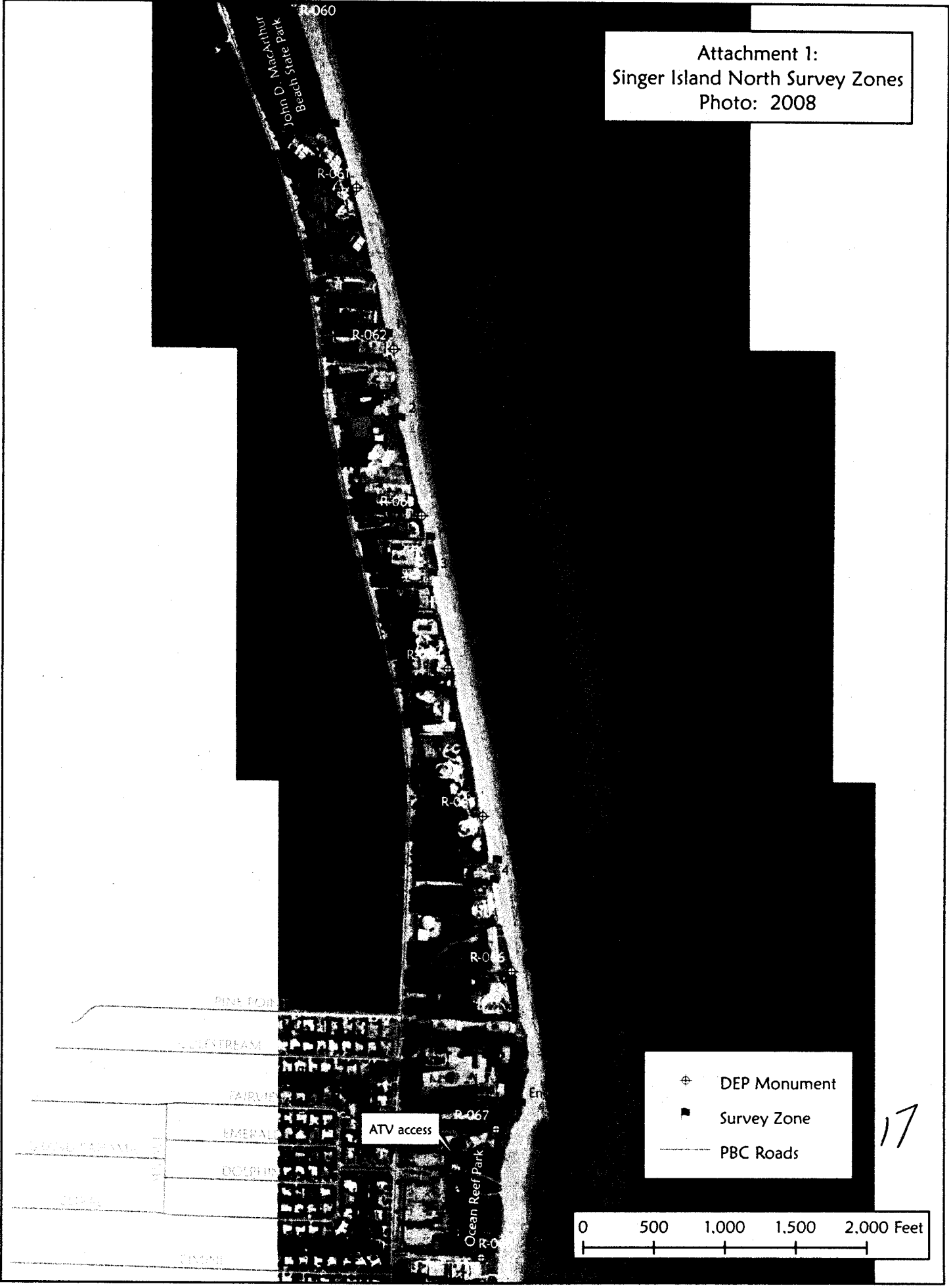


- ⊕ DEP Monument
- Survey Zone
- PBC Roads
- Groin Field *16*
- Relocation Area
- Incubation Area

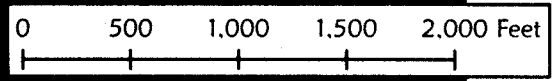




Attachment 1:  
Singer Island North Survey Zones  
Photo: 2008



- ⊕ DEP Monument
- Survey Zone
- PBC Roads



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EXHIBIT B

TAYLOR ENGINEERING, INC.  
 COST SUMMARY BY TASK  
 P2009-019: PBC TURTLE MONITORING, SINGER ISLAND AND OCEAN RIDGE

**TASK 1: Daily Nesting Surveys and Beach Monitoring**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>			
	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	49,650.00	
DB Ecological (Singer Island)	1.0	31,483.60	
Total Non-Labor Cost			81,133.60
<i>Total Task 1</i>			<b>\$ 81,133.60</b>

**TASK 2: Weekly Shorebird Surveys**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>			
	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	1,080.00	
DB Ecological (Singer Island)	1.0	1,080.00	
Total Non-Labor Cost			2,160.00
<i>Total Task 2</i>			<b>\$ 2,160.00</b>

**TASK 3: Escarpment Mapping**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>			
	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	1,675.00	
DB Ecological (Singer Island)	1.0	1,440.00	
Total Non-Labor Cost			3,115.00
<i>Total Task 3</i>			<b>\$ 3,115.00</b>

**TASK 4: High Water Line and Toe of Dune Mapping**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>			
	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	450.00	
DB Ecological (Singer Island)	1.0	650.00	
Total Non-Labor Cost			1,100.00
<i>Total Task 4</i>			<b>\$ 1,100.00</b>

**TASK 5: Nest Evaluations and Monitoring**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>			
	Units	Cost (\$)	

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**EXHIBIT B**

**P2009-019: PBC TURTLE MONITORING, SINGER ISLAND AND OCEAN RIDGE**

DB Ecological (Ocean Ridge)	1.0	9,400.00	
DB Ecological (Singer Island)	1.0	9,385.35	
Total Non-Labor Cost			<u>18,785.35</u>

*Total Task 5* \$ 18,785.35

**TASK 6: Compaction**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<hr/>			
<i>Non-Labor</i>		Units	Cost (\$)
DB Ecological (Ocean Ridge)	1.0	3,500.00	
DB Ecological (Singer Island)	1.0	1,443.90	
Total Non-Labor Cost			<u>4,943.90</u>
<i>Total Task 6</i>			<u>\$ 4,943.90</u>

**TASK 7: Survey Zone Characterization**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<hr/>			
<i>Non-Labor</i>		Units	Cost (\$)
DB Ecological (Ocean Ridge)	1.0	1,500.00	
DB Ecological (Singer Island)	1.0	721.95	
Total Non-Labor Cost			<u>2,221.95</u>
<i>Total Task 7</i>			<u>\$ 2,221.95</u>

**TASK 8: Program Management, QA/QC, Reporting**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<hr/>			
Vice President	6.0	990.00	
Project Professional	40.0	4,120.00	
Administrative	10.0	430.00	
Total Man-Hours	56.0		
Labor Cost			5,540.00
<hr/>			
<i>Non-Labor</i>		Units	Cost (\$)
DB Ecological (Ocean Ridge)	1.0	39,520.00	
DB Ecological (Singer Island)	1.0	20,214.60	
Total Non-Labor Cost			<u>59,734.60</u>
<i>Total Task 8</i>			<u>\$ 65,274.60</u>

**TASK 9: Annual Report**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<hr/>			
<i>Non-Labor</i>		Units	Cost (\$)
DB Ecological (Ocean Ridge)	1.0	7,500.00	
DB Ecological (Singer Island)	1.0	5,775.60	

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**EXHIBIT B**

**P2009-019: PBC TURTLE MONITORING, SINGER ISLAND AND OCEAN RIDGE**

Total Non-Labor Cost	13,275.60
<i>Total Task 9</i>	<b>\$ 13,275.60</b>

**TASK A: Nest Relocation (Ocean Ridge)**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	150.00	
Total Non-Labor Cost			150.00
<i>Total Task A</i>			<b>\$ 150.00</b>

**TASK B: Caging Activities**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	4,480.00	
Total Non-Labor Cost			4,480.00
<i>Total Task B</i>			<b>\$ 4,480.00</b>

**TASK C: Beach Cleaning Activities**

<i>Labor</i>	Hours	Cost (\$)	Task Totals
<i>Non-Labor</i>	Units	Cost (\$)	
DB Ecological (Ocean Ridge)	1.0	345.00	
<i>Total Task C</i>			<b>\$ 345.00</b>

**Project Total \$ 196,985.00**

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D.B. Ecological Services, Inc.  
1012 SW 7<sup>th</sup> St  
Boca Raton, FL 33486  
Phone # (561) 376-5502  
Fax # (561) 393-3854

**SCOPE OF WORK**  
**PALM BEACH COUNTY SEA TURTLE MONITORING – NORTH COUNTY**  
**COST BREAKDOWN FOR SEGMENT 1 BY TASK**

Segment 1 – South boundary of John D. MacArthur Beach State Park to the North boundary of Oasis Condominium (~1.25mile).

- TASK 1: Daily Nesting Surveys and Beach Monitoring: \$31,483.60
- TASK 2: Weekly shorebird Surveys: \$1080.00
- TASK 3: Escarpment Mapping: \$1440.00
- TASK 4: High Water Line & Toe of Dune Mapping: \$650.00
- TASK 5: Nest Evaluations and Monitoring: \$9385.35
- TASK 6: Compaction: \$1443.90
- TASK 7: Survey Zone Characterization: \$721.95
- TASK 8: Program Management, Quality Assurance/Quality Control, and Reporting: \$20,214.60
- TASK 9: Annual Reports: \$5775.60

Total Cost: \$72,195.00

D.B. Ecological Services, Inc.  
1012 SW 7<sup>th</sup> St  
Boca Raton, FL 33486  
Phone # (561) 376-5502  
Fax # (561) 393-3854

**SCOPE OF WORK PALM BEACH COUNTY SEA TURTLE MONITORING –  
OCEAN RIDGE COST BREAKDOWN SEGMENT 2 BY TASK**

Ocean Ridge Segment 2 – 1500 feet north of the South Lake Worth Inlet to Adams Road  
(~2.25 miles):

- TASK 1: Daily Nesting Surveys and Beach Monitoring: \$49,650.00
- TASK 2: Weekly shorebird Surveys: \$1,080.00
- TASK 3: Escarpment Mapping: \$1,675.00
- TASK 4: High Water Line & Toe of Dune Mapping: \$450.00
- TASK 5: Nest Evaluations and Monitoring: \$9,400.00
- TASK 6: Compaction: \$3,500.00
- TASK 7: Survey Zone Characterization:\$1500.00
- TASK 8: Program Management, Quality Assurance/Quality Control, and Reporting: \$39,520.00
- TASK 9: Annual Reports: \$7,500.00

Additional Tasks B. Segment 2- Ocean Ridge:

- ADDITIONAL TASK A: Nest Relocation: \$30.00/Nest Relocation x 5 Estimated Nests
- ADDITIONAL TASK B: Caging Activities: \$4,480.00
- ADDITIONAL TASK C: Beach Cleaning Activities: \$345.00
- ADDITIONAL TASK D: Sand Transfer Plant/Construction Coordination: No Additional Cost
- ADDITIONAL TASK E: Total Crawl Length: No Additional Cost
- ADDITIONAL TASK F: Preconstruction Meeting: No Additional Cost

Total Cost: \$119,250.00

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**Singer Island North and Ocean Ridge Pricing Sheet**

**Segment 1 - Singer Island North**

<b>Task</b>	<b>Description</b>	<b>Pricing Quantity</b>	<b>Amount</b>	<b>Cost/Quantity</b>	<b>Total Cost</b>
Task 1	Daily Nesting Surveys	By Task	1	\$ 31,483.60	\$ 31,483.60
Task 2	Weekly Shorebird Surveys	By Task	1	\$ 1,080.00	\$ 1,080.00
Task 3	Escarpment Mapping	By Task	1	\$ 1,440.00	\$ 1,440.00
Task 4	HWL/TOD Mapping	By Task	1	\$ 650.00	\$ 650.00
Task 5	Nest Evaluations	By Task	1	\$ 9,385.35	\$ 9,385.35
Task 6	Compaction	By Task	1	\$ 1,443.90	\$ 1,443.90
Task 7	Survey Zone Characterization	By Task	1	\$ 721.95	\$ 721.95
Task 8	Program Management	By Task	1	\$ 20,214.60	\$ 20,214.60
Task 9	Annual Report	By Task	1	\$ 5,775.60	\$ 5,775.60
<b>Total Cost for Option A</b>					<b>\$ 72,195.00</b>

**Segment 2 - Ocean Ridge**

<b>Task</b>	<b>Description</b>	<b>Pricing Quantity</b>	<b>Amount</b>	<b>Cost/Quantity</b>	<b>Total Cost</b>
Task 1	Daily Nesting Surveys	By Task	1	\$ 49,650.00	\$ 49,650.00
Task 2	Weekly Shorebird Surveys	By Task	1	\$ 1,080.00	\$ 1,080.00
Task 3	Escarpment Mapping	By Task	1	\$ 1,675.00	\$ 1,675.00
Task 4	HWL/TOD Mapping	By Task	1	\$ 450.00	\$ 450.00
Task 5	Nest Evaluations	By Task	1	\$ 9,400.00	\$ 9,400.00
Task 6	Compaction	By Task	1	\$ 3,500.00	\$ 3,500.00
Task 7	Survey Zone Characterization	By Task	1	\$ 1,500.00	\$ 1,500.00
Task 8	Program Management	By Task	1	\$ 39,520.00	\$ 39,520.00
Task 9	Annual Report	By Task	1	\$ 7,500.00	\$ 7,500.00
Additional Task A	Nest Relocation	Per Nest*	5	\$ 30.00	\$ 150.00
Additional Task B	Caging Activities	By Task	1	\$ 4,480.00	\$ 4,480.00
Additional Task C	Beach Cleaning Activities	By Task	1	\$ 345.00	\$ 345.00
Additional Task D	Sand Transfer Plant Activities	Per Day*	245	included	\$ -
Additional Task E	Total Crawl Length	Include in cost of Task 1			
Additional Task F	Pre-construction Meeting	By Task	1	included	\$ -
<b>Total Cost for Option B</b>					<b>\$ 119,250.00</b>

\*quantities are estimates only - actual values will be used during monthly reimbursements

\$ 191,445

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budget back up

**2009 Singer Island and Ocean Ridge Sea Turtle Monitoring  
Account and Cost Sharing Breakdown**

Account	Description	2009
3652-381-MO37-3120	Singer Island Erosion Control	72195.00
3652-381-MO15-3120	Ocean Ridge Shoreline Protection	119250.00

**Cost Share**

Beach	Year	Total Cost	Federal		State		Riviera Beach		ERM	
			%	Amount	%	Amount	%	Amount	%	Amount
Singer Island	2009	72195.00	0.00	0.00	0.39945	28838.29	0.20	14439.00	0.40055	28917.71
Ocean Ridge	2009	119250.00	0.54	64395.00	0.23	27427.50	0.00	0.00	0.23	27427.50
<b>Total</b>		<b>191445.00</b>	<b>64395.00</b>		<b>56265.79</b>		<b>14439.00</b>		<b>56345.21</b>	
<b>Percent of Total</b>			34%		29%		8%		<b>TDC</b>	<b>ad valorem</b>
									<b>37751.29</b>	<b>18593.92</b>
									20%	10%

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## Taylor Engineering Continuing Contract for Coastal and Marine Engineering

Contract R2008-0410 dated March 1, 2008 for period of two years expires on Feb. 28, 2010

SBE-MBE Goal 15.0% (10% SBE/W; 5% MBE/H)

Task order summary:

TASK NUMBER	TOTAL/ SBE and/or MWBE AMOUNT	TASK DUE DATE	TASK DESCRIPTION	APPROVED BY/DATE
Taylor-01	316,582.00 0.00	1/31/09	2008 North County Sea Turtle Monitoring	BCC 3/11/2008
Taylor-01A	49,023.00 0.00	1/31/2009	2008 North County Sea Turtle Monitoring	ERM 3/11/2008
0410-02	5,000.00 0.00	4/30/2008	2007 Jupiter Inlet Ebb Shoal Survey	ERM 4/29/2008
0410-03	93,924.00 35,462.00	10/31/2008	2008 Regional Monitoring Beach Profiles and 3 Ebb Shoal Surveys	CRC 8/6/2008
0410-04	21,766.00 0.00	10/31/2008	Ocean Ridge 36 Month Monitoring Report	ERM 7/25/2008
0410-05	164,763.00 0.00	9/9/2009	Jupiter/Carlin Renourishment Beach Fill and Permitting	BCC 9/9/2008
0410-03A	18,363.00 8,046.00	10/31/2008	2008 Regional Monitoring Beach Profiles and 3 Ebb Shoal Surveys	ERM 10/22/2008
Taylor-01B	9,852.50 0.00	1/31/2009	2008 North County Sea Turtle Monitoring	ERM 11/10/2008
0410-05A	25,168.84 0.00	9/9/2009	Jupiter/Carlin Renourishment Beach Fill and Permitting	ERM 11/17/2008
0410-06	91,660.00 13,776.00	4/24/2009	Zeke's Parcel Waterfront Design	CRC 12/17/2008
0410-07	190,744.00 0.00	8/31/2010	Jupiter/Carlin Section 934 Study	BCC
0410-08	196,985.00 191,445.00	1/31/2010	2009 Sea Turtle Monitoring - Singer Island & Ocean Ridge	BCC

Subtotal: 1,183,831.34

Subtotal SBE-MBE: 248,729.00

Subtotal SBE-MBE Part.: 21.0%

Report Date & Filename: 01/28/09

T:\eeringser\Consultants\TAYLOR\_2008\history\_0410.xls]Sheet1

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JC  
copy

R2008 0410

**CONTRACT FOR PROFESSIONAL CONSULTANT SERVICES  
BETWEEN PALM BEACH COUNTY AND  
TAYLOR ENGINEERING, INC.**

This is a Contract made as of MAR 11 2008, by and between Palm Beach County, a Political Subdivision of the State of Florida, by and through its Board of County Commissioners, hereinafter referred to as the COUNTY, and Taylor Engineering, Inc., 9000 Cypress Green Drive, Suite 200, Jacksonville, Florida 32256, an engineering firm, a corporation, authorized to do business in the State of Florida, hereinafter referred to as the CONSULTANT, whose Federal I.D. Number is 59-2850478.

In consideration of the mutual promises contained herein, the COUNTY and the CONSULTANT agree as follows:

**ARTICLE 1 - SERVICES**

The CONSULTANT's responsibility under this Contract is to perform professional coastal and marine engineering services and incidental services as more specifically set forth in the Scope of Work attached hereto as Exhibit "A". In the event services are required to be performed that are not described in Exhibit "A", but are within the general scope of services, the COUNTY and the CONSULTANT hereby reserve the right to negotiate task orders covering the desired services.

The CONSULTANT shall conduct professional services in accordance with Chapters 471 and 472, Florida Statutes and other applicable local, state and federal standards. The CONSULTANT shall conduct topographic and hydrographic survey work in compliance with the U.S. Army Corps of Engineers "Technical Requirements for Surveying, Mapping and Photogrammetric Services," Revised March 1989 and the U.S. Army Corps of Engineers "Engineering Design: Hydrographic Surveying," EM 1110-2-1003, January 1, 2001, and the most current Florida Department of Environmental Protection specifications for topographic (section 02000) and bathymetric (section 02100) surveying.

**ARTICLE 2 - PERIODS OF SERVICE AND SCHEDULES**

This Contract commences on March 1, 2008 and ends two years later. At the option of the COUNTY, the Contract can be renewed for an additional one-year period.

Reports and other work items shall be delivered or completed according to schedules established in each task order.

**ARTICLE 3 - ASSIGNMENT OF WORK**

The CONSULTANT shall provide professional services on a task order basis. A copy of the Task Order form and Task Change Order form are attached hereto as Exhibit "C" and Exhibit "D". The COUNTY reserves the right to modify these forms during the term of the Contract.

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**ARTICLE 32 - CRIMINAL HISTORY RECORDS CHECK**

The CONSULTANT shall comply with the provisions of Ordinance 2003-030, the Criminal History Records Check Ordinance ("Ordinance"), if CONSULTANT's employees or subcontractors are required under this contract to enter a "critical facility" as identified in Resolution R-2003-1274. The CONSULTANT acknowledges and agrees that all employees and subcontractors who are to enter a "critical facility" will be subject to a fingerprint based criminal history records check. Although COUNTY agrees to pay for all applicable FDLE/FBI fees required for criminal history record checks, the CONSULTANT shall be solely responsible for the financial, schedule, and staffing implications associated in complying with Ordinance 2003-030.

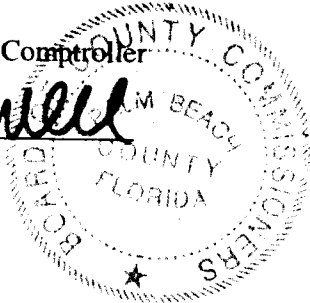
IN WITNESS WHEREOF, the Board of County Commissioners of Palm Beach County, Florida has made and executed this Contract on behalf of the COUNTY and CONSULTANT has hereunto set its hand the day and year above written.

R 2008 04 10  
MAR 11 2008

ATTEST:

Sharon R. Bock, Clerk & Comptroller

By: *Sharon R. Bock*  
Deputy Clerk



PALM BEACH COUNTY  
BOARD OF COUNTY COMMISSIONERS:

By: *Addie L. Greene*  
Addie L. Greene, Chairperson

WITNESS:

*Carla M. Cannon*  
Signature

Carla M. Cannon  
Name (type or print)

CONSULTANT:

Taylor Engineering, Inc.  
Company Name

*Steven J. Schropp*  
Signature

Steven J. Schropp  
Name (type or print)

Vice President  
Title

(corp.seal)

APPROVED AS TO FORM  
AND LEGAL SUFFICIENCY:

By: *James K. Miller*  
Assistant County Attorney

APPROVED AS TO TERMS  
AND CONDITIONS:

By: *Richard E. Walesky*  
Richard E. Walesky, Director  
Dept. of Environmental Resources Mgmt.

**EXHIBIT B**  
Taylor Engineering, Inc.  
Schedule of Hourly Labor Rates  
and Equipment Fees and Other Direct Costs  
for 2008  
Palm Beach County  
Coastal & Marine Engineering Services

<b>Position</b>	<b>Rate Basis Hourly Wage</b>	<b>Burdened Hourly Billing Rate*</b>
<i>CEO</i>	86.67	247.00
<i>President</i>	65.26	186.00
<i>Vice President</i>	57.89	165.00
<i>Senior Advisor</i>	50.53	144.00
<i>Director</i>	43.86	125.00
<i>Senior Professional</i>	36.14	103.00
<i>Project Professional</i>	36.14	103.00
<i>Staff Professional</i>	25.61	73.00
<i>Senior Editor</i>	33.33	95.00
<i>Sr. Technical Support</i>	29.82	85.00
<i>Technical Support</i>	20.35	58.00
<i>Administrative</i>	15.09	43.00

<b>Equipment Fee and Other Direct Costs</b>	<b>Rate</b>	<b>Unit</b>
Black & White Photocopies (8-1/2 x 11)	\$0.15	/page
Black & White Photocopies (11 x 17)	\$0.20	/page
Color Photocopies (8-1/2 x 11)	\$1.25	/page
Color Photocopies (11 x 17)	\$1.50	/page
Computer Generated Glossy Plots (24" x 36" Glossy Paper)	\$65.00	/page
Computer Generated Glossy Plots (24" x 36" Standard Paper)	\$35.00	/page
14' Aluminum Jonboat	\$80.00	/day
Truck	\$85.00	/day
Trimble Differential GPS	\$100.00	/day
ADFM Velocity Profiler Pro20	\$200.00	/day
ADCP Rio Grande Current Meter	\$200.00	/day
Sokkia SET6E Total Station	\$350.00	/day
Cone Penetrometer	\$15.00	/day
YSI SCT Meter	\$50.00	/day
YSI DO Meter	\$50.00	/day
Hand-held GPS	\$10.00	/day

\*The Burdened Hourly Billing Rates are based on a 2.85 multiplier.

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