

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2023	2024	2025	2026	2027
Capital Expenditures	_____	_____	_____	_____	_____
Operating Costs	<u>\$198,912</u>	_____	_____	_____	_____
External Revenues	_____	_____	_____	_____	_____
Program Income (County)	_____	_____	_____	_____	_____
In-Kind Match (County)	_____	_____	_____	_____	_____
NET FISCAL IMPACT	<u>\$198,912</u>	_____	_____	_____	_____
No. ADDITIONAL FTE POSITIONS (Cumulative)	_____	_____	_____	_____	_____
Is Item Included in Current Budget?			Yes <u>X</u>	No _____	
Does this item include the use of federal funds?			Yes _____	No <u>X</u>	
Budget Account No.:	<u>Fund 3652</u>	<u>Department 381</u>	<u>Unit M015</u>	<u>Object 3120</u>	
Reporting Category	_____				

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

Beach Improvement Fund
 3652-381-M015-3120 Ocean Ridge Shore Protection \$198,911.92

C. Department Fiscal Review:

S. Fleming

III. REVIEW COMMENTS

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

Lina Mata 7/25/23
OFMB QA 7/24

Dr. J. Jacob
Contract Dev. and Control 7/27/23

EW 7/24/23
TR 7/26/23

B. Legal Sufficiency:

M. Blum
8/2/2023
Assistant County Attorney

C. Other Department Review:

Department Director

CONSULTANT SERVICES AUTHORIZATION

CSA #: 0089-01 CONSULTANT: Coastal Protection Engineering LLC

ACCOUNT: 3652-381-M015-3120-~~FO15 CIP~~ -COCR-008 CONTRACT: R2023-0089

[Fiscal approval of Budget Availability: S. Neary
Sue Neary]

PROJECT MANAGER: Chris Carstens PHONE: 561-681-3813

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

PROJECT NAME: Ocean Ridge Shore Protection Project V Design and Permitting

LOCATION/DISTRICT #: Ocean Ridge / District 4

TASK DESCRIPTION (use additional pages if necessary): The Consultant shall provide professional services for the design and permitting of the Project, as described in the attached CPE proposal dated May 25, 2023 (Attachment B), OEBO Schedules 1 and 2 (Attachment A), and the Contract History (Attachment C) are attached hereto and made part of this CSA.

DELIVERABLES: See attached CPE proposal dated May 25, 2023 (Attachment B).

CSA TYPE: FIXED PRICE DUE DATE: 12/31/2024

TOTAL AMOUNT: \$198,911.92

(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>161,191.92</u>

*certified as both an SBE and a State MBE
TOTAL SBE-M/WBE PARTICIPATION: \$161,191.92

CONSULTANT REP: Thomas P. Pierro DATE: 6/27/2023
Thomas P. Pierro, P.E., D.CE, Authorized Member

APPROVED AS TO TERMS AND CONDITIONS:

ERM DIRECTOR: Deborah Drum DATE: 7-5-2023
Deborah Drum

{SIGNATURE PAGES CONTINUED}

APPROVED AS TO FORM AND LEGAL SUFFICIENCY:

ASSISTANT COUNTY ATTORNEY: _____ DATE: _____
ybh Yelizaveta B. Herman

ATTEST: JOSEPH ABRUZZO
CLERK OF THE CIRCUIT
COURT & COMPTROLLER: _____ DATE: _____
Deputy Clerk

BOARD OF COUNTY COMMISSIONERS: _____ DATE: _____
Gregg K. Weiss, Mayor

OEBO SCHEDULE 1

LIST OF PROPOSED CONTRACTOR/CONSULTANT AND SUBCONTRACTOR/SUBCONSULTANT PARTICIPATION

SOLICITATION/PROJECT/BID NAME: Ocean Ridge Shore Protection Project V Design and Permitting

NAME OF PRIME RESPONDENT/BIDDER: Coastal Protection Engineering LLC

CONTACT PERSON: Stacy Buck, Senior Marine Biologist

SOLICITATION OPENING/SUBMITTAL DATE: _____

SOLICITATION/PROJECT/BID No.: CSA #0089-01

ADDRESS: 5301 N. Federal Hwy, Suite 335, Boca Raton, FL 33487

PHONE NO.: 561-565-5100 **E-MAIL:** sbuck@coastalprotectioneng.com

DEPARTMENT: Environmental Resources Management

PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT ON THIS PROJECT. PLEASE ALSO LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT.

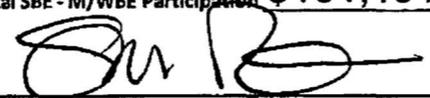
Name, Address and Phone Number	(Check all Applicable Categories)			DOLLAR AMOUNT OR PERCENTAGE OF WORK				
	Non-SBE	M/WBE	SBE	Black	Hispanic	Women	Caucasian	Other
		Minority/Women Business	Small Business					(Please Specify)
1. Coastal Protection Engineering LLC	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____	_____	_____	\$161,191.92 ✓	_____
2. CSA Ocean Sciences Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	\$13,178.00 ✓	_____
3. Terraquatic, Inc.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	\$24,542.00 ✓	_____
4.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	_____	_____	_____	_____

(Please use additional sheets if necessary)

Total _____ \$198,911.92 ✓

Total Bid Price \$ 198,911.92 ✓ Total SBE - M/WBE Participation \$161,191.92 ✓

I hereby certify that the above information is accurate to the best of my knowledge: _____


Authorized Member

Signature
Title

- Note:**
1. The amount listed on this form for a Subcontractor/subconsultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
 2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and/or M/WBE, please indicate the dollar amount under the appropriate category.
 3. Modification of this form is not permitted and will be rejected upon submittal.

Attachment A
p. 1 of 4

Attachment A
p. 2 of 4

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0089-01
SOLICITATION/PROJECT NAME: Ocean Ridge Shore Protection Project V Design and Permitting

Prime Contractor: Coastal Protection Engineering LLC Subcontractor: N/A

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 11/6/2020

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
	Engineering and Biological Monitoring Services				\$161,191.92

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$161,191.92

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant _____ Price or Percentage: _____

Coastal Protection Engineering LLC

Print Name of Prime
By: [Signature]
Authorized Signature

Thomas P. Pierro

Print Name

P.E., D.CE

Title

Date: 6/27/2023

N/A

Print Name of Subcontractor/subconsultant

By: _____
Authorized Signature

Print Name

Title

Date: _____

OEBO LETTER OF INTENT – SCHEDULE 2

Attachment A
p. 3 of 4

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0089-01
 SOLICITATION/PROJECT NAME: Ocean Ridge Shore Protection Project V Design and Permitting

Prime Contractor: Coastal Protection Engineering LLC Subcontractor: CSA Ocean Sciences Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): n/a

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	ESA Listed Coral Surveys				\$13,178.00

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$13,178.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant _____

Price or Percentage: _____

Coastal Protection Engineering LLC

Print Name of Prime
By: 
Authorized Signature

Thomas Pierro
Print Name

Principal Engineer / AMBR
Title

Date: 6/28/2023

CSA Ocean Sciences Inc.

Print Name of Subcontractor/subconsultant
By: 
Authorized Signature

Frederick B. Ayer, II
Print Name

Executive Vice President
Title

Date: 27 June 2023

OEBO LETTER OF INTENT – SCHEDULE 2

Attachment A
p. 4 of 4

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: CSA No. 0089-01
 SOLICITATION/PROJECT NAME: Ocean Ridge Shore Protection Project V Design and Permitting

Prime Contractor: Coastal Protection Engineering LLC Subcontractor: Terraquatic, Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): n/a

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Surveying Services				\$24,542.00

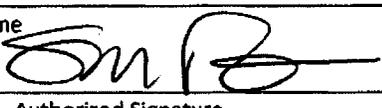
The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$24,542.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

Name of 2nd/3rd tier Subcontractor/subconsultant _____ Price or Percentage: _____

Coastal Protection Engineering LLC

Print Name of Prime

By: 
 Authorized Signature

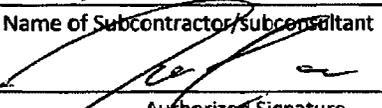
Thomas Pierro
 Print Name

Principal Engineer/AMBR
 Title

Date: 6/28/2023

Terraquatic, Inc.

Print Name of Subcontractor/subconsultant

By: 
 Authorized Signature

JOSHUA LEE, PSM
 Print Name

PRESIDENT
 Title

Date: JUNE 27, 2023



Attachment B
page 1 of 17

COASTAL PROTECTION ENGINEERING
5301 N. FEDERAL HWY, SUITE 335
BOCA RATON, FL 33487
561-565-5100

May 25, 2023

Sent Via Email

Andy Studt
Program Supervisor
Coastal Resources Management
Palm Beach County
2300 North Jog Road, 4th Floor
West Palm Beach, FL 33411

Re: Proposal for Design and Permitting of the Ocean Ridge Shore Protection Project

Dear Andy,

This proposal is being provided in response to your request for Coastal Protection Engineering LLC (CPE) to support Palm Beach County (County) in preparing a Department of the Army (DA) permit application for the Ocean Ridge Shore Protection Project (SPP). Additionally, CPE will support a modification to the FDEP permit to revise the 2013 Biological Monitoring Plan.

The CPE Team will provide professional services on the following tasks as further described in the attached Scope of Services (Exhibit A):

- Task 1 – Agency Coordination**
- Task 2 – Federal Permitting**
- Task 3 – Revise FDEP Biological Monitoring Plan**
- Task 4 – Nearshore ESA-Listed Coral Species Survey**
- Task 5 – Borrow Area Investigation**

The services proposed herein will be conducted in accordance with this proposal and Professional Services Contract ERM-CCNA-2022 between Palm Beach County and Coastal Protection Engineering executed January 24, 2023. The total cost for these services is to be provided for a Lump Sum fee of \$198,911.92 as detailed in the attached Fee Proposal (Exhibit B) to be invoiced monthly based on percent complete.

Thank you for the opportunity to serve the County. If you have any questions, please feel free to contact me directly at 561-632-1210.

Sincerely,

Stacy Buck
Senior Marine Biologist
Coastal Protection Engineering LLC
Mobile: 561-632-1210
sbuck@coastalprotectioneng.com



Att.: Exhibit A – Scope of Services
Exhibit B – Fee Proposal

cc: Chris Carstens, Palm Beach County ERM
Tara Brenner, P.E., P.G., CPE
Tom Pierro, P.E., CPE



Exhibit A – Scope of Services

Ocean Ridge Shore Protection Project – Design & Permitting

This scope of work is for professional services to support Palm Beach County (County) in preparing a Department of the Army (DA) permit application for the Ocean Ridge Shore Protection Project (SPP). The federal permit (SAJ-2012-01244) expired on December 17, 2018, and the USACE constructed the FCCE project under FDEP Permit No. 0311339-001-JC in 2020. The County recently requested a 5-year extension to the FDEP permit, which was set to expire on June 24, 2023, but is anticipated to be authorized until June 24, 2028 with the extension. Accordingly, the County seeks to secure a new DA permit to construct the Ocean Ridge SPP as needed for the life of the permit. It is assumed that annual beach survey data conducted by the County will be available to CPE to support the engineering design. Likewise, post-construction borrow area surveys conducted after the 2020 FCCE project will be utilized for borrow area design and calculations. Therefore, these surveys are not included in this scope of work.

Our staff and subconsultants will be used as described herein and proposed in Exhibit B. Although this proposal is detailed by separable items and estimated by specific staff and categories, it is anticipated that some work elements will exceed the estimate while others fall below the estimate to complete. Our staff and subconsultants will be used as needed to achieve the scope of services and to meet the stated objectives and timelines within the proposed budget.

The following Tasks are included in this Scope of Services:

- Task 1 – Agency Coordination**
- Task 2 – Federal Permitting**
- Task 3 – Revise FDEP Biological Monitoring Plan**
- Task 4 – Nearshore ESA-Listed Coral Species Survey**
- Task 5 – Borrow Area Investigation**

Task 1 – Agency Coordination

CPE will coordinate with state and federal agencies as needed throughout execution of this scope of services to aid the County with regulatory needs and project planning. This may include emails, phone calls, and participating in meetings as they are needed up to the budget proposed. This task is intended to support the County with both scheduled and impromptu meetings or presentations that may arise relating to the Ocean Ridge SPP. This may include but is not limited to responding to County requests, preparation of memorandums, assembling and analyzing existing documents and information, preparing for and/or participating in conference calls, site visits, meetings and/or presentations, planning, and coordination with other local, state, and federal entities as requested. This includes coordination with federal agencies, including USFWS and NMFS, during the permitting process. It is anticipated that preliminary discussions related to the next federal design document for re-authorization of the Ocean Ridge SPP will be initiated under this task.



Deliverable: Meeting minutes will be taken and shared with County staff to document coordination and progress. Staff hours within this task will be used to support coordination efforts beyond what is included in the other tasks of this proposal.

Task 2 – Federal Permitting

The previous federal DA permit was issued in 2013 and expired in 2018. Since the 2020 FCCE project was constructed by USACE, the FDEP permit was the only regulatory permit required. The County is now seeking re-issuance of the DA permit from the USACE.

Engineering Design

As the basis for the project design and permitting effort, CPE will utilize the template previously authorized by USACE under DA Permit No. SAJ-2012-01244. Shoreline and volume changes will be updated to evaluate volume needs and distribution on the existing beach conditions. The design will consider volume requirements, updated beach conditions, and other relevant factors of the proposed project. CPE will review the authorized Equilibrium Toe of Fill (ETOF), compare it to current conditions and determine if it is still applicable. CPE will review existing data and the proposed template to update the design as appropriate, prepare the permit sketches, and assemble the application attachments. The permit sketches will include plan view and cross-sections of the beach fill template and borrow areas, available construction access(es) and staging areas, topographic and bathymetric survey data, identified regulatory restrictions, known hardbottom areas, and exclusion zones. The permit sketches will be signed and sealed by a Professional Engineer registered in the State of Florida and submitted with the application.

Pre-Application Meeting

Prior to preparing the Department of the Army (DA) permit application, CPE will request, prepare for, and attend a pre-application meeting with USACE regulatory staff. The meeting will be held virtually via webinar, but this proposal also includes the option to attend an in-person meeting with USACE in Palm Beach Gardens if requested by the County. The overall purpose of the pre-application meeting is to present the proposed project, obtain agency input and guidance and identify any additional data needs and/or concerns. Feedback received during the pre-application meeting will be used to refine the proposed field investigations, complete the design, and prepare and submit a comprehensive permit application.

Permit Application

Based on feedback obtained in the pre-application meeting and analyses described above, the CPE Team will compile available environmental data, geological data, permit sketches, and an updated project description to support the application. CPE will develop a Department of the Army (DA) permit application to request a 15-year multi-use permit that includes relevant aspects and features of the Ocean Ridge SPP. We anticipate the project will meet the requirements of the NMFS South Atlantic Regional Biological Opinion (SARBO) and the USFWS Statewide Programmatic Biological Opinion (SPBO) and Piping Plover Programmatic Biological Opinion (P³BO). We will provide NMFS and USFWS with data we anticipate will be needed for their respective consultations.



Permit Processing

Following submittal of the DA permit application, CPE will provide post-submittal coordination to aid in expediting agency reviews. This may include attending meetings and/or participation in teleconferences with agencies as needed. We will respond to Requests for Additional Information (RAIs) during the permit review process. RAIs may include comments from other federal agencies, and/or the public. We will coordinate with the County on the extent of the response and what the implication may be to the permitting process and construction timeline. We will draft a RAI response and provide the County an opportunity for review prior to submittal. In cases where protracted coordination and response efforts may exceed the level of effort estimated herein, CPE will contact the County to discuss an approach and can develop a supplemental proposal if requested.

Deliverable: The deliverables under this task include a draft and final DA permit application, coordination with federal agencies, and responses to two RAIs (each provided to the County as draft and final).

Task 3 – Revise FDEP Biological Monitoring Plan

The existing FDEP permit for the Ocean Ridge SPP includes an outdated Biological Monitoring Plan (BMP) that was approved in 2013. FDEP has expressed that the 2013 BMP will need to be updated prior to the next beach nourishment project. CPE biologists will coordinate with the County and FDEP to update and refine the existing BMP to align with FDEP's Standard Operating Procedures for Nearshore Hardbottom Monitoring of Beach Nourishment Projects (FDEP, 2016).

Deliverable: The deliverable under this task includes a revised Biological Monitoring Plan approved by FDEP.

Task 4 – Nearshore ESA-Listed Coral Species Survey

The 2020 National Marine Fisheries Service (NMFS) South Atlantic Regional Biological Opinion (SARBO) requires surveying of hardbottom resources located within the range of Endangered Species Act (ESA) listed corals, which is defined as all areas in Florida from St. Lucie Inlet in Martin County south through the Florida Keys. The Ocean Ridge SPP falls within this range and also includes *Acropora* critical habitat. For beach nourishment projects, hardbottom resources that are located within 500 feet of the project equilibrium toe of fill (ETOF) must be surveyed for listed coral species within two years of project construction. There are known hardbottom resources within 500 feet of the Ocean Ridge SPP ETOF and an ESA-Listed Coral Species Survey was conducted in October 2022. If the construction timeline extends later than October 2024, an additional listed-species survey will be conducted as per the NMFS recommended protocol for ESA-listed coral colony and *Acropora* critical habitat in compliance with the SARBO. Each sampling site measures 1-hectare and will be surveyed by two marine biologists using a 2-tiered approach.

Tier 1: The hardbottom within each site will be assessed in a grid pattern. If five (5) or fewer colonies of any ESA-listed species are encountered, the required data will be collected on those colonies and no further surveying is required. If more than five (5) colonies are encountered, the survey will proceed to Tier 2.



Tier 2: Three (3) non-overlapping belt transects will be placed over as much hardbottom as possible within the 1-hectare sampling site and the required data will be recorded for all colonies within the three (3) transects. Transitions between hardbottom and sand will also be recorded.

Deliverable: Raw data from the survey will be submitted in the form of scanned datasheets, excel spreadsheets with coral data, and photographs. An ESA-listed coral survey report will be prepared and provided to the USACE to support ESA Section 7 consultation. The report will include a map of the project area and adjacent hardbottom resources with the survey results overlaid onto recent, clear aerial photographs.

Task 5 – Borrow Area Investigation

The NFMS SARBO requires that geophysical surveys be conducted within 1000 feet of a borrow area in order to determine if hardbottom/coral reef resources are located in proximity to the area proposed for dredging. A sidescan sonar survey will be conducted within 1000 feet of the north and south borrow areas to identify potential hardbottom/coral reef resources. This survey will be conducted in compliance with the NMFS SARBO. The survey shall be conducted by our subconsultant Terraquatic using an EdgeTech 4125 dual frequency sonar towfish. Data shall be collected using adequate overlap to specifically map the hardbottom emergence area or edge within the defined areas. All survey operations will be conducted under the direct responsible charge of a Florida Licensed Professional Surveyor and Mapper and will be in accordance with the "Standards of Practice" set forth in Florida Statue 472, Administrative Code 5J17.

If hardbottom/coral reef resources are documented within the sidescan sonar survey investigation area (1000 feet of the borrow areas), an ESA-Listed Coral Species Survey will be conducted on those resources. Based on historical documentation of reef resources in this area, there are two patch reefs located east of the borrow area that may fall into this investigation area. It is anticipated that the ESA-Listed Species survey on these patch reefs will take one day to complete. The ESA-Listed Coral Species survey will be conducted following the same NMFS protocol described in Task 4.

Deliverable: Upon completion of the sidescan sonar survey, the data shall be processed and provided in a geo-referenced TIFF image file. If an ESA-listed coral survey is required, a report will be prepared and provided to the USACE to support ESA Section 7 consultation. The report will include a map of the borrow areas and hardbottom resources within 1000 feet, along with the survey results overlaid onto recent, clear aerial photographs.



Exhibit B - Fee Proposal

Ocean Ridge Shore Protection Project – Design & Permitting

The Scope of Services presented in Exhibit A will be performed for a Lump Sum fixed price as shown on the fee estimate attached hereto within Exhibit B. The services proposed herein will be conducted in accordance with this proposal and Professional Services Contract ERM-CCNA-2022 between Palm Beach County and Coastal Protection Engineering executed January 24, 2023. The work will be invoiced monthly based on percent complete.

Please issue the Purchase Order and/or Notice to Proceed in the name of our license contracting entity, Coastal Planning and Engineering LLC, and reference the contract under which we are performing these services. The approved rates, classifications, and fee estimate build up are presented below. Should the project require additional services not included in this proposal, CPE will coordinate with the County to amend the scope of services with a mutually agreeable revision. Additional services can be provided under a future phase proposal upon request.



Palm Beach County – ERM-CCNA-2022

Ocean Ridge Shore Protection Project – Design and Permitting

Exhibit B – Fee Proposal

Tasks	Task Cost	Labor							Direct	Subconsultants	
		Principal Engineer (Hours)	Project Manager (Hours)	Sr Marine Biologist (Hours)	Coastal Engineer (Hours)	Jr Coastal Engineer (Hours)	Jr Coastal Scientist (Hours)	CAD/ GIS Operator (Hours)	SCUBA Diving (/diver/day)	CSA Ocean Sciences (Sub-Consultant)	Terraquatic (Sub-Consultant)
Task 1. Agency Coordination	\$35,929.20	50	40	78	8	16	16				
Task 2. Federal Permitting	\$93,807.32	80	120	184	144	32	2	40			
Task 3. Revise FDEP Biological Monitoring Plan	\$13,781.02		2	80			8	8			
Task 4. Nearshore ESA-Listed Coral Survey	\$13,924.26		2	44				4	2	\$6,477.00	
Task 5. Borrow Area Investigation	\$41,470.12	2	8	52				4	2	\$6,701.00	\$24,542.00
	Total =	132	172	438	152	48	26	56	4	\$13,178.00	\$24,542.00
	Rate =	\$267.52	\$173.23	\$150.68	\$120.01	\$94.63	\$87.30	\$85.22	\$65.00	1.00	1.00
	Cost =	\$35,312.64	\$29,795.56	\$65,997.84	\$18,241.52	\$4,542.24	\$2,269.80	\$4,772.32	\$260.00	\$13,178.00	\$24,542.00
LABOR COST = \$160,931.92 DIRECT EXPENSE COST = \$260.00 SUBCONSULTANT COST = \$37,720.00 <hr/> TOTAL PROJECT COST = \$198,911.92											

Coastal Protection Engineering LLC



CSA Ocean Sciences Inc.
8502 SW Kansas Avenue
Stuart, Florida 34997

www.csaocean.com
Phone: 772-219-3000
Fax: 772-219-3010

19 May 2023

Stacy Buck
Senior Marine Biologist
Coastal Protection Engineering
5301 N. Federal Hwy, Suite 335
Boca Raton, Florida 33487

Subject: Revised Palm Beach County Ocean Ridge Endangered Species Act Listed Coral Survey 2023
(CSA Ref: 82293)

Dear Stacy,

CSA Ocean Sciences Inc. (CSA) appreciates the opportunity to provide this proposal in response to your request for proposal email on 15 May 2023 to assist Coastal Protection Engineering (CPE) in performing Endangered Species Act (ESA) listed coral surveys for the Palm Beach County (PBC) Ocean Ridge Renourishment Project. This revised version addresses the optional nature and schedule of the nearshore hardbottom survey.

SCOPE OF WORK

ESA-LISTED CORAL SURVEY – OFFSHORE PATCH REEF

Task 1 – Project Management, Mobilization, and Demobilization

This task includes internal CSA project management, joint team kickoff meeting, preparation of the CSA dive plan, HSSE paperwork, and labor hours associated with mobilization and demobilization of the survey vessel and field equipment for Task 2 – Field Survey.

Task 2 – Field Survey – Offshore Patch Reef

The nearshore hardbottom ESA-listed coral field survey will be performed after completion of a side-scan sonar survey, likely fall/winter 2023 during an appropriate weather window. This task includes labor hours for one CSA Project Scientist and one Captain assuming a 12-h field day. Equipment includes:

- 23' Parker survey vessel, trailer, and truck;
- Field laptop;
- Hypack software;
- 1 GoPro underwater camera;
- 12 scuba tanks; and
- 1 set of scuba gear.

Travel costs include truck and boat fuel, parking, and per diem. Based on discussions with CPE, one 12-hr field day, including travel each way to/from CSA's office in Stuart to the project location near Ocean Ridge, Florida just south of Boynton Inlet, is included. This task assumes CPE will provide two biologists for the field effort.

This task includes field surveys to identify and map the location of ESA-listed coral colonies at an estimated three, 1-ha sites within 1,000 ft of the offshore borrow areas for the project based on existing habitat maps in the area.

Task 3 – Field Data Processing

This task includes processing of all mapping/target data collected in Hypack during Task 2 – Field Survey. All Hypack data will be provided to CPE in shapefile format. This task also includes back-up of all raw field data (photos, videos, datasheets, and copies of field and dive logs). All data will be provided to CPE within 14 days following completion of the field survey.

All data (Hypack and raw field data) will be provided to CPE on a data hard drive and shipped via FedEx; these costs are included in Task 3.

OPTIONAL - ESA-LISTED CORAL SURVEY – NEARSHORE HARDBOTTOM

An ESA-Listed coral survey of the nearshore hardbottom habitat is included as an optional activity. This survey and associated tasks (Tasks 4 – 6) will only be required if construction is delayed and occurs after October 2024.

Task 4 – Project Management, Mobilization, and Demobilization

This task includes internal CSA project management, joint team kickoff meeting, preparation of the CSA dive plan, Health, Safety, Security, and Environment (HSSE) paperwork, and labor hours associated with mobilization and demobilization of the survey vessel and field equipment for Task 5 – Field Survey.

Task 5 – PBC Ocean Ridge ESA-Listed Coral Field Survey – Nearshore Hardbottom

If required, the nearshore hardbottom ESA-listed coral field survey will be performed during the summer of 2024 during an appropriate weather window. This task includes labor hours for one CSA Project Scientist and one Captain assuming a 10-h field day based on experience from previous surveys in 2022 and 2023. Equipment includes:

- 23' Parker survey vessel, trailer, and truck;
- Field laptop;
- Hypack software;
- 1 GoPro underwater camera;
- 8 scuba tanks; and
- 1 set of scuba gear.

Travel costs include truck and boat fuel, parking, and per diem. Based on discussions with CPE one 10-hr field day, including travel each way to/from CSA's office in Stuart to the project location near Ocean Ridge, Florida just south of Boynton Inlet is included. This task assumes CPE will provide two biologists for the field effort.

This task includes field surveys to identify and map the location of ESA-listed coral colonies at 11 × 1-ha sites north and south of the project templates.

Task 6 – Field Data Processing

This task includes processing of all mapping/target data collected in Hypack during Task 2 – Field Survey. All Hypack data will be provided to CPE in shapefile format. This task also includes back-up of

all raw field data (photos, videos, datasheets, and copies of field and dive logs). All data will be provided to CPE within 14 days following completion of the field survey.

All data (Hypack and raw field data) will be provided to CPE on a data hard drive and shipped via FedEx; these costs are included in Task 6.

RATES AND PAYMENT SCHEDULE

PBC Ocean Ridge ESA-Listed Coral Survey - Offshore Patch Reef						
Task #	Project Task Name	Terms	Unit Rate	Qty	Total	Payment Schedule
Task 1	ESA-Coral Offshore: PM, Mob, Demob	Lump Sum	\$ 2,330	1	\$ 2,330	Monthly; Net 30
Task 2	ESA-Coral Offshore: Field Survey	Lump Sum	\$ 3,848	1	\$ 3,848	Monthly; Net 30
Task 3	ESA-Coral Offshore: Hypack and Field Data Processing	Lump Sum	\$ 523	1	\$ 523	Monthly; Net 30
					TOTAL	\$ 6,701

Optional- PBC Ocean Ridge ESA-Listed Coral Survey - Nearshore Hardbottom						
Task #	Project Task Name	Terms	Unit Rate	Qty	Total	Payment Schedule
Task 4	ESA-Coral NSHB: PM, Mob, Demob	Lump Sum	\$ 2,447	1	\$ 2,447	Monthly; Net 30
Task 5	ESA-Coral NSHB: Field Survey	Lump Sum	\$ 3,486	1	\$ 3,486	Monthly; Net 30
Task 6	ESA-Coral NSHB: Hypack and Field Data Processing	Lump Sum	\$ 544	1	\$ 544	Monthly; Net 30
					TOTAL	\$ 6,477

Demob = demobilization; ESA = Endangered Species Act; Mob = mobilization; NSHB = nearshore hardbottom; PBC = Palm Beach County.

PROPOSAL TERMS

CSA's commercial proposal price calculations are based on "General Terms" and "Project-specific Terms," listed below. If CPE (Client) has issues with any of these items, CSA reserves the right to modify its original proposal price in order to meet any cost increase arising from any modifications requested by the Client.

This proposal contains privileged, confidential, and/or proprietary information intended for a specific individual and purpose. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful.

CSA is certified by TRACE International Inc. and conducts business ethically and in compliance with the U.S. Foreign Corrupt Practices Act, U.K. Bribery Act, and other anti-bribery legislation. CSA has implemented and strictly adheres to anti-bribery, anti-corruption, and third-party risk management corporate policies and procedures (<https://www.traceinternational.org/>). CSA holds these standards in high regard and expects the same from its clients and subcontractors.

General Terms

- Consequences due to coronavirus HSSE have not been included but may result in contingency, including government-imposed quarantine, testing, and other unforeseen impacts.
- All staff will conform to CSA's coronavirus mitigation protocol. Any other required protocol(s) will be reconciled via a bridging document reflecting the more conservative approach among plans.

- The services described in this proposal are consistent with the Client or Regulatory Document, as well as CSA's experience providing the proposed services under both typical and atypical situations.
- Quoted rates are valid for 90 days after the date of the proposal.
- Prices are quoted and payable in U.S. Dollars.
- Any additional costs incurred for express services, including priority visas, will be charged at cost +15%.
- Any unspecified costs for third-party services will be billed at cost +15%.
- Payment is due within 30 days of invoice unless otherwise stated in contract.
- Services are subject to availability of personnel and equipment at time of the award.
- If CSA is required to exceed its original estimate for any reason, the Client may redefine the scope of services by submitting a change order to accomplish their budgetary objectives.
- A mutually agreed upon contract must be executed by both parties before any commencement of work, unless CSA receives a formal "Notice to Proceed." A "Notice to Proceed" template is available upon request.

Project-specific Terms

- CSA will not be held responsible for any costs or delays incurred due to Government actions, decisions, or rulings when all necessary measures to address all transparent Government concerns have been taken.
- Once CSA receives a formal "Notice to Proceed" or a fully executed contract, a mobilization time of 2 weeks will be required before beginning any on-site work.
- Approvals and authorizations requiring longer than the time estimated that may delay field efforts could result in additional costs to the Client.
- Mobilization/demobilization includes: project management, joint kickoff meeting, travel expenses (transportation, fuel, per diem), labor during travel to and from project location, vessel mobilization/demobilization, and Dive Plan.
- Field day includes labor, equipment, fuel, and per diem.
- Any presentations and meetings will be provided at additional expense.
- Technical assistance, should any be required, will be provided by CSA at an additional cost to Client.

Vessel and Client Vessel

- If Client employees need to board a CSA-owned vessel, the contractual terms must contain a mutual indemnification clause and the Client must provide a Certificate of Insurance evidencing a Maritime Employers Liability policy which shall include Waiver of Subrogation in favor of CSA Ocean Sciences Inc.

Equipment

- If any proposed equipment becomes unavailable, CSA reserves the right to substitute or replace the equipment with suitable alternatives. If substituting the equipment results in a price increase, then CSA will be required to obtain Client written approval prior to placing said equipment in service.

Positioning and Geophysical

- CSA will utilize WGS 84 UTM geodesy and Esri data formats in all geospatial products unless otherwise specified at project outset by the Client; subsequent conversions to other formats and geodesy are provided at an additional cost to the Client.

- Vertical and horizontal resolution of all geospatial data are provided without reference of vertical data to a tidal datum and at the resolution afforded by equipment, local, and space weather conditions at the time of collection. CSA's default system is differential GPS; tidal datum integration, where possible, is provided at additional cost to the Client and may require the installation of tide stations or additional water level measurement methods and/or advanced GPS technology (e.g., RTK).
- CSA's geospatial products are not Signed and Sealed by a Professional Land Surveyor unless specified at project outset by the Client; this certification is provided at an additional cost to the Client.

Contingency

- Contingency is included in the proposed prices.

Client Responsibilities

- Project technical details, pertinent information necessary for project execution will be provided to CSA in sufficient time to allow assessment and effective integration into project planning, pricing, and execution. Delays in providing information that results in changes to project planning and execution may result in additional costs to the Client.

Client Responsibilities – with a diver component

- Client will provide two AAUS approved divers to augment the survey team.
- Client will provide all navigation data necessary to execute the project.

Deliverables

- Price for preparing deliverables is based on a provision of electronic navigation and data files.
- All deliverables will be provided electronically, pricing for additional deliverables is not included.

If you would like a further explanation of the costs or the scope of work, please do not hesitate to contact me at your convenience.

Best Regards,



Deborah Kilbane

CSA Ocean Sciences Inc.
Program Director | Senior Scientist
Ports and Coastal Sciences
8502 SW Kansas Avenue | Stuart, Florida 34997
dkilbane@conshelf.com
Primary/Cell: +1 (561)523-1313
CSA Main: +1 (772) 219-3000

Terraquatic, Inc.
6836 Bayshore Drive
Lantana, Florida 33462

May 12, 2023

Stacy Buck
Coastal Protection Engineering
5301 N. Federal Highway, Suite 335
Boca Raton, FL 33487

RE: Professional Surveying and Mapping Proposal
Remote Sensing-Side Scan Sonar Survey
Ocean Ridge Borrow Areas (North & South)
Palm Beach County, Florida
Proposal- 23-1645

TERRAQUATIC
SURVEYING AND MAPPING

Attachment B
page 14 of 17

Dear Stacy,

In accordance with your request Terraquatic Inc. is pleased to provide the following proposal for professional services pertaining to the above-referenced project. The scope of work shall encompass performing a side scan sonar (SSS) survey within the limits you provided via email May 10, 2023. The survey area will be within 1,000 feet of the defined areas of the north and south borrow area, see exhibit below. The survey shall be conducted using an EdgeTech 4125 dual frequency sonar towfish. Data shall be collected using adequate overlap to specifically map the hardbottom emergence area or edge within the defined areas.

All survey operations will be conducted under the direct responsible charge of a Florida Licensed Professional Surveyor and Mapper and will be in accordance with the "Standards of Practice" set forth in Florida Statue 472, Administrative Code 5J17.

Upon completion of field data collection data shall be processed and provided in a geo-referenced TIFF image file.

Terraquatic, Inc.
6836 Bayshore Drive
Lantana, Florida 33462



Attachment B
page 15 of 17

Cost:

The lump sum fee for the survey shall be \$24,542.00, including survey vessel, travel, expenses for fuel and meals, data collection, data processing and final deliverables.

Cost Breakdown:

Crew / Services	Estimated Hours	Regular Hourly Rate	Unit	Total Cost
Side Scan Operator	32	\$145.00	Crew Hour	\$4,640
3-Person GPS Crew	0	\$234.00	Crew Hour	\$0
3-Person Hydrographic Crew	32	\$297.00	Crew Hour	\$9,504
Computer / Processing CADD	40	\$125.00	Per Hour	\$5,000
Field Survey Manager / Planning	10	\$95.00	Per Hour	\$950
Project Manager	4	\$162.00	Per Hour	\$648
Professional Surveyor & Mapper	8	\$175.00	Per Hour	\$1,400
Net Cost:				\$22,142

Lump sum fee for Side Scan Sonar System \$2,400.00
Total fee= \$24,542.00

If you have any questions or require any additional information, please do not hesitate to contact us directly. We appreciate the opportunity to provide this proposal.

Sincerely,
Terraquatic, Inc.

Joshua Lee, PSM
Terraquatic, Inc.

If you agree with these terms, please execute below, and return a copy to our office.

Signature Date

Please print name

Terraquatic, Inc.
6836 Bayshore Drive
Lantana, Florida 33462

TERRAQUATIC
SURVEYING AND MAPPING

Attachment B
page 16 of 17

Exhibits:

Approximate Survey Limits
Ocean Ridge South Borrow Area
(survey limits shown in red, extend 1000 feet outside of magenta border)



Terraquatic, Inc.
6836 Bayshore Drive
Lantana, Florida 33462

TERRAQUATIC
SURVEYING AND MAPPING

Attachment B
page 17 of 17

Approximate Survey Limits
Ocean Ridge South Borrow Area
(survey limits shown in red, extend 1000 feet outside of magenta border)

