

EXECUTIVE SUMMARY

Recommendation to accept a proposal from CB&I Environmental & Infrastructure, Inc. dated August 3, 2015 for the design, permitting and Engineer of Record services for the renourishment of Clam Pass Beach Park; perform critically eroded Area Analysis for Florida Department of Environmental Protection Cost Share funding; approval of a Work Order under Contract 15-6382 for a not to exceed amount of \$68,504.40; authorize the County Manager or his designee to execute this work order; authorize necessary budget amendment; and make a finding that this expenditure promotes tourism (Project No. 90069).

OBJECTIVE: To provide design, permitting and Engineer of Record services as required to renourish Clam Pass Beach Park, submit a request to FDEP for designation of Clam Pass Park as a Critically Eroded Area, and submit a permit modification request to FDEP and United States Army Corp of Engineers (USACE) to include Clam Pass Park in the new 15-year beach renourishment permits.

CONSIDERATIONS: The objective of this project is to incorporate Clam Pass Beach Park (R-42+100 to R-44) into the County's beach nourishment program using the existing standards to the maximum extent feasible. To accomplish this, the 2015 survey data will be used as the pre-construction condition for design and permit sketches by using upland sand source gradation data.

A request for modification to the 15-year Collier County Beach Renourishment state and federal permits will not be submitted until the original permit is issued. The modifications will be to extend the Park Shore reach northern limit from R-43+500 to R-42+100 to allow for nourishment of Clam Pass Park

FISCAL IMPACT: The Board of County Commissioners approved the incorporation of Clam Pass Beach Park into the beach renourishment program on June 23, 2015. Funding for this item will be available in the Proposed Budget for TDC Beach Renourishment Fund 195 in Fiscal Year 2016.

GROWTH MANAGEMENT IMPACT: There is no impact to the Growth Management Plan related to this action.

ADVISORY COMMITTEE RECOMMENDATIONS: At the September 10, 2015 CAC meeting this item was unanimously approved by a 6 to 0 vote. The TDC will review this item on September 28, 2015.

LEGAL CONSIDERATIONS: This item has been approved as to form and legality and requires majority vote for approval. – CMG

RECOMMENDATION: That the Board of County Commissioners accept a proposal from CB&I Environmental & Infrastructure, Inc. dated August 3, 2015 for the design, permitting and Engineer of Record services for the renourish of Clam Pass Beach Park; perform critically eroded Area Analysis for Florida Department of Environmental Protection Cost Share funding; approval of a Work Order under Contract 15-6382 for a not to exceed amount of \$68,504.40; authorize the County Manager or his designee to execute this work order; authorize necessary budget amendment and make a finding that this expenditure promotes tourism.

Prepared By: J. Gary McAlpin, P.E., Coastal Zone Management, Capital Project Planning, Impact Fees and Program Management Division

Attachments: A) Proposal; B) Work Order

CB&I Environmental & Infrastructure, Inc.
2481 NW Boca Raton Blvd.
Boca Raton, FL 33431
Tel: +1 561 391 8102
Fax: +1 561 391 9116
www.CBI.com



August 3, 2015

Gary McAlpin, Director
Collier County Coastal Zone Management
2800 N. Horseshoe Drive
Naples, FL 34104

**Re: Clam Pass Park: Engineering and Design, Critically Eroded Area Analysis and Permit Modification Request
(Contract No. 15-6382-CZ "Grant Funded Professional Services for Coastal Zone")**

Dear Gary:

This letter is in response to Collier County's request for a proposal for CB&I Environmental & Infrastructure, Inc. (CB&I) to assist the County with incorporating Clam Pass Park into the County's beach nourishment program. CB&I will design the fill placement template for Clam Pass Park for integration into the Collier County nourishment project. We will also conduct an analysis in support of a request that FDEP designate Clam Pass Park as a Critically Eroded Area. Based on these efforts, CB&I will request modifications to FDEP and USACE 15 year beach nourishment permits to include Clam Pass Park. A detailed scope of work is attached in Exhibit A.

A fee proposal is included as Exhibit B, and the rate schedule is provided as Exhibit C. The cost with time and materials is not to exceed \$68,504.40.

All work will be completed within 18 months (548 days) of receiving the Notice to Proceed.

Very truly yours,

A handwritten signature in black ink, appearing to read 'TP Pierro', is written over a white background.

Thomas P. Pierro, P.E., D.CE.
Vice President
CB&I Environmental & Infrastructure, Inc.

cc: Tara Brenner, P.G., CB&I
Lauren Floyd, CB&I
Stephen Keehn, P.E., CB&I



Exhibit A
Scope of Work

**Clam Pass Park: Engineering and Design, Critically Eroded Area
Analysis and Permit Modification Request
Collier County, Florida
Scope of Work
Contract Number 15-6382**

Introduction

This scope of work is for the services required for incorporation of Clam Pass Park in the Collier County beach nourishment program. CB&I Environmental & Infrastructure, Inc. (CB&I) will provide the engineering and scientific services described below needed to update to the County's beach nourishment design, submit a request to FDEP for designation of Clam Pass Park as a Critically Eroded Area, and submit a permit modification request to FDEP and USACE to include Clam Pass Park in the new 15-year beach renourishment permits.

1. Engineering and Design

a. Clam Pass Park

The nourishment of Clam Pass Park is proposed to address a down drift hot spot south of Clam Pass and extend the Collier County beach nourishment program to incorporate the park. The 2015 survey data will be used as the pre-construction condition for design and permit sketches using material from upland sand sources. Clam Pass Park has a fill template developed for previous inlet maintenance permits. CB&I engineers will review the 2015 conditions against the previously permitted fill template to identify areas requiring nourishment. We will calculate the design life for using the existing beach fill template with and without sand bypassing from Clam Pass maintenance dredging and will examine a larger fill section using coarser upland sand. The shape of the fill area will be finalized through consultation with the Coastal Zone Management Department to meet County objectives. The existing template for the Collier County beach nourishment program already extends north to R-43+500, and the previously permitted Clam Pass disposal area overlaps this region to the south and extends north to R-42 +100. The objective of this project is to incorporate Clam Pass Park (R-42+100 to R-44) into the County's beach nourishment program using the existing standards (beach width, nourishment interval and biological monitoring plan) to the maximum extent feasible. We will complete an analysis of the equilibrium profile location versus hardbottom to assess, with reasonable assurance, the objective of adding the Clam Pass Park fill area without resulting in hardbottom impacts. Grain size information collected for the recent Clam Pass permit application will be used for this analysis. These standards may be modified in consultation with the County and in response to pre-application meetings with FDEP and USACE.

In support of design, permitting and critical erosion areas analysis, long term shoreline and volume changes will be calculated or summarized from previous reports. Volume calculations will be completed to determine the quantity of sand needed for nourishment based on historic sand bypassing rates at Clam Pass and future plans by the management authority for the pass.

b. Collier County Beach Renourishment Project Integration

Although the primary focus of this analysis described above in Task 1a. is Clam Pass Park, it will also include calculation of a long term erosion rate for use in designing the fill distribution for annual truck haul nourishment for the Collier County beach nourishment program. The long term rate will be based on the period from 1996 to 2015, adjusted for fill placed. This information will be incorporated into the design matrix (spreadsheet) along with shoreline position for use in identifying the alongshore fill distribution for future nourishment projects for the Collier County Nourishment Program. This will lead to a more economic use of sand and the information will be used to support the permit modification request.

2. Critically Eroded Area Analysis

The Critically Eroded Area (CEA) was extended north to R-45 in Park Shore based on a January 2014 request by the County to FDEP. Using the information developed for the last CEA request, CB&I will develop a new request to FDEP to extend the CEA to approximately R-42+100, which includes most of Clam Pass Park. Historic monitoring reports extending back to 1988 and the Clam Pass Analysis Report conducted by CPE in 2006 will be used. In addition, research will be conducted to see if any new information is available that meets the eligibility criteria. The following definition has been adopted by the FDEP to identify CEA eligibility:

Critically eroded area is a segment of the shoreline where natural processes or human activity have caused or contributed to erosion and recession of the beach or dune system to such a degree that upland development, recreational interests, wildlife habitat, or important cultural resources are threatened or lost. Critically eroded areas may also include peripheral segments or gaps between identified critically eroded areas which, although they may be stable or slightly erosional now, their inclusion is necessary for continuity of management of the coastal system or for the design integrity of adjacent beach management projects.

We will conduct a simple profile recession analysis using SBEACH to see if the barrier beach is vulnerable to over wash and breaching under 25 year or 100 year average storm conditions. Based on the County's previous experience with FDEP in this region, there is no guarantee that FDEP will readily approve an extension of the CEA to include Clam Pass Park. However, based on the 2014 approval, there is sufficient basis to pursue this designation. This analysis will be conducted based on existing information and does not include any field investigations, complex calculations or advanced numerical modeling. The engineer may conduct a site visit if deemed appropriate in support of the request. Based on this analysis, CB&I will submit a request on the County's behalf that FDEP designate Clam Pass Park as a Critically Eroded Area. This task includes responses to one request for additional information. CB&I staff will also discuss the CEA request during the permit modification pre-application meeting (described in Task 3).

3. Permit Modification Request

CB&I will utilize the information developed in Tasks 1 and 2 to assemble a request for modifications to the 15 year Collier County Beach Renourishment state and federal permits once they are issued. CB&I will begin working on the permit modification request upon receipt of the Notice to Proceed from the County so that the modification request will be ready to submit once the 15 year state and federal permits are both issued. The modifications will be to extend the Park Shore reach northern limit from R-43+500 to R-42+100 (the existing northern limit of the Clam Pass disposal area) to allow for nourishment of Clam Pass Park.

To the extent practical, we will utilize the existing fill template from the beach nourishment and inlet maintenance dredging permits merged into one comprehensive fill section with the same equilibrium toe of fill from these permits. If the analyses in Task 1 above show a need for a changed permit cross section, they will be added in consultation with the County. This may be feasible using coarser sand.

This task will require pre-application meetings with FDEP and USACE in order to receive agency guidance on information required in support of the permit modification request. CB&I personnel will travel to Tallahassee for a combined pre-application and CEA consultation meeting with FDEP staff. It is expected that the modification request will require an updated biological monitoring plan, updated physical monitoring plan and permit sketches. It is also anticipated that a permit modification for inclusion of Clam Pass Park in the project area will result in the USACE reinitiating consultation with U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). CB&I will provide assistance during this coordination and will monitor the agencies' progress. This task also includes providing one round of responses to agency Requests for Additional Information (RAI).

Summary

This work will be performed on a time and materials (T&M) basis with a cost not to exceed \$68,504.40 as outlined in the attached fee spreadsheet. The work will be completed within 18 months (548 days) of receipt of the Notice to Proceed barring any unforeseen circumstances beyond the control of CB&I.

Tasks related to plans and specifications, biological and physical monitoring surveys, and erosion control line (ECL) extension are not included in this proposal. These tasks should be identified and conducted once the scope and timing of the modified permit are known. In addition, the ECL and monitoring may be scheduled as part of the County's annual surveys.

Confidentiality Statement

The information contained in this proposal is confidential commercial information and shall not be disclosed, except for evaluation purposes, provided that if a contract is awarded to CB&I Environmental & Infrastructure, Inc. as a result of or in connection with the submission of this proposal, the requester shall have the right to use or disclose the data to the extent provided in the contract. This restriction does not limit the requestor's right to use or disclose any technical data obtained from another source without restriction.



Exhibit B
Fee Proposal

EXHIBIT B

Fee Proposal For:
 Clam Pass Park: Engineering and Design, Critically Eroded Area Analysis and Permit Modification Request
 Collier County, Contract No. 15-6382

August 3, 2015

Task Item	Cost	Principal (Hours)	Senior Project Manager (Hours)	Project Manager (Hours)	Planner/ Coastal Engineer (Hours)	Senior Environmental Specialist/ Professional Geologist (Hours)	Scientist/ Geologist (Hours)	Senior Marine Biologist/ Hydrogeologist (Hours)	Marine Biologist/ Hydrogeologist (Hours)	Senior GIS Specialist (Hours)	GIS Specialist (Hours)	Senior Designer (Hours)	Surveyor and Mapper/ Professional Surveyor & Mapper (Hours)	Clerical/ Administrative (Hours)	Airfare/Car Rental (\$)	Meals	Mileage	Tolls
1 Engineering and Design	\$32,110.70																	
A. Clam Pass Park	\$26,210.70	2	18	40	80	2	1	10		4	8	32	1	12		1	260	1
B. Collier Co. Renourishment Project Integration	\$5,900.00		6	14	24									2				
2 Critically Eroded Area Analysis	\$13,591.00	1	20	18	36			4	8		14			6				
3 Permit Modification Request	\$22,802.70	10	10	22	8	1		42	12	2	18	20	4	10	1650	6	260	1
Total Hours =		13	54	94	148	3	1	56	20	6	40	52	5	30	1650	7	520	2
Rate =		\$207	\$173	\$148	\$111	\$135	\$94	\$139	\$111	\$146	\$103	\$115	\$121	\$63	\$1	\$36.00	\$0.445	\$12.00
Cost =		\$2,691	\$9,342	\$13,912	\$16,428	\$405	\$94	\$7,784	\$2,220	\$876	\$4,120	\$5,980	\$605	\$1,890	\$1,650	\$252.00	\$231.40	\$24.00
TIME & MATERIALS TOTAL	\$68,504.40																	



Exhibit C
Rate Schedule

SCHEDULE B

RATE SCHEDULE

Title	Rate
Principal	\$207.00
Senior Project Manager	\$173.00
Project Manager	\$148.00
Senior Engineer	\$158.00
Engineer	\$124.00
Senior Inspector	\$97.00
Inspector	\$77.00
Senior Planner	\$140.00
Planner	\$111.00
Senior Designer	\$115.00
Designer	\$95.00
Environmental Specialist	\$110.00
Senior Environmental Specialist	\$135.00
Scientist/Geologist	\$94.00
Senior Scientist/Geologist	\$119.00
Marine Biologist/Hydrogeologist	\$111.00
Senior Marine Biologist/Hydrogeologist	\$139.00
Senior GIS Specialist	\$146.00
GIS Specialist	\$103.00
Clerical/Administrative	\$63.00
Senior Technician	\$86.00
Technician	\$73.00
Surveyor and Mapper	\$121.00
CAD Technician	\$82.00
Survey Crew - 2 man	\$136.00
Survey Crew - 3 man	\$172.00
Survey Crew - 4 man	\$205.00
Senior Architect	\$155.00
Architect	\$122.00

This list is not intended to be all inclusive. Hourly rates for other categories of professional, support and other services shall be mutually negotiated by Collier County and firm on a project by project basis as needed.

