

WORK ORDER 2018006 - 21

This Work Order Number **21** is entered into as of this ____ day of _____, 2025, pursuant to that certain Engineering and Biological Support Services Contract for Sector 3 Agreement for Professional Services, dated January 9, 2018, ("Agreement"), by and between INDIAN RIVER COUNTY, a political subdivision of the State of Florida ("COUNTY") and Aptim Environmental and Infrastructure, Inc. ("Consultant").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit A (Scope of Work), attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the mutually agreed upon lump sum or maximum amount not-to-exceed professional fee. Any additional costs must be approved in writing. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit A (Time Schedule), attached to this Work Order and made a part hereof by this reference all in accordance with the terms and provisions set forth in the Agreement. Pursuant to paragraph 1.3 of the Agreement, nothing contained in any Work Order shall conflict with the terms of the Agreement and the terms of the Agreement shall be deemed to be incorporated in each individual Work Order as if fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this Work Order as of the date first written above.

CONSULTANT:

By: _____

Name: _____

Title: _____

BOARD OF COUNTY COMMISSIONERS OF
INDIAN RIVER COUNTY:

By: _____

Joseph E. Flescher, Chairman

BCC Approval Date: _____

By: _____

John A. Titkanich, Jr., County Administrator

Approved as to Form and Legal Sufficiency:

By: _____

Jennifer W. Shuler, County Attorney

Ryan L. Butler, Clerk of Court and Comptroller

Attest: _____

Deputy Clerk

(SEAL)



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Fax: +1 561 391 9116
www.aptim.com

June 17, 2025 (Revised)

Mr. Eric Charest
Indian River County
Public Works - Coastal Division
1801 27th St, Building A
Vero Beach, FL 32960

**Subject: Indian River County, FL
Sector 3 – 2018006 – Work Order #21
Sector 3 Hardbottom Impact Analysis**

Dear Eric:

This proposal outlines a scope of work for Aptim Environmental & Infrastructure, LLC (APTIM), to provide professional services to Indian River County (the County) in support of the Sector 3 Beach and Dune Restoration Project. The scope of work described herein is to support the County with a hardbottom impact analysis to explore the feasibility of increased fill templates along portions of the Sector 3 shoreline.

The tasks to perform this work are listed below and described on the following pages. A breakdown of the hours and expenses to develop the cost is attached. The scope and fee proposal were developed following the provisions of the Professional Services Agreement between Indian River County and APTIM, dated January 9, 2018, to provide engineering and biological support services in support of the Sector 3 (Wabasso Beach) Beach and Dune Restoration Project (RFQ#2018006).

Task 1: Profile Analysis

APTIM will analyze historic beach profile and hardbottom monitoring area to determine candidate areas for increased fill density. APTIM proposes the following services as components of this study:

- Determine candidate profiles for increased fill (erosion rates, hardbottom location, etc.)
- Develop preliminary fill templates
- Develop equilibrium profiles
- Plot seaward limit of fill and perform impact analysis
- Finalize beach fill template
- Modeling of increased fill densities

The monitoring data will be used to demonstrate fill areas best suited for increased fill templates within the Sector 3 Project Area. This will provide a degree of additional storm protection and allow for less frequent renourishment episodes. Previous nourishment projects had relatively thin fill sections, primarily to avoid hardbottom coverage using a method acceptable to FDEP. Thinner fill sections are subject higher loss rates by percentage. A wider and higher beach will moderate these losses, increasing the project durability. In addition, the biological monitoring study has not shown any significant reef impacts attributable to the past projects. Conclusions of this study will support the supposition that a wider and higher beach.

Deliverable

APTIM will distribute cross-sections and impact areas to the County for review.

Schedule

APTIM will provide findings of profile analysis within ninety (90) days of commencement of study.

Cost

The lump sum cost for this task is \$55,644.00.

Task 2: Desktop Feasibility Report

APTIM will prepare a report of findings from hardbottom impact analysis detailed in Task 1. The report will include acreage of impacts, recommended cross-sections, engineering basis for selection of profiles, and a path forward for permitting. Hardbottom maps will also be included as an appendix. It is the goal of this report to serve as the foundation for obtaining a permit modification to increase fill constructions at targeted sections of the Sector 3 project.

Deliverable

APTIM will distribute a draft report for County review and provide final report incorporating County comments.

Schedule

APTIM will distribute the draft report thirty (30) days from completion of the hardbottom impact analysis. A final report will be provided fourteen (14) days after receipt of County comments on the draft report.

Cost

The lump sum cost for this task is \$22,898.00.

Task 3: Public Meetings

APTIM will attend up to three (3) public meetings as required to distribute findings to the residents, Board of County Commissioners, or Beach and Shore Preservation Advisory Committee as requested by staff.

Deliverable

APTIM will create a presentation prior to public meeting for County review and approval.

Schedule

This task is as needed, but sufficient notice will be coordinated with the County for review and approval of presentation.

Cost

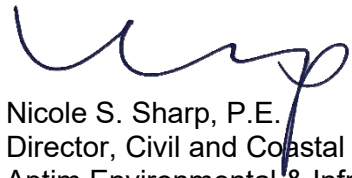
The lump sum cost for this task is \$12,577.50.

Summary

The total lump sum cost to perform the proposed work described herein for Sector 3 – 2018006 – Work Order #21 is \$91,119.50. Please refer to Exhibit A, attached to the end of this proposal, for a summary of the costs and labor hours of each Task. APTIM will proceed with the tasks upon receipt of a signed work order from Indian River County (unless stated otherwise in the schedule). APTIM will strive to execute each phase of the work within budget and in as expeditious a manner according to construction progress. We will coordinate with the County in the event that any unforeseen issues or circumstances with the scope, schedule, or budget arise.

Thank you for the opportunity to serve Indian River County. We look forward to continuing to provide expert professional services to the County. Please do not hesitate to call if you have any questions.

Sincerely,



Nicole S. Sharp, P.E.
Director, Civil and Coastal Engineering
Aptim Environmental & Infrastructure, LLC

Client Authorized Signature

Printed Name

Title

EXHIBIT 1



Indian River County, FL
Sector 3 - 2018006 - Work Order #21
Sector 3 Hardbottom Impact Analysis

Summary of Cost by Task

Task Number	Task Name	Labor	Subcontractors	Equipment	Materials	Other ODCs	Travel	Totals
Task 1	Profile Analysis	\$ 52,644.00	\$ -	\$ 3,000.00	\$ -	\$ -	\$ -	\$ 55,644.00
Task 2	Desktop Feasibility Study	\$ 22,898.00						\$ 22,898.00
Task 3	Public Meetings	\$ 11,400.00		\$ 1,177.50				\$ 12,577.50
Totals =		\$ 86,942.00	\$ -	\$ 4,177.50	\$ -	\$ -	\$ -	\$ 91,119.50

Submitted By: Nicole Sharp
Submitted To: Indian River County, FL
Submission Date: 05/01/25

Summary of Labor Hours and Cost

Labor Title	Labor Bill Rate	Profile Analysis		Desktop Feasibility Report		Public Meetings		Totals	
		Task 1		Task 2		Task 3			
		Labor Hours	Cost	Labor Hours	Cost	Labor Hours	Cost	Labor Hours	Cost
Principal Engineer/Sr Proj Mngr	\$ 250.00		\$ -		\$ -			-	\$ -
Expert Witness (Testimony)	\$ 300.00		\$ -		\$ -			-	\$ -
Program Manager	\$ 190.00	50	\$ 9,500.00	20	\$ 3,800.00	24	\$ 4,560.00	94	\$ 17,860.00
Sr Coastal Engineer/Proj Mngr	\$ 165.00		\$ -		\$ -			-	\$ -
Coastal Engineer III	\$ 150.00	140	\$ 21,000.00	70	\$ 10,500.00	24	\$ 3,600.00	234	\$ 35,100.00
Coastal Engineer II	\$ 125.00		\$ -		\$ -			-	\$ -
Coastal Engineer I	\$ 105.00		\$ -		\$ -			-	\$ -
Coastal Modeler II	\$ 130.00	40	\$ 5,200.00	20	\$ 2,600.00			60	\$ 7,800.00
Coastal Modeler I	\$ 110.00		\$ -		\$ -			-	\$ -
Professional Surveyor & Mapper	\$ 145.00		\$ -		\$ -			-	\$ -
Hydrographer	\$ 135.00		\$ -		\$ -			-	\$ -
Surveyor	\$ 95.00		\$ -		\$ -			-	\$ -
Survey Technician	\$ 80.00		\$ -		\$ -			-	\$ -
Senior Marine Biologist	\$ 135.00	56	\$ 7,560.00	20	\$ 2,700.00	24	\$ 3,240.00	100	\$ 13,500.00
Marine Biologist II	\$ 95.00		\$ -		\$ -			-	\$ -
Marine Biologist I	\$ 72.00		\$ -		\$ -			-	\$ -
Professional Geologist	\$ 150.00		\$ -		\$ -			-	\$ -
Geologist III	\$ 130.00		\$ -		\$ -			-	\$ -
Geologist II	\$ 95.00		\$ -		\$ -			-	\$ -
Geologist I	\$ 80.00		\$ -		\$ -			-	\$ -
Senior CAD Operator	\$ 140.00	8	\$ 1,120.00		\$ -			8	\$ 1,120.00
CAD Operator	\$ 105.00	42	\$ 4,410.00	16	\$ 1,680.00			58	\$ 6,090.00
GIS Operator	\$ 105.00	34	\$ 3,570.00	10	\$ 1,050.00			44	\$ 4,620.00
Boat Captain	\$ 80.00		\$ -		\$ -			-	\$ -
Bookkeeper	\$ 80.00		\$ -		\$ -			-	\$ -
Clerical	\$ 71.00	4	\$ 284.00	8	\$ 568.00			12	\$ 852.00
Technician	\$ 60.00		\$ -		\$ -			-	\$ -
Subcontractors	-	-	\$ -					-	\$ -
Equipment	-	-	\$ 3,000.00					-	\$ 3,000.00
Materials	-	-	\$ -					-	\$ -
Other ODCs	-	-	\$ -					-	\$ -
Mobilization/Demob	-	-	\$ -				\$ 1,177.50	-	\$ 1,177.50
TOTAL	-	374	\$ 55,644.00	164	\$ 22,898.00	72	\$ 12,577.50	610	\$ 91,119.50