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September 30, 2022

Eric Charest, Natural Resource Manager  
Indian River County Public Works Coastal Division  
1801 27<sup>th</sup> Street  
Vero Beach, FL 32960

**Subject: Work Order 2018008-05  
Hurricane Ian Storm Impact Assessments – Sectors 3, 5 and 7  
Indian River County, FL**

Dear Eric:

This proposal outlines a scope of work for Aptim Environmental & Infrastructure, LLC (APTIM) to provide storm impact assessments for the Sector 3, Sector 5, and Sector 7 project areas in Indian River County due to the impacts of Hurricane Ian, in support of the County's coordination with the Federal Emergency Management Agency (FEMA). The Sector 3 Beach Restoration Project (R-20 to R-55) was constructed in three phases from 2010 to 2012, subsequently renourished from R-24 to R-55 in the winter of 2014/15, and most recently renourished in two phases from the winter of 2020/2021 to the spring of 2022. The Sector 5 Dune Restoration Project (R-71 to R-85) was constructed in 2005 and 2006 following impacts from the 2004 and 2005 hurricanes and was renourished in the winter of 2019/20. The Sector 7 Beach Restoration Project (R-97 to R-108) was constructed in 2007, and easements are currently being obtained for the next nourishment.

The Sector 3, Sector 5 and Sector 7 project areas were recently impacted by the passing of Hurricane Ian in late September 2022. As regularly maintained local- and State-funded engineered beach restoration projects, these projects may qualify for post-disaster relief funding from the FEMA Public Assistance Program (Category G). The following services will be provided to support the County's coordination with FEMA.

#### Scope of Work

Beach volumetric changes and contour changes will be calculated in the Sector 3, Sector 5, and Sector 7 project areas using surveys that were collected prior to and following the impact of Hurricane Ian. Beach profile transects were surveyed at the FDEP R-monuments by the County's surveyor, Morgan & Eklund, in Summer 2022 as part of the annual monitoring effort, which also represents the pre-storm condition. A post-storm survey will be performed by Morgan & Eklund under a separate work order to the County to document the most recent condition of the beach. Beach contour changes will be evaluated to document changes at the shoreline and the dune. Volumetric changes will be quantified above MHW (+0.6 ft NAVD) and above the depth of closure. If deemed technically appropriate, the background erosion rate for each project area will be extracted from the volume change results. The beach changes will be summarized with tables and graphical representations, and the losses due to the storm impact will be identified. Storm repair costs will be estimated and provided for preliminary information to FEMA.

Deliverable

A storm impact assessment will be provided in a brief report for each of the three project areas (Sector 3, Sector 5, and Sector 7). Each report will include background information regarding the project, a brief description of the storm, beach contour and volumetric changes, repair cost estimates, and survey profile plots.

Schedule & Assumptions

APTIM will provide the deliverable within 60 calendar days of receipt of Morgan & Eklund's certified post-storm survey data deliverable. It is assumed that the data provided by the County is considered final, has been processed and does not require additional review. Should a request for additional calculations or analysis be requested by FEMA following the three impact assessments, APTIM can provide a separate scope of work upon the request of the County.

Cost

The cost to complete this task is a fixed price of \$22,500.00. This cost was developed following the provisions of the Continuing Contract Agreement for Continuing Engineering Services 2018008 (dated April 17, 2018 and amended May 18, 2021) between Indian River County and APTIM.

Thank you for the opportunity to serve Indian River County. Please do not hesitate to call if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Nicole S. Sharp'.

Nicole S. Sharp, P.E.  
Coastal Market Lead  
Aptim Environmental & Infrastructure, LLC

cc: James Austin, APTIM

**EXHIBIT 2**

REV20.1



**Work Order 2018008-05  
Hurricane Ian Post-storm Analysis  
Indian River County, FL**

**Summary of Cost by Task**

Task Number	Task Name	Labor	Sub-contractors	Mobilization/Travel	Totals
Task 1	Sector 3 Post-Storm Analysis	\$ 8,560.00	\$ -		\$ 8,560.00
Task 2	Sector 5 Post-Storm Analysis	\$ 7,500.00			\$ 7,500.00
Task 3	Sector 7 Post-Storm Analysis	\$ 6,440.00	\$ -	\$ -	\$ 6,440.00
<b>Totals =</b>		<b>\$ 22,500.00</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 22,500.00</b>

Submitted By: Nicole Sharp  
 Submitted To: Indian River County, FL  
 Submission Date: 9/29/2022



2020 - REV20.1

**Work Order 2018008-05  
Hurricane Ian Post-storm Analysis  
Indian River County, FL**

**Summary of Labor Hours and Cost**

Labor Title	Labor Bill Rate	Sector 3 Post-Storm Analysis		Sector 5 Post-Storm Analysis		Sector 7 Post-Storm Analysis		Totals	
		Task 1		Task 2		Task 2			
		Labor Hours	Cost	Labor Hours	Cost	Labor Hours	Cost	Labor Hours	Cost
Principal Engineer	\$ 295.00		\$ -		\$ -		\$ -		\$ -
Program Manager	\$ 215.00	14	\$ 3,010.00	12	\$ 2,580.00	10	\$ 2,150.00	36	\$ 7,740.00
Sr Coastal Engineer/Proj Mng	\$ 195.00		\$ -		\$ -		\$ -		\$ -
Coastal Engineer III	\$ 165.00		\$ -		\$ -		\$ -		\$ -
Coastal Engineer II	\$ 130.00		\$ -		\$ -		\$ -		\$ -
Coastal Engineer I	\$ 105.00	52	\$ 5,460.00	46	\$ 4,830.00	40	\$ 4,200.00	138	\$ 14,490.00
Coastal Modeler II	\$ 130.00		\$ -		\$ -		\$ -		\$ -
Senior CAD Operator	\$ 185.00		\$ -		\$ -		\$ -		\$ -
CAD Operator	\$ 110.00		\$ -		\$ -		\$ -		\$ -
GIS Operator	\$ 120.00		\$ -		\$ -		\$ -		\$ -
Clerical	\$ 90.00	1	\$ 90.00	1	\$ 90.00	1	\$ 90.00	3	\$ 270.00
Technician	\$ 70.00		\$ -		\$ -		\$ -		\$ -
Mobilization/Travel									\$ -
Sub-Contractors			\$ -		\$ -		\$ -		\$ -
<b>TOTAL</b>		<b>67</b>	<b>\$ 8,560.00</b>	<b>59</b>	<b>\$ 7,500.00</b>	<b>51</b>	<b>\$ 6,440.00</b>	<b>177</b>	<b>\$ 22,500.00</b>

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