

WORK ORDER NUMBER 2018006-3

**SECTOR 3 (WABASSO BEACH) BEACH AND DUNE RESTORATION PROJECT
2018 PHYSICAL MONITORING**

This Work Order Number 2018006-3 is entered into as of this ____ day of _____, 2018 pursuant to that certain Contract Agreement relating to Engineering and Biological support services for Sector 3 (Wabasso Beach) Beach and Dune Renourishment Project entered into as January 9, 2018 ("Agreement"), between Indian River County, a political subdivision of the State of Florida ("COUNTY") and Aptim Environmental & Infrastructure, Inc. ("CONSULTANT").

The COUNTY has selected the Consultant to perform the professional services set forth on Exhibit 1, attached to this Work Order and made part hereof by this reference. The professional services will be performed by the Consultant for the fee schedule set forth in Exhibit 2, attached to this Work Order and made a part hereof by this reference. The Consultant will perform the professional services within the timeframe more particularly set forth in Exhibit 2, 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
Aptim Environmental & Infrastructure, Inc.

BOARD OF COUNTY COMMISSIONERS
OF INDIAN RIVER COUNTY

By: 
Thomas P. Pierro, P.E., D.CE

By: _____
Peter D. O'Bryan, Chairman

Title: Director of Operations

Attest: Jeffrey R. Smith, Clerk of Court and
Comptroller

Date: 6/20/2018

By: _____
(Seal) Deputy Clerk

Approved:

By: _____
Jason E. Brown, County Administrator

Approved as to form and legal sufficiency:

By: _____
William K. DeBaal, Deputy County Attorney



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

June 8, 2018

Mr. James Gray
Director of Natural Resources
Indian River County Public Works
1801 27th St, Building A
Vero Beach, FL 32960

**Subject: Indian River County, FL
Sector 3 – 2018006 – Work Order #3
2018 Physical Monitoring**

Dear James:

This proposal outlines a scope of work for Aptim Environmental & Infrastructure, Inc. (APTIM) to provide professional services to Indian River County (the County) in support of permit-required physical monitoring efforts for the Indian River County Sector 3 Dune Repair Project constructed in 2014/15 (FDEP Permit No. 0285993-001-JC; currently Mod 008-JN). Physical monitoring for the initial Sector 3 Beach & Dune Restoration Project constructed between 2010 and 2012 has been fulfilled and is no longer required per correspondence with FDEP dated October 25, 2017. The 2018 physical monitoring represents the Year 3 condition of the 2014/15 Dune Repair Project (R24 - R55) and includes beach profile surveys, aerial photography, and report development. Physical monitoring is required at least 5,000 feet north and south of the project area. Additionally, as requested by the County, this proposal includes collection of aerial photography along the remaining portion of the Indian River County shoreline, to be conducted in conjunction with the Sector 3 aerial photography collection. The costs associated with this work order 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 for the Sector 3 (Wabasso Beach) Beach and Dune Renourishment Project (RFQ#2018006).

Task 1: Physical Monitoring Report

Task 1: Scope of Work

We understand that the County's surveyor, Morgan & Eklund, will perform the beach profile surveying and will be responsible for certifying the survey data and submitting a survey report to the FDEP. APTIM will review the data to ensure that it conforms to the standards required by the FDEP physical monitoring plan. APTIM will notify the County of any issues with the survey data and will coordinate through the County or directly with the surveyor to resolve any issues.

APTIM will develop an engineering report that discusses the performance of the beach fill project. We will analyze contour (MHWL and dune) and volumetric changes throughout the project area for erosion and accretion patterns, trends or changes between annual surveys and for cumulative changes over time. Summary tables and graphical representations of contour and volumetric changes will be presented, as well as beach profile plots of the current and previous monitoring surveys.

APTIM will manage the collection of georeferenced aerial photography of the project area, as discussed more fully in Task 2. The aerials will be collected between R-15 and R-60, as to align with previous aerial photography collection related to this project. Plots of relevant hardbottom and shoreline positions will be overlaid on the

aerials and included in the report appendix. Biological monitoring is no longer required for this project; thus, delineation of the landward edge of hardbottom is not included in this scope of work.

Task 1: Required Data

To perform the physical monitoring evaluation, APTIM will need the beach profile survey data in x,y,z format, collected in summer of 2018 by Morgan & Eklund.

Task 1: Deliverable

APTIM will provide the County a draft electronic version of the report for the County's review and comments. APTIM will incorporate comments from the County and revise the report accordingly. Once finalized, APTIM will submit an electronic version of the Physical Monitoring Report to the FDEP to satisfy permit compliance. APTIM will also provide the County one hardcopy and one electronic version of the final report. It is assumed that Morgan & Eklund is responsible for submitting the survey data and associated survey reporting to the FDEP.

Task 1: Schedule

This task will begin upon approval from the County to proceed with this work order. It is anticipated that 60 days will be required to complete the analysis and compose a draft monitoring report. At such time, a draft report will be provided to the County for their review and comments. Once the comments are returned to APTIM, the final report addressing the comments will be submitted to the FDEP and the County within 14 days. FDEP permit condition 56 (d) requires an engineering report be submitted to the FDEP within 90 days following completion of each post-construction survey. As such, assuming data collection concludes July 31, and the data is provided to APTIM by August 17, we estimate submittal of a final report by October 30, 2018.

Task 1: Cost

The lump sum cost for this task is \$29,534.00.

Task 2: Georeferenced Aerial Photography – Sector 3

Task 2: Scope of Work

As part of the Indian River County Sector 3 Beach and Dune Restoration Project, collection of georeferenced orthorectified aerial photography is required per FDEP special permit condition 56(c) for the primary purpose of mapping and quantifying exposed nearshore hardbottom and natural/artificial reefs. The aerials will be collected following FDEP's Monitoring Standards for Beach Erosion Control Projects, Section 02100 – Environmental Aerial Photography Acquisition (FDEP, 2014). APTIM proposes to subcontract with GPI Geospatial, Inc. (GPI), of Orlando, FL, to collect the aerial photography. GPI's proposal submitted to APTIM is attached for reference. Two separate scopes of work are presented for this task.

Task 2.A: Sector 3

Aerial photography collection between R-15 and R-60, as to align with previous Sector 3 monitoring efforts.

Task 2.B: Entire County (excluding Sector 3)

Aerial photography collection between R-1 and R-15, and between R-60 and R-119.

Task 2: Required Data

GPI has previously performed this scope of work in the County (previously operating as ACA), and should have sufficient historic survey points to rectify the images. If additional survey points are required, the County's Public Works Department may have surveys that can be used to rectify aerial images – which will avoid additional field work.

Task 2: Deliverable

The following deliverables will be provided to the County (Entire County aerials – Task 2.A) and FDEP (Sector 3 aerials – Task 2.b) via secure file transfer or thumb drive, whichever the County/FDEP prefers:

1. Camera Calibration Report
2. Flight Report – includes Flight Log, Weather Log, and Tide Log
3. MetaData – Federal Geographic Data Committee (FGDC) compliant in HTML format
4. Individual georeferenced orthorectified image frames in uncompressed TIFF format and associated world files
5. Mosaicked georeferenced orthorectified image in JPEG format and associated world file

Task 2: Schedule

Collection of the aerial photography will be timed to occur as close to concurrent as possible with the beach profile surveying conducted for Sector 3. The exact time of beach profile survey collection is unknown, but it is expected in mid-July 2018. APTIM will coordinate with GPI, the County, and/or Morgan & Eklund to align the schedule as close as possible. The Sector 3 aerials (Task 2.A) will be collected in conjunction with the Entire County aerials (Task 2.B).

Task 2: Cost

The lump sum cost for Task 2 is \$20,185.20, including a 5% management fee for subcontractors, per the Professional Services Agreement between the County and APTIM. The cost associated with each aerial collection effort is as follows:

Task 2.A: Sector 3

\$14,445.90, including a 5% management fee for subcontractors

Task 2.B: Entire County (excluding Sector 3)

\$5,739.30, including a 5% management fee for subcontractors

Summary

The total lump sum cost to perform the proposed work described herein for Sector 3 – 2018006 – Work Order #3 is \$49,719.20. The following page includes a summary of the costs and labor hours of each Task. Thank you for the opportunity to serve Indian River County. As always, please do not hesitate to call if you have any questions.

Sincerely,



William Reilly, P.E.
Senior Coastal Engineer
Aptim Environmental & Infrastructure, Inc.

cc: Thomas Pierro, P.E., D.CE, APTIM
Debbie Neese, APTIM



Authorized Corporate Signature

Thomas P. Pierro, P.E., D.CE

Printed Name

Director of Operations

Title



SPM REVISION: 2018 - REV 18.2
PROJECT NUMBER: 631237709

Indian River County, FL
Sector 3 - 2018006 - Work Order #3
2018 Physical Monitoring

Summary of Cost by Task

Task Number	Task Name	Labor	Subcontractors	Equipment	Materials	Mobilization/Travel	Totals
Task 1	Physical Monitoring Report	\$ 29,534.00	\$ -	\$ -	\$ -	\$ -	\$ 29,534.00
Task 2.A	Georeferenced Aerial Photography	Sector 3 R15 - R60	\$ -	\$ 14,445.90	\$ -	\$ -	\$ 14,445.90
Task 2.B		Entire County (excluding Sector 3) R1 - R15, R60 - R119	\$ -	\$ 5,739.30	\$ -	\$ -	\$ 5,739.30
Totals =		\$ 29,534.00	\$ 20,185.20	\$ -	\$ -	\$ -	\$ 49,719.20

Summary of Labor Hours and Cost

Labor Title	Labor Bill Rate	Physical Monitoring Report		Georeferenced Aerial Photography				Totals	
		Task 1		Task 2.A (Sector 3)		Task 2.B (Entire County)		Totals	
		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	3	\$ 570.00		\$ -		\$ -	3	\$ 570.00
Sr Coastal Engineer/Proj Mngr	\$ 165.00	98	\$ 16,170.00		\$ -		\$ -	98	\$ 16,170.00
Coastal Engineer III	\$ 150.00		\$ -		\$ -		\$ -		\$ -
Coastal Engineer II	\$ 125.00		\$ -		\$ -		\$ -		\$ -
Coastal Engineer I	\$ 105.00	84	\$ 8,820.00		\$ -		\$ -	84	\$ 8,820.00
Coastal Modeler II	\$ 130.00		\$ -		\$ -		\$ -		\$ -
Coastal Modeler I	\$ 110.00		\$ -		\$ -		\$ -		\$ -
Professional Surveyor & Mapper	\$ 145.00	2	\$ 290.00		\$ -		\$ -	2	\$ 290.00
Hydrographer	\$ 135.00		\$ -		\$ -		\$ -		\$ -
Surveyor	\$ 95.00		\$ -		\$ -		\$ -		\$ -
Survey Technician	\$ 80.00		\$ -		\$ -		\$ -		\$ -
Senior Marine Biologist	\$ 135.00		\$ -		\$ -		\$ -		\$ -
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	1	\$ 140.00		\$ -		\$ -	1	\$ 140.00
CAD Operator	\$ 105.00	8	\$ 840.00		\$ -		\$ -	8	\$ 840.00
GIS Operator	\$ 105.00	20	\$ 2,100.00		\$ -		\$ -	20	\$ 2,100.00
Boat Captain	\$ 80.00		\$ -		\$ -		\$ -		\$ -
Bookkeeper	\$ 80.00	4	\$ 320.00		\$ -		\$ -	4	\$ 320.00
Clerical	\$ 71.00	4	\$ 284.00		\$ -		\$ -	4	\$ 284.00
Technician	\$ 60.00		\$ -		\$ -		\$ -		\$ -
Subcontractors			\$ -		\$ 13,758.00		\$ 5,466.00		\$ 19,224.00
5% Mgmt Fee for Subs			\$ -		\$ 687.90		\$ 273.30		\$ 961.20
Equipment			\$ -		\$ -		\$ -		\$ -
Materials			\$ -		\$ -		\$ -		\$ -
Mobilization/Travel			\$ -		\$ -		\$ -		\$ -
TOTAL		224	\$ 29,534.00		\$ 14,445.90		\$ 5,739.30	224	\$ 49,719.20

Submitted By: William Reilly
Submitted To: Indian River County, FL
Submission Date: 06/08/18

May 30th, 2018

William Reilly, P.E.
Senior Coastal Engineer
APTIM
9143 Philips Hwy, Suite 400
Jacksonville, FL 32256

Subject: Indian River County Coastal Aerials
GPI GEOSPATIAL, Inc. Proposal No. 18282

GPI GEOSPATIAL, Inc. greatly appreciates this opportunity to provide you with our proposal to perform professional Aerial services as requested. The following proposal is based on our understanding of the scope of work. This proposal can be individually modified to meet your requirements, upon request. Our proposed Scope of Work is as follows:

SCOPE OF WORK

GPI GEOSPATIAL will collect aerial imagery along the shoreline of Indian River County, FL, on separate areas:

1. Collection between R-15 and R-60
2. Collection between R1-R15 and R60-R119.

The aerials will be collected following FDEP's Monitoring Standards for Beach Erosion Control Projects, Section 02100 – Environmental Aerial Photography Acquisition (FDEP, 2014).

SCOPE OF SERVICES

Flight Planning:

Prepare 3 Band Digital Aerial Imagery flight plan with Airborne GPS/IMU using our Microsoft UltraCAM Eagle sensor to obtain 6" (six inch) pixel resolution imagery suitable for the preparation of raster imagery in accordance with the FDEP 2100 specifications. ABGPS/IMU data will be collected during the flight and post processed with the CORS GPS data. Collection of the aerial photography will be timed to occur as close to concurrent as possible with the post-construction beach profile surveying conducted for Sector 3 via separate contract. The exact time of beach profile survey collection is unknown, but it is expected in mid-July 2018. APTIM will provide GPI a notice to proceed. GPI will coordinate with APTIM, the County, or those performing the beach profile survey to align the schedule as close as possible.

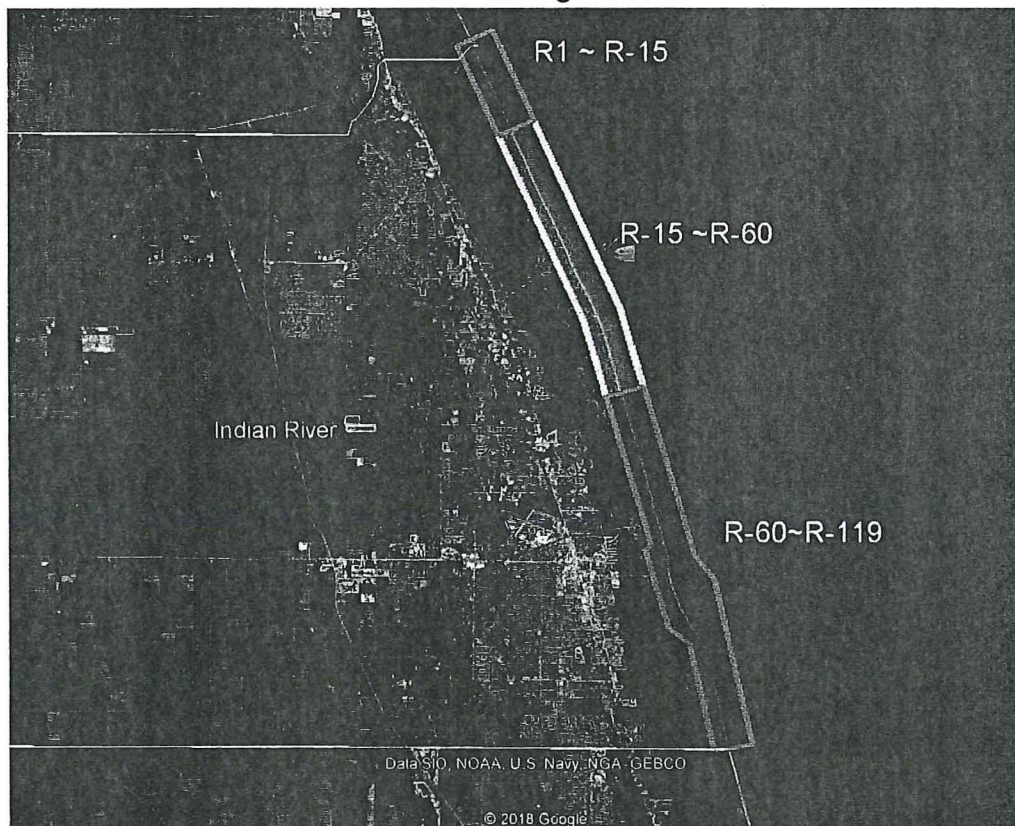
The flight shall be conducted on an incoming tide and when there is sufficient visibility in coastal waters to capture nearshore hardbottom. If, during the flight, weather conditions deteriorate to the point that any of the flight requirements stipulated by the FDEP standards cannot be met, then the flight will be rescheduled at no cost to APTIM.

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Senior Coastal Engineer
APTIM
9143 Philips Hwy, Suite 400
Jacksonville, FL 32256

Project Specifics:

1. GPI GEOSPATIAL shall acquire RGB 3 band Digital Color Imagery using our Microsoft UltraCAM Eagle Camera.
2. The sun angle shall be at a minimum of 15°-30° degrees; skies shall be free of haze, clouds and shall not contain any excessive tip, tilt, or crab.
3. Georeferenced digital imagery with the following specifications:
 - a) A minimum 60% forward overlap with each adjacent photograph and a ratio of 50% land and 50% ocean (2000'and 2000') on the horizontal.
 - b) The image shall be clear and sharp in detail, free from clouds, shadows or any other blemishes that would render the image as uncertain for mapping rock and reef features as far offshore as possible and no less than -15 feet NAVD.

**Monuments R-1 to R-119
Aerial Coverage Area**



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Aerial Triangulation

Defined as the procedure of establishing geometric relationships among forward and side lapping imagery to extend and densify supplemental horizontal and vertical control points.

Using the Horizontal and Vertical control survey data, and the Exterior Orientation Parameters of all frames (AGPS & IMU), GPI GEOSPATIAL shall precisely perform manual and automatic digital aerial triangulation using our Trimble Inpho Match-AT or ISAT software.

Image points will be established at the Von Gruber locations on each image and will be 3 ray points except for the first and last image on each strip.

Appropriate XY&Z weight factors to the control points will be established based on mapping scale requirements.

A Certified Photogrammetrist will study and approve the aerotriangulation results; a PSM signed and sealed certification shall accompany the report.

Automatic and manual tie point matching shall be performed on the entire set of imagery to best contribute to the strength and quality of the block.

Geo-Referenced Digital Imagery

Using the Exterior Orientations from the triangulation, GPI GEOSPATIAL shall perform a rigorous Geo-rectification of all imagery. The high quality imagery shall have a constant scale. A tiling scheme shall be created, and all imagery shall be cut at 0.5' pixel in TIFF formats. GPI GEOSPATIAL shall use our Trimble Inpho OrthoVista to bring it all together in a seamless homogeneous mosaic. OrthoVista is powerful professional mosaicking software that utilizes advanced imaging techniques to automatically adjust and compensate intensity and color variations, it also computes radiometric adjustments such as hot spots and lens vignetting on the entire block to match the color and brightness of adjacent images.

Final Quality Assurance Check

The entire project area is put through a quality control check, in which the imagery is reviewed and the final mosaicked tiles are checked against the project control points for accuracy. The check will include assuring that positions of stationary objects (roads, buildings, etc.) throughout the image frames align with previous aeriels collected by GPI GEOSPATIAL.

DELIVERABLES:

GPI will provide 2 separate deliverables of the following for R-15~R-60 and R-1~R-15_R-60~R-119

- Individual Geo-referenced tiles in uncompressed TIFF format and associated world files on DVD or thumb drive.
- Mosaicked Geo-referenced files in JPEG format on DVD or thumb drive.

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- Camera Calibration Report.
- Flight Reports, including Flight Log, Weather Log, and Tide Log.
- FGDC Compliant Metadata in HTML format.

SCHEDULE

Aerial Imagery Flight Mission: One week from NTP, weather permitting.
 Delivery of Raster Imagery will be within 12 weeks from flight date.

FEES

Lump Sum (Total Fee).....\$ 19,224.00

R-15 to R-60:

Indian River County Sector 3

Classification	Hourly Rate	Overhead Multiplier with 10% profit	Billable Rate	Hours	Total
Project Manager	\$56.00	3.00	\$168.00	20	\$3,360.00
Project Surveyor/QA/QC	\$53.00	3.00	\$159.00	8	\$1,272.00
Surveyor/Aerial Triangulation	\$45.00	3.00	\$135.00	18	\$2,430.00
CADD Tech/Image Clipping	\$26.00	3.00	\$78.00	4.5	\$351.00
Ortho Analyst	\$33.00	3.00	\$99.00	55	\$5,445.00
Pilot	\$38.50	3.00	\$115.50	5	\$577.50
Sensor Operator	\$21.50	3.00	\$64.50	5	\$322.50
Subtotal					\$13,758.00

R-1 to R-15 and R-60 to R-119:

Classification	Hourly Rate	Overhead Multiplier with 10% profit	Billable Rate	Hours	Total
Project Manager	\$56.00	3.00	\$168.00	4	\$672.00
Project Surveyor/QA/QC	\$53.00	3.00	\$159.00	2	\$318.00
Surveyor/Aerial Triangulation	\$45.00	3.00	\$135.00	6	\$810.00
CADD Tech/Image Clipping	\$26.00	3.00	\$78.00	2	\$156.00
Ortho Analyst	\$33.00	3.00	\$99.00	35	\$3,465.00
Pilot	\$38.50	3.00	\$115.50	0.25	\$28.88
Sensor Operator	\$21.50	3.00	\$64.50	0.25	\$16.13
Subtotal					\$5,466.00

CONTRACT TERMS

Time for Acceptance

This proposal may be accepted only if it is signed and received by GPI GEOSPATIAL within ninety (90) days from the date of the proposal.

William Reilly, P.E.
Senior Coastal Engineer
APTIM
9143 Philips Hwy, Suite 400
Jacksonville, FL 32256

Standard of Practice and Care

Services performed by GPI GEOSPATIAL under this Agreement will be consistent with the level of care and skill ordinarily exercised by members of the profession performing the services currently practicing in the same locality and under similar conditions. No other representation, expressed or implied, and no warranty or guarantee is included or intended in this Agreement or any report, opinion, document or otherwise.

Payment for Services

Any retainer required per the proposal letter shall be paid to GPI GEOSPATIAL within three days after the Agreement is fully executed. GPI GEOSPATIAL shall not be obligated to perform any services under this Agreement unless and until the full amount of any retainer is received by GPI GEOSPATIAL.

APTIM will be invoiced monthly based on work performed based on the percentage of the work which is completed. Payment for services will be due upon APTIM receipt of the invoice and shall not be conditioned on APTIM receipt of payment by any other party under any circumstances. One half of the amount of the retainer shall be applied to pay amounts of monthly invoices as they are issued and the remainder of the retainer amount shall be held by GPI GEOSPATIAL and applied to pay the final invoice. Any remainder of the retainer amount after the final invoice is paid will be returned to APTIM.

Invoice payments not received within 30 days from the date of the invoice are deemed past due and shall be subject to a service charge equal to 1.5% per month (18% per annum). If payment is not received within 60 days of the date of the invoice, GPI GEOSPATIAL shall have the unilateral right to discontinue work on the project and/or, at GPI GEOSPATIAL's option, apply the remainder of any retainer amount with no legal recourse by APTIM. GPI GEOSPATIAL reserves the right to withhold deliverables under this Agreement until all delinquent invoices have been paid.

If GPI GEOSPATIAL elects to continue to provide services after APTIM fails to timely pay an invoice, then thereafter, payment shall be deemed due and immediately payable before GPI GEOSPATIAL provides the deliverable(s) to which the payment relates and GPI GEOSPATIAL's obligation to provide such deliverable shall be deemed not to arise until after full payment for the deliverable(s) is received.

If, per the proposal, GPI GEOSPATIAL's services are being provided for a lump sum/flat fee, the price of services which are listed as part of GPI GEOSPATIAL's scope of services in the proposal will not exceed the lump sum/flat fee amount, except for the amount due GPI GEOSPATIAL for Reimbursable Expenses, if any, which are subject to payment in accordance with the "Reimbursable Expenses" provision which is set forth below.

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Senior Coastal Engineer
APTIM
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Jacksonville, FL 32256

Additional Services

Services not expressly listed in the proposal are deemed to be additional services for which GPI GEOSPATIAL shall be entitled to additional compensation ("Additional Services") and will not be performed until approved and authorized in a writing signed by APTIM and GPI GEOSPATIAL. If the fee set forth in the proposal is for a Lump Sum, then Additional Services shall be provided on an hourly basis, invoiced at GPI GEOSPATIAL's prevailing hourly rates which are set forth in Exhibit B to the Proposal, "GPI GEOSPATIAL Prevailing Hourly Rates" which is incorporated here and will be invoiced separately.

Hourly Rate Schedule (Not applicable to Lump Sum Fees)

Services provided on an hourly basis will be invoiced at "GPI GEOSPATIAL's Prevailing Hourly Rates" set forth in Exhibit B to the Proposal which is incorporated here.

Reimbursable Expenses

Reimbursable expenses will be billed to APTIM, in addition to the fee, whether Lump Sum or at an Hourly Rate. Reimbursable expenses include the cost of travel, lodging, reproductions, deliveries, postage, credit card fees charged by APTIM credit card provider, if applicable, applicable taxes, if any and the additional cost of higher insurance limits, if required by APTIM

Project Suspension or Termination

If the project is suspended for more than 90 days, abandoned or terminated, in whole or part, APTIM will pay GPI GEOSPATIAL for services performed and reimbursable expenses incurred prior to GPI GEOSPATIAL's receipt of written notice of such suspension, abandonment or termination. APTIM agrees that GPI GEOSPATIAL's fee for remainder of services which were unexecuted as of the date of abandonment or termination will require renegotiation and written and signed modification to this Agreement before GPI GEOSPATIAL is bound to continue to perform should the project be restarted.

Risk Allocation

In recognition of the relative risks, rewards and benefits of the project to APTIM and GPI GEOSPATIAL, APTIM agrees that, to the fullest extent permitted by law, GPI GEOSPATIAL's total liability to APTIM will not exceed the paid portion of the total amount of GPI GEOSPATIAL's fee with respect to any matter, based on any theory of recovery, including but

not limited to negligence, errors, omissions, strict liability or, breach of contract or breach of warranty, arising from or related to this Agreement or the performance of services hereunder. Both APTIM and GPI GEOSPATIAL agree that they will not be liable to each other, under any circumstances, for special, indirect, consequential, or punitive damages arising out of or related to this Agreement.

William Reilly, P.E.
Senior Coastal Engineer
APTIM
9143 Philips Hwy, Suite 400
Jacksonville, FL 32256

Force Majeure

Neither party will be liable to the other for delays in performing any obligations under the Agreement due to circumstances beyond its reasonable control, including but not limited to revolts, insurrections, riots, wars, acts of enemies, national emergency, strikes, floods, earthquake, embargo, or transportation, and acts of God, and other events beyond the reasonable control of the parties caused by nature or governmental authorities.

Dispute Resolution

GPI GEOSPATIAL and APTIM shall endeavor to resolve any controversy, claim or dispute arising out of or relating to the Agreement or the performance thereof, by negotiation. Any claim that is not resolved by negotiation within thirty (30) days shall be subject to non-binding mediation. Either party may demand mediation by serving a written notice stating the nature of the dispute, the grounds on which the dispute is based, amount claimed, and requiring that mediation of the matter be commenced within forty-five (45) days of service of notice. The mediation shall be administered by the American Arbitration Association in accordance with their most recent Construction Mediation Rules, or by other person or organization and according to such other rules, as the parties may agree upon. If the dispute fails to be resolved by non-binding mediation within sixty (60) days after commencement of mediation, the dispute shall be submitted for arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules before one arbitrator. Mediation or arbitration shall take place in Orlando, Florida or the some other mutually agreeable location. The cost of such mediation and/or arbitration shall be borne equally by the parties with each party bearing the expense of its own attorneys, except that if the dispute arises from or relates to GPI GEOSPATIAL's enforcement of any of its rights or APTIM obligations under this Agreement, APTIM shall reimburse GPI GEOSPATIAL's damages, losses, costs or expenses, including but not limited to attorneys' fees.

Miscellaneous

- a. Merger: The agreement between GPI GEOSPATIAL and APTIM consists of these General Terms and Conditions, the attached proposal, and any exhibits or attachments noted in the proposal. Together, these elements will constitute the entire agreement superseding any and all prior negotiations, correspondence, or agreements either written or oral between them relating to the subject matter of this Agreement.
- b. No Waiver: The failure by GPI GEOSPATIAL to enforce or otherwise exercise any right under this Agreement shall not be deemed a waiver. No waiver shall be effective unless expressly stated in a writing signed by GPI GEOSPATIAL.
- c. Saving Clause: If any provision(s) of the Agreement be deemed illegal, invalid or unenforceable by a court with jurisdiction, the remaining provisions shall remain in effect.

William Reilly, P.E.
Senior Coastal Engineer
APTIM
9143 Philips Hwy, Suite 400
Jacksonville, FL 32256

- d. Changes or Modifications: This Agreement can be changed or modified only by mutual agreement by GPI GEOSPATIAL and APTIM in a writing signed by an authorized representative of both GPI GEOSPATIAL and APTIM

- e. Right and Remedies Cumulative/Choice of Law: GPI GEOSPATIAL's rights and remedies under this Agreement are cumulative and not exclusive of any rights or remedies otherwise available pursuant to applicable law. GPI GEOSPATIAL may exercise its rights as often as it deems appropriate. This Agreement will be governed by the laws of the State of [Florida] without regard to its conflicts of law principles.

- f. The proposed fee does not cover any additional insurance limits that exceed GPI GEOSPATIAL's standard coverages. This proposal fee will be adjusted to cover any higher insurance limits if they are required for this contract.

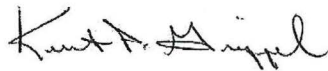
By signing below I APPROVED AND ACCEPT this letter as a legal contract and I have read and agree to the payment terms as set forth above.

By: _____ Date: _____
(Authorized Signature)
_____ Title: _____
(Typed or printed name)

Authorized Fee: \$ _____ Purchase Order No.:

Very truly yours,

GPI GEOSPATIAL, Inc.



Kurt Griffel
Assistant Vice President