April 20, 2017

Susan Goldberg, Architect, NCARB, AIA
City of Hollywood, Department of Public Utilities
Engineering & Construction Services
2717 Van Buren Street
Hollywood, Florida 33020

Re: 2017 Beach Project Engineering Support
Work Order #1

Dear Mrs. Goldberg:

Applied Technology & Management (ATM) is pleased to provide this proposal to the City of Hollywood for engineering services in support of the City's 2017 Beach Project. It is our understanding that the City wishes to renourish it's established beach template (via truck haul) within the boundaries of the CRA. In conjunction with this effort an upper beach placement (above MHW) will be placed on beaches within the City limits north of the CRA boundary.

This proposal provides survey, engineering and construction administration tasks to support the design, bidding and construction oversight of both project phases (the CRA project and the upper beach placement north of the CRA). It is assumed that regulatory engagement for both tasks will be conducted by Coastal Systems International (CSI) in coordination with ATM.

**SCOPE OF SERVICES**

The following Scope of Services is proposed:

**Task 1. Site Condition Survey**

ATM will conduct a physical (beach profile) survey of both project areas to support project design, permitting and bidding. All topographic and bathymetric profile surveys of the beach and offshore will be conducted by a Florida licensed surveyor. Topographic and bathymetric surveys will be conducted within the bounds of the CRA beach fill area and along 5,000 feet of the adjacent shoreline to both the north and south ends of the beach fill area (this are includes the upper beach placement area north of the CRA project). Profile surveys will be conducted at each of the Department of Environmental Protection's reference monuments within the following areas:

Hollywood North Segment:

- R-99 to R-107 6,000 feet up drift of Project Area
- R-107 to R-109+300 Project Area
- R-110 to R-115 5,000 feet down drift of Project Area

Hollywood South Segment:

- R-114 to R-119 5,000 feet up drift of Project Area
- R-119-380 to R-124-280 Project Area
- R-124 to R-2 (Dade Co.) 5,000 feet down drift of Project Area

All profile surveys will be measured along the previously established azimuths and locations of each historical monument. The profiles will extend from the monument or at least 100-ft landward of the dune/vegetation/seawall line to at least 2,000 ft. offshore of the monument or to the -30 ft. NAVD seabed contour, whichever is greater. Wading profiles will extend to at least -4 feet NAVD. All survey activities and deliverables will be conducted in accordance with the latest update of the DEP BBCS Monitoring Standards for Beach Erosion Control Projects, Section 01000 – Beach Profile Topographic Surveying and Section 01100 – Offshore Profile Topographic Surveying.

**Task 1 Deliverable:**

ATM will provide all survey data, as well as resultant survey drawings to the City both as electronic files (dwg, pdf and raw data x,y,z files) and one set of signed and sealed 11x17 drawings.

**<u>Task 2. Project Design, Volume and Cost Estimate</u>**

The project volumes and construction template will be updated based on the surveys collected in Task 1. Within the CRA project the design volume will be estimated based on the established project template. For the upper beach project a template will be developed based on existing conditons and available upper beach area as determined withn the Task 1 survey. An estimate of project cost for each project phase will be developed based on realized unit rates for recent, similar projects.

**Task 2 Deliverable:**

ATM will submit a letter report providing preliminary project drawings, estiamed volumes and costs for each project phase.

**<u>Task 3.0. Permit Drawings, Plans, Specifications and Bidding Support</u>**

ATM will support the development of permit drawings, plans specifications and will support project bidding in coordination with City CRA staff.

Subtasks include:

**Task 3.1 Permit Drawings, Plans and Specifications.**

ATM will develop a permit drawing set to support CCCL permitting of the upper beach placement project phase. This permit drawing set will be signed and sealed by the project engineer and will include project surveys acquired in Task 1.

A set of plans sufficient for project bidding will be developed for each project phase. A set of bid technical specifications will be developed for the combined project. This package will consist primarily of the project plans and technical specifications. These will be incorporated into the City's general front end (boilerplate) bidding/contract documents. This effort will be conducted in coordination with City CRA staff.

**Task 3.1 Deliverable:** A draft copy of the plans and specifications will be prepared for City staff review. A final plans and specifications set will be provided based on staff input.

**Task 3.2 - Bid Support**

ATM will conduct a pre-bid conference with potential bidders and will address questions received from potential bidders. If necessary, ATM will develop addendums to the bid. Upon receipt of bids, ATM will review the submittal packages and provide a recommendation to the City regarding bid award.

**Task 3.2 Deliverable:** An agenda for the pre-bid conference will be prepared. Addendums as appropriate will be prepared. All documentation will be provided to City staff in draft form for review and comment prior to finalization.

**<u>Task 4: Construction Administration and Observation</u>**

ATM will provide project administration and observation to support project conformance with the plans and specifications, project permit and conditions of the construction contract.

**Task 4.1: Engineering Observation and Administration**

ATM will provide engineering construction support services on an as needed basis as required for Project Certification. ATM will provide construction observation through regular on-site review of construction progress with the Contractor and City. On-site visits will be conducted based on construction progress by the Contractor and in consultation with the City. ATM will observe the construction with regard to the Contractor's compliance to the contract plans and specifications and regulatory permit conditions. ATM will notify the City and construction Contractor of any observed deficiencies. ATM will provide on-site coordination with the

Contractor and City as part of this task. During the construction process ATM will provide administrative support on an as-needed basis including Contractor coordination and review of Contractor invoices. Upon notification from the Contractor of completion of construction, ATM will coordinate a site inspection and develop a punch-list for the Contractor to complete prior to a recommendation for final payment. ATM will coordinate with the City and Contractor as necessary to address field changes, payment requests, punch list completion, and permit-required submittals to the regulatory agencies.

ATM senior staff will attend a weekly project update and coordination meeting with the City and Contractor. Regular observations will be conducted by local ATM staff with experience in beach construction.

**Task 4.1 Deliverables:**

1) A Daily observation report will be prepared by the on-site construction representative. This will be submitted to the City electronically within 24 hours of the observations.

2) ATM will provide brief summary reports of project progress to the City on a weekly basis. Additional documents will be prepared and submitted to the City as appropriate during construction.

3) ATM will provide the City with a recommendation for payment associated with Contractor invoice submittals.

**Task 4.2: Project Review and Certification**

ATM will prepare Project Certification documentation. This will include development of signed and sealed Project Certifications. In addition, a construction project monitoring report will be developed consistent with regulatory requriemetns. The scope of this report will be limited to construction activities. Project performance monitoring as required by project permit will be conducted under annual monitoring efforts beyond this scope. ATM will prepare a final project sediment QA report consistent with the requirements of the project QA/QC Plan. This effort will include collection of sand samples for mechanical sieving which will be completed under this task.

**Task 4.2 Deliverables:**

1) Project certification letter
2) Project Physical Monitoring Report
3) Project QA Sediment Report
4) Any additional correspondence or documentation as required

**PROJECT SCHEDULE**

The following table summarizes the project schedule.

| Task | Schedule |
|---|---|
| Task 1 | June 2017 |
| Task 2 | 30 days after completion of surveys |
| Task 3 | 45 – 60 days after completion of surveys |
| Task 4 | December 2017 |

**PROJECT RATES**

The following hourly rates for key staff will be utilized under this scope of work. Effort will be charged on a time and materials not to exceed basis.

| Staff Position | Hourly Rate ($/hr) |
|---|---|
| Project Principal | $170.00 |
| Project Manager | $140.00 |
| Senior Surveyor | $120.00 |
| Staff Engineer/Tech. | $105.00 |
| Survey Technician | $85.00 |
| CAD Tech/GIS | $90.00 |
| Administrative | $75.00 |

## COMPENSATION

The following table summarizes the time and materials (labor and expenses) required to complete the Scope of Work detailed herein.

| | Task Description and Breakdown | ATM Total Labor | Internal Direct Expenses* | Total Task Budget |
|---|---|---|---|---|
| | | | | |
| **Task 1** | **Site Condition Survey** | | | |
| 1.1 | Survey | $17,325 | $5,500 | $22,825 |
| | **Total Cost - Task 1** | **$17,325** | **$5,500** | **$22,825** |
| **Task 2** | **Project Design Volume and Cost** | | | |
| 2.1 | Project Design Volume and Cost | $11,290 | $0 | $11,290 |
| | **Total Cost - Task 2** | **$11,290** | **$0** | **$11,290** |
| **Task 3** | **Drawings, Plans and Specs and Bid Support** | | | |
| 3.1 | Permit Drawings, Plans and Specs | $14,500 | $100 | $14,600 |
| 3.2 | Bid Support | $8,220 | $0 | $8,220 |
| | **Total Cost - Task 3** | **$22,720** | **$100** | **$22,820** |
| **Task 4** | **Construction Administration** | | | |
| 4.1 | Eng. Obs. and Admin. | $36,100 | $5,000 | $41,100 |
| 4.2 | Project Certification | $11,460 | $2,500 | $13,960 |
| | **Total Cost - Task 4** | **$47,560** | **$7,500** | **$55,060** |
| | **Total Task Order Costs** | **$98,895** | **$13,100** | **$111,995** |

If the above meets with your understanding and approval, please sign one (1) original of this proposal, initial the attachments and return for our files. Receipt of the signed original shall serve as our authorization to proceed. If you feel modifications to this proposal are required, please do not hesitate to call.

Regards,

Sincerely,

***Applied Technology & Management, Inc***.

Michael G. Jenkins, Ph.D., P.E.
Coastal Engineering Principal

APPROVED and ACCEPTED this ________ day of ________________, 2017.

By ________________________________________

Name: ____________________________________
(Please type name and title)