ATKINS

SUPPLEMENTAL WORK ORDER FORM
for the CITY OF CLEARWATER

Date: **6/25/2019**

Project Number:

City Project Number: **18-0009-EN**

1. PROJECT TITLE:

Cooper's Bayou – Environmental Baseline Survey/Technical Memorandum, Cooperative Funding Application Assistance, and Stakeholder Coordination

2. SCOPE OF SERVICES:

Atkins has prepared this proposal for the City of Clearwater (City) to conduct a baseline environmental assessment for Cooper's Bayou in order to assess potential ecological lift to mangrove swamp habitat due to the proposed hydrologic improvements included in the Cooper's Bayou Circulation Study report. During a recent meeting with FDOT District 7 and City of Clearwater staff on June 20th it was determined that FDOT has an immediate need for mangrove credits and a potential future need for seagrass credits in order mitigate for impacts due to future roadway expansion projects throughout Tampa Bay.

Cooper's Point is located in Sections 9, 10, 15, 16, Township 29 South, Range 16 East, in Pinellas County, Safety Harbor, Florida (**Figure 1)**. The project site is located north of the west end of the Courtney Campbell Causeway (State Road 60) north of the intersection of South Bayshore Boulevard. The project study area consists of Cooper's Point peninsula and Cooper's Bayou, which contain tidal flats and mangrove swamp. The area is entirely located within the Pinellas County Aquatic Preserve in Class II, Outstanding Florida Waters.

As directed by the City of Clearwater, Atkins previously compiled and reviewed existing data for the purposes of assessing the existing conditions of Cooper's Bayou. The data in combination with hydrodynamic modeling correlated hydrological flushing with ecological value, as a baseline with which the potential ecological value of potential restoration and/or enhancement opportunities were estimated. Current modeling has demonstrated potential for improvement in both water quality and seagrass resources onsite.

As part of this supplemental work order, Atkins will conduct the baseline environmental assessment survey (**Figure 2**) to characterize and quantify the existing mangrove fringes as well

as mosquito ditches in the northern, middle and south bayou segments. The results of the baseline survey will be included in a Technical Memo along with a UMAM functional assessment of the resources. Additionally, the scope of work will include coordination with the agencies and stakeholders regarding potential cooperative funding opportunities for the project.

Figure 1 – Cooper's Bayou Project Area

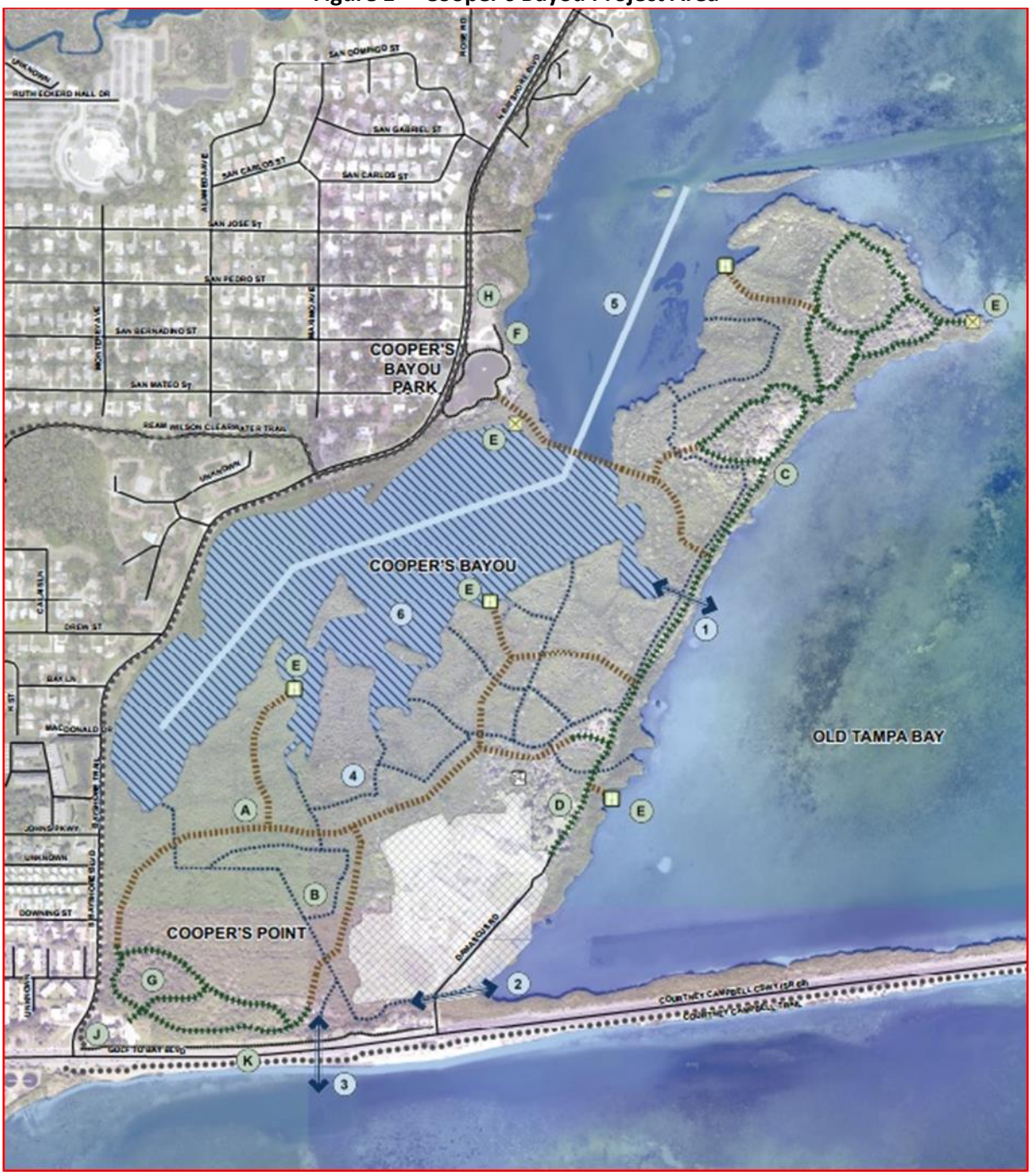
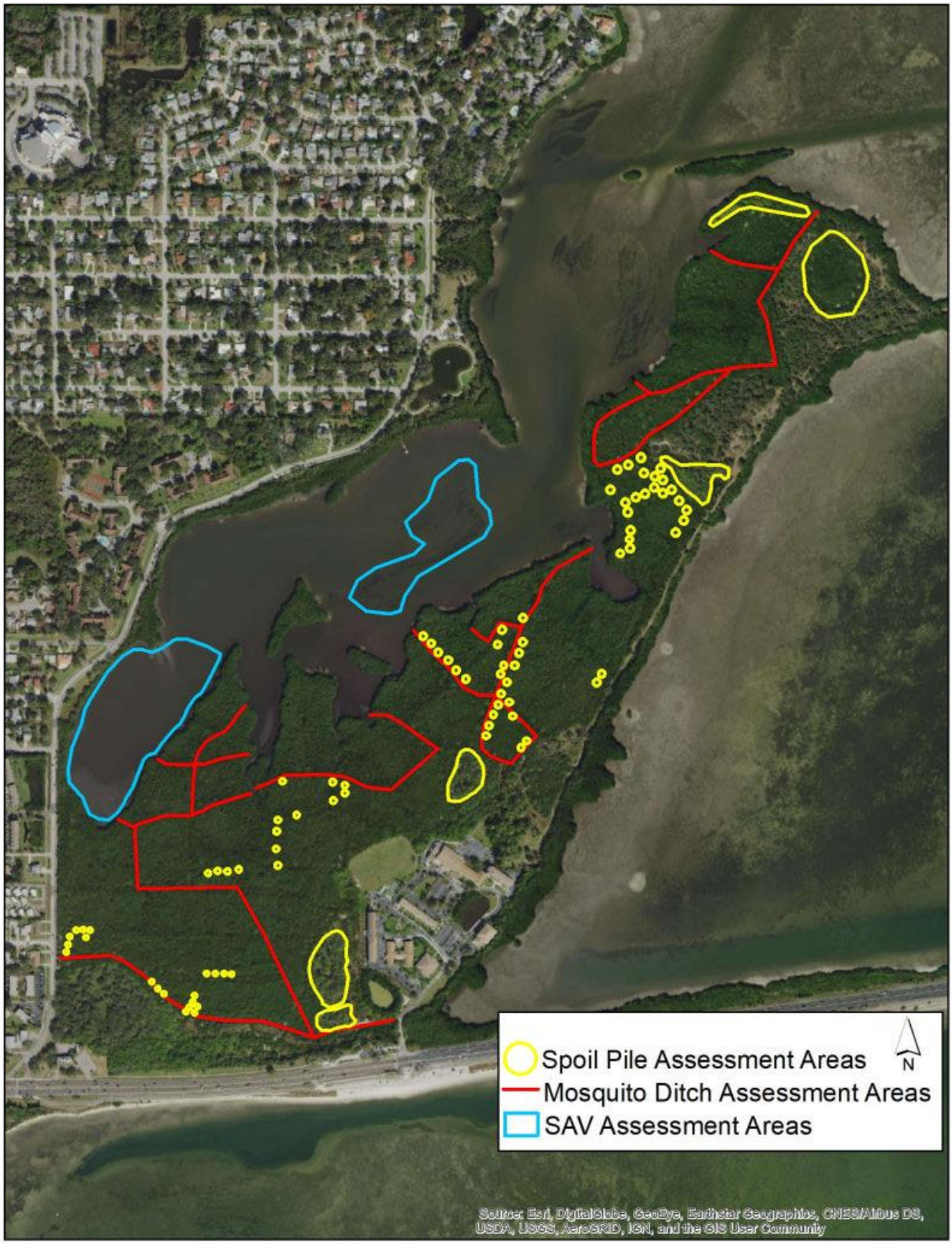


Figure 2 – Cooper's Bayou Assessment Areas


Spoil Pile Assessment Areas
Mosquito Ditch Assessment Areas
SAV Assessment Areas
N
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

The proposed scope of work for this Work Order is as follows:

1. **Project Management:** Atkins will assign a Project Manager to manage the technical tasks, communicate, and coordinate with the City staff and others. Atkins's Project Manager will be responsible for overall client satisfaction in all aspects of this Work Order including the schedule, deliverables, and quality control.

2. **Environmental Baseline Assessment (Survey):** As part of the environmental baseline assessment, Atkins field biologists will:
    a. Review the condition within and adjacent to the existing mosquito ditches in the northern, middle and south bayou segments (**Figure 2**) to quantify potential ecological lift from potential use of ditch blocks and hydroblasting of spoil piles associated with the mosquito ditches.
    b. Determine typical dimensions of the dredge spoil piles associated with the mosquito ditches in order to quantify the area available/suitable for mangrove recruitment following hydroblasting. This acreage will be quantified as potential mangrove creation areas and mitigation credit values estimated via UMAM assessment.
    c. Identify areas of Brazilian pepper on current aerial imagery and further assess their condition in the field.
    d. Assess mangrove swamp holistically for characterization of community structure for use in completion of UMAMs.
    e. Assess potential area of seagrass coverage within middle and lower bayou segments.

In accordance with regulatory requirements, Atkins field biologists will also conduct an underwater survey with the aid of snorkel gear and vessel support, to map the aerial extent of seagrass beds and to qualitatively and quantitatively describe the benthic habitat within the survey areas located in the middle and lower bayou segments. First, the landward and waterward seagrass edge of bed will be recorded as one biologist snorkels over the seagrass edge while a second biologist follows behind with a Trimble GeoXT 6000 series handheld with sub-meter spatial accuracy.

During the survey, submerged aquatic vegetation (SAV) will be quantitatively assessed via 1-m2 quadrats along transects established at regular intervals within and adjacent to the proposed project and random sample plots established within the entire seagrass bed located to the south of the existing bird island. Increased random sample plot density will be utilized within a 25-foot buffer of the project footprint. At each random sample plot location along the transects as well as the random sample plots within the seagrass bed outside the proposed project, snorkelers will estimate the percent cover of each seagrass species as well as the total percent cover of seagrass. Acreage of potential temporary impacts will be calculated.

3. **Baseline Assessment Technical Memorandum:** All findings of the baseline survey will be summarized in a Technical Memorandum. As part of the memo, Atkins will prepare a written assessment of the current condition and relative value of the function being performed by the mangroves utilizing the Uniform Mitigation Assessment Method (UMAM) in accordance with Chapter 62-345.100 Florida Administrative Code (F.A.C). This information will be presented to the agencies during the agency coordination task in order to help determine the level of permitting and mitigation design required to offset impacts from the project.

4. **Cooperative Funding Application Assistance/Stakeholder Coordination and Agency Support:** Atkins will coordinate with the following agencies/stakeholders regarding potential cooperative funding interest:
    a. Hillsborough County
    b. Pinellas County
    c. Port Tampa Bay
    d. Florida Department of Transportation District 1
    e. Florida Department of Transportation District 7

    Additionally, we will assist in gaining agency support in a similar fashion to the permitting approach for Old Tampa Bay, Atkins will prepare a powerpoint presentation that summarizes the ecological benefit established with the hydrodynamic modeling. In addition, the merits of the project relative to Old Tampa Bay will be enumerated. Coordination and interactive presentations will be given to the following agencies:
    a. Tampa Bay Estuary Program
    b. Tampa Bay Nitrogen Consortium
    c. SWFWMD (Regulatory and SWMM branches)

    In addition, coordination meetings with the Army Corps of Engineers and DEP will be conducted to establish support.

Information City will provide to Atkins

- Any existing reports, permits, surveys, models, etc. pertaining to the project site.

Deliverables

- Draft and Final Baseline Environmental Assessment Technical Memo.
- Agency coordination meeting minutes.
- UMAM functional assessment.
- Powerpoint Presentation

3. PROJECT GOALS:

The goal of this Work Order is to conduct a baseline environmental assessment of the mangrove swamp system to be used in discussions with the applicable agencies/stakeholders to identify potential cooperative funding partners for the project and to establish agency support.

4. BUDGET:

See Attachment "B"

This price includes all labor and expenses anticipated to be incurred by Atkins for the completion these tasks in accordance with Professional Services Method "B" – Lump Sum – Percentage of Completion by Task, **for a fee not to exceed** Fifty-Eight Thousand Nine Hundred Thirty Three Dollars ($58,933).

5. SCHEDULE:

Atkins will submit a draft to the City of Clearwater within 45 days from the notice to proceed. The final technical memorandum will be submitted during the coordination of the cooperative funding support process.

6. STAFF ASSIGNMENT (Consultant):

Atkins Team's Key Staff:

Daniel Parsons	Project Manager
Shayne Paynter	Senior Technical Director
David Loy	Senior Scientist II
Renee Price	Senior Scientist

7. CORRESPONDENCE/REPORTING PROCEDURES:

ENGINEER's project correspondence shall be directed to:
Daniel Parsons, PE, CFM, ENV SP (813) 281-4856, daniel.parsons2@atkinsglobal.com

All City project correspondence shall be directed to:
Sarah Kessler (727) 562-4897, sarah.kessler@myclearwater.com with copies to others as may be appropriate.

8. INVOICING/FUNDING PROCEDURES:

For work performed, invoices shall be submitted monthly to the:

City of Clearwater, Engineering Department
Attention: Veronica Josef, Senior Staff Assistant
PO Box 4748
Clearwater, Florida 33758-4748.

City Invoicing Code: **ENST180005-DSGN-PROSVC**

9. INVOICING PROCEEDURES

At a minimum, in addition to the invoice amount(s) the following information shall be provided on all invoices submitted on the Work Order:

A. Purchase Order Number and Contract Amount.
B. The time period (begin and end date) covered by the invoice.
C. A short narrative summary of activities completed in the time period
D. Contract billing method – Lump Sum or Cost Times Multiplier
E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
F. If Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts will be required for any single item with a cost of $50 or greater or cumulative monthly expenses greater than $100).
G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. SPECIAL CONSIDERATIONS:

The consultant named above is required to comply with Section 119.0701, Florida Statutes (2013) where applicable.

PREPARED BY:

_____
Daniel Parsons, PE, CFM, ENV SP
West Florida Division Manager
Atkins North America

_____
Date

APPROVED BY:

_____
Tara Kivett, PE
City Engineer
City of Clearwater

_____
Date

CITY OF CLEARWATER
ENGINEERING DEPARTMENT

WORK ORDER INITIATION FORM
CITY DELIVERABLES

1. FORMAT

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. Datum: Horizontal and Vertical datum shall be referenced to North American Vertical Datum of 1988 (vertical) and North American Datum of 1983/90 (horizontal). The unit of measurement shall be the United States Foot. Any deviation from this datum will not be accepted unless reviewed by City of Clearwater Engineering/Geographic Technology Division.

2. DELIVERABLES

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20’ unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address Tom.Mahony@myClearwater.com.

All electronic files (CAD and Specification files) must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

Bird Island Breakwater Structure – Environmental Baseline Survey/Report, Agency Coordination, and Funding Research

ATKINS

SUPPLEMENTAL WORK ORDER FORM
PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
1.0	Project Management / Meetings / QA/QC		$7,456	$7,456
2.0	Environmental Baseline Assessment (Survey)		$20,938	$20,938
3.0	Baseline Assessment Technical Memorandum		$5,234	$5,234
4.0	Cooperative Funding Application Assistance/Stakeholder Coordination and Agency Support		$25,305	$25,305
			Grand Total	**$58,933**