PUBLIC NOTICE
AGENDA
PROFESSIONAL SERVICES EVALUATION COMMITTEE MEETING
Thursday, May 02, 2019, 10:00 a.m.
Eighth Floor, Conference Room 851
Jacksonville, FL 32202

Committee Members: Gregory Pease, Chairman
Randall Barnes, Treasurer
James McCall, OGC

<table>
<thead>
<tr>
<th>Subcommittee Members</th>
<th>ITEM #</th>
<th>TITLE &amp; ACTION</th>
<th>MOTION</th>
<th>CONTR EXP</th>
<th>OUTCOME</th>
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</thead>
<tbody>
<tr>
<td>Brian Hughes</td>
<td>P-23-19</td>
<td>Approval to proceed with Evaluation of Proposals Received Consultant Services for Consolidated Downtown Development Regional Impact Downtown Investment Authority (DIA)</td>
<td>That the committee approves proceeding with the evaluation of the two (2) proposals received in accordance with Section 126.302(f) of the Procurement Manual.</td>
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<td>Oliver Barakat</td>
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<td>Jeff Foster</td>
<td>P-31-19</td>
<td>Single Source Award Professional Services for Brownfield Site Rehabilitation Agreement Department of Public Work/Solid Waste Division</td>
<td>That the City of Jacksonville enter into a Single Source agreement with GeoSyntec Consultants for Professional Services for Brownfield Site Rehabilitation Agreement – Formerly Manufactured Gas Plant Contamination Cleanup; by (i) incorporating the attached Scope of Work identified as Exhibit ‘A’ and Contract Fee Schedule identified as Exhibit ‘B’; (ii) incorporating Contract No. 7980-06; (iii) providing a maximum indebtedness in the amount of $421,829.00 for the services; and (ii) providing a period of service from date of execution of the contract to project completion. All other terms and conditions are per the City’s standard contract language.</td>
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<td>Will Williams</td>
<td>SS#3</td>
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<td>Alex Baker</td>
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<td>Addition to Legal Related Services List Procurement Division</td>
<td>That the Committee approve the request of Patrick R. Phipps, MAI, of Colliers International and J. Mark Williams, MAI, of Moody Appraisal Group; for inclusion on the Legal Related Services list as Appraisers of Real Property.</td>
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|               | Addition to Legal Related Services List Procurement Division | That the committee approves the request of Michelle Baden on behalf of U. S. Legal Support for inclusion on the Legal Related Services list as Court Reporter. | | |

MEETING ADJOURNED:

CU: Council Aiders
Subcommittee Members
April 29, 2019

To: Gregory Pease, Chairman
Professional Services Evaluation Committee

From: Guy Parola, Title
Downtown Investment Authority (DIA)

Cc:
Brian Hughes, Mayor’s Chief of Staff, Interim DIA CEO
PSEC Subcommittee
Downtown Investment Authority

Oliver Barakat, DIA Board Member
PSEC Subcommittee
Downtown Investment Authority

Subject: Review of Submittals for RFP - P-23-19 Consultant Services for Consolidated Downtown Development Regional Impact

The Downtown Investment Authority received only two (2) submittals for the Consultant Services for Consolidated Downtown Development Regional Impact Request for Proposals.

Per Section 126.302(f) of the Procurement Code it:

"PSEC receives responses from less than three proposers, it shall resolicit proposals from proposers previously solicited and from additional persons, unless it determines, in writing, that no advantage would be obtained by resoliciting. Notwithstanding the number of responses received, PSEC may proceed to consider those proposers responding to the resolicitation or to the initial solicitation if it determines, in writing, that no advantage would be obtained by resoliciting."

Considering the foregoing information, staff request the process that should be followed in order to ensure the continued services by evaluating.
TO: Greg Pease, Chief, Procurement Division

THRU: John Pappas, P.E., Director, Department of Public Works

FROM: Jeffrey S. Foster, P.G., SW Environmental Engineer Manager
      Will Williams, Chief, Solid Waste Division

DATE: April 4, 2019

SUBJECT: Single Source Request
         Professional Services for Brownfield Site Rehabilitation Agreement Designated Contractor
         Confederate Park - Former Manufactured Gas Plant Contamination Cleanup
         Geosyntec Consultants

The Solid Waste Division respectfully requests approval of a Single Source Award for Professional Services for the Brownfield Site Rehabilitation Agreement Designated Contractor to Geosyntec Consultants. This Single Source Award is needed to continue the work plan designated in the Florida Department of Environmental Protection Brownfield Site Rehabilitation Agreement that was approved by the City Council under Ordinance 2018-0542 for the former manufactured gas plant site known as Confederate Park.

The funding source for this request will be ERAS32CMP ERR011-01 069505. Nothing contained herein shall be amended, modified or otherwise revised without prior PSEC and Mayor’s approval.

If there are any questions, please do not hesitate to contact me at this office (904) 381-8205. Please advise when this item will be placed on the agenda so a representative of Solid Waste can attend.

JSF/jsf

Cc: Ann Brackin, DPW
    Dina Riddle, DPW
    Nickii Brookins, SWD
SINGLE SOURCE REQUEST

Pursuant to the City of Jacksonville Procurement Code § 126.206 & § 126.312, when requesting a purchase from a vendor subject to the referenced sections, please complete this form to justify your request and submit to Procurement with applicable attachments.

REQUESTING AGENCY (DEPT./DIVISION): Public Works/Solid Waste

FUNDING SOURCE: ERAS32CMF-ERR011-01 069505

BRIEF DESCRIPTION OF GOODS/SERVICES:
- Implementation of Remedial Action Work Plan
- Prepare Remedial Action Plan
- Production of plans and specifications for bidding package
- Review of bidding documents
- Oversight of Remedial Action Plan implementation
- Certification report submittal to FDEP
- Operation of remedial action system equipment
- Groundwater monitoring
- Progress and O&M reports

AMOUNT OF PROJECT (attach quote): $491,829.00 (First Scope of Work Deliverable Only)

PROVIDE A SUMMARY OF THE SCOPE OF GOODS/SERVICES TO BE PROVIDED;
IDENTIFY EACH ITEM, COMPONENT OR SERVICE BEING PROCURED (ATTACH QUOTE/PROPOSAL):
- Implementation of Remedial Action Work Plan
- Prepare Remedial Action Plan
- Production of plans and specifications for bidding package
- Review of bidding documents
- Oversight of Remedial Action Plan implementation
- Certification report submittal to FDEP
- Operation of remedial action system equipment
- Groundwater monitoring
- Progress and O&M reports

PROVIDE A DETAILED JUSTIFICATION AS TO WHY THE REQUESTED GOODS/SERVICES CAN ONLY BE EFFICIENTLY AND EFFECTIVELY PROCURED THROUGH THE RECOMMENDED SINGLE SOURCE PROVIDER:
- Geosyntec is listed as the contractor that is part of the Brownfield Site Rehabilitation Agreement that was approved by City Council under ordinance 2018-0542.
- See Brownfield Site Rehabilitation Agreement - Attachment E Contractor Certification Form

ASSERT THAT YOU HAVE RESEARCHED THE AVAILABILITY OF THE REQUESTED GOODS/SERVICES FROM OTHER SOURCES IN APPLICABLE MARKETS AND HAVE DISCUSSED AND EVALUATED THE SAME WITH COJ’S PROCUREMENT AND EBO DIVISIONS:

Geosyntec has been the incumbent environmental contractor since the start of the assessment work under Contract 7980-06. Amendment #5. As such, the incumbent has been a critical and core part of the remedial action feasibility study and provided technical support in the ongoing legal action that resulted in the Brownfield Site Rehabilitation Agreement that will allow for the cleanup of the facility and remediation of the former manufactured gas plant site.

Submitted by: Jeffrey S. Foster, P.G. SW Environ. Engineer Mgr

(Name) (Title)

Date: April 4, 2019

Requesting Agency’s Director’s Signature:

Procurement Division March, 2017
Transmitted Via E-Mail

Mr. Jeffrey Foster, P.E., P.G.
City of Jacksonville
Department of Public Works
Solid Waste Division
1031 Superior Street
Jacksonville, FL 32254

Subject: Proposal for Work Plan Implementation Activities
Former Manufactured Gas Plant Site – Confederate Park
City of Jacksonville, Duval County, Florida

Dear Mr. Foster:

Geosyntec Consultants (Geosyntec) is pleased to provide the City of Jacksonville (City) with this cost proposal for the performance of pre-design related Work Plan implementation activities at the former manufactured gas plant (MGP) site (Site) located at Confederate Park. The Site is inclusive of the Confederate Park property, the E.H. Thompson property, and the Orange Street right-of-way (east of Main Street) in Jacksonville, Duval County, Florida. The Remedial Action Plan (RAP) to be ultimately prepared for the City, following pre-design field activities, will not include remedial evaluation or design for the former Park View Inn property (property located south of the Orange Street right-of-way).

The objective of the pre-design activities and the RAP, which will be prepared based upon the pre-design field testing program, is to obtain approval from the Florida Department of Environmental Protection (FDEP) for a comprehensive remedy which will address impacted Site soils, sediment, surface water, and groundwater to facilitate an eventual risk-management based closure for the Site. Prior to developing the RAP, pre-design tasks will be required to obtain additional field data for remedial design. In summary, pre-design tasks are based upon recent Work Plan submittals, and will include the following:

- Aquifer Performance Testing (APT) Work Plan Implementation (Task 2);
- Multi-Phase Extraction (MPE) Work Plan Implementation (Task 3);
- Mass Flux Assessment Work Plan Implementation (Task 4);
- Groundwater Modeling Work Plan Implementation (Task 5); and
Mr. Jeffrey Foster, P.E., P.G.
11 March 2019
Page 2

- Performance of a Site Civil Survey (Task 6).

This letter provides Geosyntec’s proposed scope of work and estimated costs to implement the tasks identified above assuming that the submitted Work Plans are approved by FDEP with no changes that would impact the cost and scope. Additionally, scope and budget for the preparation of a Site-specific Health and Safety Plan (HASP), project management and general project support to the City are included in this proposal as Task 1.

PROPOSED TASKS

Geosyntec has developed the following proposed task-based scope of work associated with the implementation of the tasks described above.

Task 1 – Project Management, Health and Safety Plan, Meetings and Communications

The development and implementation of the proposed project work will require the following activities:

- Preparation of a Site-specific HASP in accordance with the requirements of 29 CFR 1910.120 (required document per OSHA). The HASP covers activities to be completed during implementation of the proposed field activities. A copy of the HASP will be on-Site during the performance of all field activities.

- Procuring and scheduling drilling subcontractors, equipment subcontractors (for APT, mass flux, and MPE testing), fixed-base laboratory, coordination with the University of Florida, and investigation-derived waste (IDW) transport and disposal subcontractor.

- Day-to-day project management activities, such as invoicing, file maintenance, interaction between project team members, communications with the City, other team members, FDEP, and other activities essential to ensure that the project objectives are achieved, and project scope associated with implementing the Work Plans are completed within the allocated budget.

For budgetary purposes, Geosyntec has assumed one face-to-face meeting will be held with the City and/or its technical representatives at the Geosyntec Jacksonville office (or other specified location in Jacksonville) and one face-to-face meeting will be held with FDEP. The purpose of the face-to-face meeting at Geosyntec’s office will be to present and discuss the main elements, schedule and sequence of events for Work Plan implementation and to solicit feedback from the City. The purpose of the FDEP meeting will be to present the main elements of the Work Plan results to solicit feedback with the goal of reducing to the extent practical any substantial review comments from FDEP and to streamline the approval process. Meetings with other third-party
interests, such as other adjacent property owners/stakeholders (such as CHI), are not included in the budget. Estimated costs and associated labor hours by labor category for Task 1 are provided on Table 1.

**Task 2 – APT Implementation and Technical Memorandum**

The scope of work and their associated assumptions used to develop the estimated costs for implementation of the APT Work Plan are provided below. The scope of work is predicated upon the Aquifer Performance Test Work Plan (APT Work Plan) submitted to FDEP on 1 November 2018. Through Site-specific data collection (i.e. pond to creek flow, etc.) and a series of short-term specific capacity pumping tests, pneumatic slug testing and a single-well long-term pumping test that are proposed in the APT Work Plan (Geosyntec, November 2018) data will be acquired that provides quantitative measurements to inform hydraulic characteristics to be used in the groundwater flow model. A short-term specific capacity test is a field experiment in which a well is pumped at controlled rates and water-level response (i.e., drawdown) is measured in the pumped well; response data from pumping tests are used to estimate the hydraulic properties of aquifers, evaluate well performance and identify aquifer boundaries. A pneumatic slug test is a single well rising head test that measures the conductivity of the formation immediately adjacent to the monitoring well. By testing an array of Site monitoring wells, a range of transmissivities/conductivities for different geologic layers can be measured and used to represent various layers in the groundwater flow model.

Other components of this APT Work Plan scope will include collection of surface water levels within Hogan’s Creek and the decorative pond prior to and during testing and estimation of the discharge rate(s) from the pond outfall to Hogan’s Creek. These data are intended to provide an understanding of the relationship between the decorative pond and the Hogan’s Creek water levels and any tidal fluctuation or influence on groundwater movement. Additionally, evaluation of the infiltration rates of shallow on-Site soils (at three on-Site locations) will also be conducted via double-ring infiltrometer tests to provide design basis for potential infiltration galleries for treated groundwater.

Geosyntec proposes to conduct the following subtasks:

1. Well reconnaissance and baseline surface water and groundwater level measurement;
2. Collection of decorative pond clay lining materials for laboratory testing;
3. Aquifer performance testing;
4. Double-ring infiltrometer testing; and
The APT implementation subtasks are described below. Estimated costs and associated labor hours by labor category for Task 2 are provided on Table 1.

Subtask 2.1 – Well Reconnaissance and Baseline Water Level Measurement
This subtask includes reconnaissance at the Site to locate and document the existing condition of each monitoring well. Reconnaissance will include locating individual wells, documenting the surface condition of the well pad, manhole cover, protective expansion plug and lock (if any) at each well location. The depth to water, free product (if present), total depth of well and any apparent obstructions will be noted in field log forms. Photographic documentation will be collected for the condition of each well at the Site. A synoptic round of groundwater elevations will be collected in all Site monitoring wells at high-, low-, and mid-tide to obtain baseline hydraulic conditions.

As part of this subtask, Geosyntec will install two (2) permanent stilling wells and a rental flow meter unit within the outfall from the pond into Hogan’s Creek.

Assumptions for this subtask include:

- Field activities can be completed in one (1) 12-hour day by a 3-person field crew (12 hours each);
- Approximately 60 monitoring wells exist at the Site;
- Collection of three (3) full rounds of water level measurements at three different tidal levels;
- Two (2) weekly Site data downloads following deployment will be conducted;
- A 3-week rental of one flow meter for outfall and twelve (12) pressure transducer units;
- Field vehicle rental for one day; and
- Replacement of caps, j-plugs and/or lids is not included in the costs; if needed, Geosyntec will provide a cost for these items following reconnaissance, if needed and warranted.

Subtask 2.2 – Pond Bottom Materials Collection
At up to six (6) locations within the decorative pond, Geosyntec will collect samples of the pond bottom material (assumed to be a clay-lined bottom). The pond bottom samples will be collected via push borings and the samples will be collected into acetate liners. A manual slide hammer with drill rod attachment and steel core barrel (i.e., AMSTM sediment sampler or similar) will be used to collect the samples within 5 feet of the northern bank and within 5 feet of the southern bank. The collected samples will be shipped under chain of custody to Excel Geotechnical Testing, Inc. (Roswell, Georgia). The testing laboratory will perform Rigid Wall permeability testing on the

Assumptions for this subtask include:

- The field sampling within the decorative pond can be completed in one 10-hour field day utilizing two (2) Geosyntec field staff (10 hours, 2 people – including sample preparation/shipping time);
- Sample analysis includes permeability testing on up to six (6) samples by Excel Geotechnical Testing;
- No vessel or boat will be required to collect samples; and
- Access to the pond will be provided by the City.

Subtask 2.3 – Aquifer Performance Testing

As specifically described in the APT Work Plan, aquifer performance tests will be conducted at select monitoring wells to evaluate the hydraulic conductivity of saturated materials at the Site and to support the groundwater flow model development and the evaluation/design of the anticipated MPE system or other hydraulic-based technologies/remedies for the Site. The following activities will be performed as part of this subtask:

- Short-term single-well pumping tests will be attempted at ten (10) well locations;
- Rising head (pneumatic) tests will be performed at fourteen (14) well locations; and
- A long duration (i.e. 24-hour) pumping test will be completed at the extraction well that is proposed for construction (subtask 3.2) after short duration testing has been completed and data from those tests have been reviewed and evaluated to best design the long duration pumping test.

A 21,000-gallon, steel-walled fractionation tank will be mobilized to the Site for storage of pumped liquids resulting from the APTs (and in conjunction with the MPE pilot study work described below). The bulk characteristics of the containerized water will be tested for appropriate transport and off-Site treatment by a licensed waste treatment facility. The analytical testing includes VOCs, PAHs, TRPH, reactivity, corrosivity and ignitibility testing. The disposal of liquids will be properly manifested by Geosyntec on behalf of the City.

Assumptions for this subtask include:

- The field activities for the short-term single-well pumping tests can be completed during four (4) 10-hour days utilizing two (2) Geosyntec field staff;
Mr. Jeffrey Foster, P.E., P.G.
11 March 2019
Page 6

- The field activities for the pneumatic slug testing at fourteen (14) wells for testing can be completed in two (2) 10-hour days utilizing two (2) Geosyntec field staff;
- The field activities for the long-term test can be completed over a period of four (4) days, which includes set-up, break-down and continuous/overnight Geosyntec oversight (2 field staff) of the field test during its performance (assumed to be 48 hours in duration; the actual length of the test will be designated following the short-term testing and once the MPE test has been conducted);
- Costs include all expendable materials (i.e., fitting, hoses, nitrogen), pumps, and other rental equipment, such as pressure transducers, to complete the testing;
- Costs assume that the pumping well and six (6) near-field monitoring wells will be monitoring during the long-term pumping test;
- Costs include rental of a 21,000-gallon tank for three (3) weeks;
- Costs include disposal of up to 30,000 gallons of water generated from the long-term test (the actual quantity may vary from this assumed volume);
- Costs include disposal of up to 5,000 gallons for the short-term testing;
- Costs include one cleanout of the fractionation tank, by FECC, Inc. following completion of tank use at the Site; and
- Two (2) groundwater analytical samples are assumed for VOCs, PAHs, TRPH, reactivity, corrosivity and ignitibility for disposal characterization and influent concentration evaluation. One sample will be submitted for rush testing (i.e., 48-hour turnaround time).

The estimated costs and associated labor hours by labor category are provided on Table 1.

Subtask 2.4 – Double-Ring Infiltrometer Testing

Geosyntec will perform a double-ring infiltrometer (DRI) test at three separate locations on the Site; the approximate locations are provided on Figure 3 of the APT Work Plan. The double-ring infiltrometer testing will be performed in general accordance with the procedure outlined in ASTM D3385-18 (Standard Test Method for Infiltration Rate of Soils Using Double-Ring Infiltrometer, ASTM 2018). The tests will be conducted at hand-dug pit bottom depths of 2 ft BLS. The rings will be driven a minimum of 6 inches into the base of the pit. The tests will utilize a 24-inch diameter outer ring and a 12-inch diameter inner ring with an approximate 6-inch head of water in the Mariotte tubes. Each test will run for a minimum of 2 hours. A hand auger will be used to identify the approximate water table depth and seasonal high-water table (SHWT) depth at each location.

Assumptions for this subtask include:

CCR18039/FR31584

engineers | scientists | innovators
The field activities for the DRI testing can be completed during one (1) 10-hour day utilizing two (2) Geosyntec field staff;

- Costs include rental of rings, steel drive plate and ancillary equipment to set up and monitor the infiltration rates; and
- No laboratory testing will be performed.

Subtask 2.5 – Technical Memorandum Preparation

After completion of the aquifer tests, a Technical Memorandum will be prepared by Geosyntec that summarizes the results of the stilling well data, pond inflow/outflow data (correlated with creek flow elevation), baseline monitoring data, and aquifer testing. The information contained in the memorandum will include a summary of tidal efficiency factors (an average) and a graphical presentation of surface water-well interaction responses/fluctuations, if observed. A summary of hydraulic conductivity values derived from the field data and graphs presenting time-drawdown curves and analysis will be included. The report will include a summary of the methods used for aquifer test analysis. The report will include calculations and will discuss assumptions made as part of the analysis and corrections made due to other activities, such as any off-Site pumping. Results and calculations from the double-ring infiltrometer testing will also be included in the technical memorandum. It is assumed that the technical memorandum will ultimately be provided as an appendix to the Groundwater Modeling Report, which will be prepared as part of the RAP. The final report will be signed/sealed by the professional geologist or engineer in responsible charge of the testing.

Task 3 – MPE Pilot Test Implementation and Technical Memorandum

The objective of the MPE Pilot Test is to obtain Site-specific information for the evaluation and potential scale-up of the technology in a future RAP (assuming results are positive). The MPE Pilot Test will provide the specific engineering design basis criteria such as vacuum-enhanced recovery flow rates (air and groundwater), vacuum, radius of influence (ROI), induced potentiometric surface changes, off-gas emission analysis, operation/construction methods, and scalable economics for the technology. The Pilot Test will include the installation of an extraction well, piezometers, and vapor monitoring points (VMPs), which will be incorporated into the final design of the MPE system, as appropriate.

The MPE Pilot Test implementation subtasks are described below. Estimated costs and associated labor hours by labor category for Task 3 are provided on Table 1.

Subtask 3.1 – Pre-Implementation Activities

Geosyntec will field identify the proposed extraction well, piezometer, and VMP locations and coordinate a private utility locate to clear the proposed drilling locations. Additionally, the engineers | scientists | innovators
location for the placement of MPE testing equipment, 21,000-gallon fractionation tank, and associated hose/pipe routing will be confirmed.

**Subtask 3.2 – Field Drilling Activities**
Geosyntec will provide oversight of the installation of one, 4-inch diameter extraction well, two, 1-inch diameter piezometers, and two, 1-inch diameter vacuum monitoring points. The wells will be installed as specified in the October 2018 MPE Pilot Test Work Plan.

Assumptions for this subtask include:

- Field drilling locations will be accessible to the drilling equipment with access to locations provided by the City;
- well installations will be completed in two (2) days, with oversight by two Geosyntec personnel; and,
- Investigation derived waste (IDW) generated during drilling activities will be staged at the Site.

**Subtask 3.3 – MPE Testing**
Geosyntec’s subcontractor, EWE, will mobilize a mobile MPE system to the Site along with a 21,000-gallon frac tank, and conduct set-up activities. Prior to initiating MPE operations, Geosyntec personnel will collect a set of static water level measurements and staff gauge readings. MPE testing will then be implemented over a 2-day period, starting with step testing and then continuous operation testing and associated field measurements collection and analytical sampling as presented in the October 2018 MPE Pilot Test Work Plan.

Assumptions for this subtask include:

- Testing/equipment rental is based upon a 2-day testing period and utilizing two (2) Geosyntec field staff for a maximum of 12 hrs per person per day;
- up to 20,000 gallons of generated liquids will be transported off-site for disposal; and,
- up to 22 drums of IDW including soil cuttings and vapor phase granular activated carbon will be disposed off-Site.

**Subtask 3.4 – Technical Memorandum**
Following completion of the MPE Pilot Testing field activities, an evaluation of the collected MPE data will be provided in a technical memorandum, which will document the results of the MPE Pilot Test activities, as described in the October 2018 MPE PTWP. The final report will be signed/sealed by the professional engineer in responsible charge of the testing.
Task 4 – Mass Flux Assessment Implementation and Technical Memorandum

Geosyntec, in coordination with information from the University of Florida (UF) Contaminant Hydrology Laboratory (UFCHL) and SiREM Laboratories, has developed an estimate of costs for the implementation of the activities described in the October 2018 Mass Flux Work Plan. The Work Plan includes the deployment of a network of water and contaminant flux monitoring samplers (FluxMeters) within the surface water and sediments underlying Hogan’s Creek and the adjacent decorative pond to assess areas of highest mass flux/mass discharge into Hogan’s Creek. The objective of the testing would be to ultimately identify which portion(s) of Hogan’s Creek may warrant lining to mitigate potential discharges.

Objectives described in the Mass Flux Work Plan include:

1. conducting a Site reconnaissance field event to investigate the creek topography, sediment thickness, presence/absence of cedar plank base, and groundwater discharge zones within the decorative pond and Hogan’s Creek (Subtask 4.1);

2. testing and deploying passive flux meters and passive polyethylene (PE)-based porewater samplers within the sediment and surface water of the decorative pond and Hogan’s Creek to assess contaminant mass flux from groundwater within the study area (Subtask 4.2); and

3. analyzing the mass flux concentrations calculated using information from the deployed passive flux meters and passive samplers to inform recommendations for a RAP (Subtask 4.3 and 4.4).

The Mass Flux assessment subtasks are described below. Estimated costs and associated labor hours by labor category for Task 4 are provided on Table 1.

Subtask 4.1 – Site Reconnaissance

A Site reconnaissance visit of the decorative pond and Hogan’s Creek within Confederate Park will be completed to evaluate topography, sediment thickness, and the presence/absence of cedar plank base in the decorative pond and Hogan’s Creek. The proposed approach will begin with an investigation of pond and creek water depths, determination of pond and creek bottom sediment thickness, and confirming presence or absence of cedar planks on the creek bottom. This information will inform the techniques that are utilized for deployment of mass flux measurement devices (Subtask 4.2).

The reconnaissance will be completed by field staff utilizing a long metal poker or PVC pipe to push through the bottom sediments to measure sediment thickness and confirm the presence or absence of cedar planks. GPS coordinates will be recorded at each measurement location. These activities will either be conducted by wading through the decorative pond and Hogan’s Creek or utilizing a small boat when conditions are not favorable for wading. Within the decorative pond,
Mr. Jeffrey Foster, P.E., P.G.  
11 March 2019  
Page 10

sediment thickness will be recorded in two circles tracing the circumference of the decorative pond approximately every 15 ft along the southern rim and every 30 ft around the northern edge. Sediment thickness within Hogan's Creek will be evaluated with the additional note of the presence or absence of a solid cedar plank base. Five measurements will be collected across Hogan's Creek approximately every 15 ft. Data will be collected at a higher sampling density (approximately every 1 ft) in areas where great variation in topography, presence of drainage piping, or other atypical features are observed.

To evaluate the location(s) of groundwater discharge zones to Hogan’s Creek and the decorative pond, Geosyntec will complete a visual inspection of the side-walls of Hogan’s Creek and the decorative pond for indications of seepage areas (e.g., algal growth, stressed or dead vegetation, visible discoloration of soil along banks/concrete sidewalls, sheens, and odors) and completion of a temperature survey to evaluate the interaction of groundwater and surface water. Two different technologies will be used as part of the temperature survey to provide multiple lines of evidence of groundwater-surface water interaction. An unmanned aerial systems (UAS) equipped with a Traditional Photo (RBG) and Infrared (IR) sensors will be used to evaluate temperature variations between the surface water and bank environment of Hogan’s Creek and the decorative pond. As a secondary line of evidence, a temperature probe will be inserted into the sediments and the surface water to collect temperature data where potential upwelling is identified during the UAS IR survey of Hogan’s Creek and the decorative pond.

Assumptions for this subtask include:

- Preparation of the site reconnaissance will include procurement of equipment, supplies, and field forms;
- Site reconnaissance will be completed in five (5) 10-hour days utilizing two (2) Geosyntec field staff;
- Costs include rental of temperature probe, GPS, and small boat;
- The FLIR survey can be completed in one (1) day; and
- Access to the decorative pond and Hogan’s Creek will be provided by the City.

Subtask 4.2 – Passive Flux Meter Deployment and Retrieval

Sample locations for the mass flux assessment (both pilot and full scale) will be determined based upon the results of the site reconnaissance and groundwater discharge to surface water evaluation as described in Task 4.1. To evaluate the best method for deployment in Site-specific conditions, an initial deployment of one (1) SP³™ porewater sampler, (1) SP³™ surface water sampler, and three (3) sediment bed passive flux meters (SBPFM) probes will occur prior to a full-scale demonstration; this will also provide the opportunity to evaluate the best method for deployment
through the cedar planks potentially in place in the bottom of Hogan’s Creek and subsequent removal.

Following the pilot demonstration, a full-scale SP$^3$ sampler and SBPFM deployment will be conducted using deployment methods refined during the pilot demonstration. The probes will remain in place for a maximum of 4 weeks, and upon retrieval the SP$^3$ samplers will be sent to TestAmerica and the SBPFMs will be sent to the University of Florida Contaminant Hydrology Laboratory for analysis. After the recommended deployment period, the SP$^3$ samplers and SBPFMs will be removed from the ground. The SP$^3$ samplers will be shipped on ice to TestAmerica for extraction and analysis of PAHs via USEPA Method 8270-SIM and VOCs via USEPA Method 8260. In addition to the recovered passive samplers, three trip blank samplers will also be sent for analysis. SBPFMs will be placed in sealed shipping containers and transferred to the University of Florida Contaminant Hydrology Lab where they will be sampled and analyzed. Analysis of water volume flux based on tracer presence, and concentrations of benzene and naphthalene will be determined through solvent extraction followed by gas chromatography-flame ionization detector (GC FID) analysis or gas chromatography-mass spectrometer (GC Mass Spec).

Assumptions for this subtask include:

- Pilot demonstration will be completed in three (3) 10-hour day utilizing two Geosyntec field staff;
- Probes deployed during the pilot demonstration will remain in place for a maximum of four (4) weeks;
- Full-scale deployment will be completed in seven (7) 10-hour day utilizing three (3) Geosyntec field staff;
- Probes deployed during the full-scale demonstration will remain in place for a maximum of four (4) weeks;
- Full-scale retrieval will be completed in seven (7) 10-hour day utilizing three (3) Geosyntec field staff;
- A maximum of 33 SBPFMs and 47 SiREM SP$^3$ samplers will be installed in sediments within Hogan’s Creek and the decorative pond;
- SP$^3$ samplers will be sent to TestAmerica and the SBPFMs will be sent to the University of Florida Contaminant Hydrology Laboratory for analysis;
- Costs include procurement of sampling equipment, SBPFMs, and SiREM SP$^3$ samplers; and
- Access to the decorative pond and Hogan’s Creek will be provided by the City.
Subtask 4.3 – Mass Flux Analysis

Geosyntec will evaluate mass flux through sediments within Hogan’s Creek and the decorative pond by evaluating the data from the SBPFMs and SP³ samplers. The mass flux data collected will be used to refine the comprehensive CSM, construct and calibrate the groundwater flow model, further evaluate remedial strategies, and design remedial components, if warranted, specific to Hogan’s Creek and the decorative pond.

Subtask 4.4 – Technical Memorandum

After completion of the mass flux analysis, a Technical Memorandum will be prepared by Geosyntec that summarizes the results of sediment thickness and presence or absence of cedar planks within Hogan’s Creek, the zones of groundwater discharge, passive flux meter deployment and retrieval, and mass flux analysis. The final report will be signed/sealed by the professional geologist or engineer in responsible charge of the testing.

Task 5 – Groundwater Modeling

Modeling of the saturated zone will be performed with MODFLOW using a suitable pre- and post-processor. A steady-state groundwater flow model of current Site conditions will be prepared and calibrated with the synoptic water level data collected as specified in the APT Work Plan, prepared by Geosyntec, dated November 2018 that represents the highest degree of groundwater flux towards Hogan’s Creek. Calibration will be achieved by varying aquifer hydraulic properties and groundwater recharge until a reasonable match between modeled and observed groundwater elevations, flow direction, and gradient is achieved. Because the Site is in an urban area, potential anthropogenic sources and sinks of water, such as irrigation, may be included in the model domain if indicated by groundwater elevations and the groundwater flow field. After model calibration, predictive scenarios will be decided upon following execution of the APT Work Plan and the Mass Flux Work Plan, prepared by Geosyntec and dated November 2018. MODFLOW and MODPATH will be used to evaluate impacted groundwater flux to Hogan’s Creek and aid in remedial design.

The Groundwater Modeling subtasks are described below. Estimated costs and associated labor hours by labor category for Task 5 are provided on Table 1.

Subtask 5.1 – Data Evaluation/Compilation

Geosyntec is familiar with the Site data and will compile existing topographic, hydrologic, and hydrogeologic information and data collected as part of the November 2018 Mass Flux and APT Work Plans to be included in the groundwater flow model. Geosyntec will conduct a focused review of the existing data with attention paid to: 1) historical surface water and groundwater elevations, 2) lithologic logs from monitoring wells/borings, 3) topographic maps and surveys, 4)
historical permeability testing including aquifer performance tests, variable head permeability tests (slug tests), and permeameter tests, 5) groundwater chemistry data, 6) tidal data, 7) site civil survey, 8) sediment flux data, and 9) Site GIS data, etc. This data review will provide a starting point for the development of a CSM, cross sections, and a stratigraphy model. These will be used to construct the groundwater model as described in Subtask 5.2 below.

Subtask 5.2 – Flow Model Construction and Calibration

The information described in Subtask 5.1 will be used to construct the groundwater flow model. Geosyntec proposes using the USGS groundwater flow modeling code MODFLOW-2005 (Harbaugh et al., 2005), MODFLOW-NWT, or MODFLOW USG (hereafter collectively referred to as MODFLOW) to evaluate groundwater flow and potential remedial options at the site. By using MODFLOW, Geosyntec will be able to produce a 3-dimensional numerical steady state groundwater model that can be calibrated to the site conditions. This includes establishing: (1) boundary conditions (e.g. specified head, specified flux, value dependent flux, etc.); (2) boundary location and orientation; (3) boundary type variation; (4) boundary and system stresses; (5) water table boundary; (6) system recharge and withdrawal stresses; (7) grid design; (8) grid resolution and geometry to include node spacing, selection of system layering, minimization of numerical error, and grid sizing; (9) initial conditions; and (10) aquifer material properties and assignment of those properties to the grid.

Following construction of the groundwater flow model, it will be calibrated to a set of groundwater/surface water elevations that represent conditions with the greatest amount of groundwater flux to Hogan’s Creek by adjusting appropriate boundary conditions. A flow model is considered to have been calibrated when it can reproduce, to an acceptable degree, the hydraulic heads and/or groundwater fluxes of the natural system being modeled. The degree of reasonableness to which the groundwater flow model is calibrated will be based upon an evaluation of the simulated and observed water elevation measurements at monitoring locations across the site. In addition, the groundwater model calibration will be gauged by reasonably matching the observed and simulated groundwater gradient and flow direction.

Subtask 5.3 – Predictive Modeling

Following completion of Subtask 5.2, Geosyntec will conduct up to five predictive modeling scenarios. It is anticipated that predictive scenarios may include the following:

- Permutations of impermeable lining of segments of Hogan’s Creek to assess flux reductions and changes in groundwater flow;
- Changes in the decorative pond depth, lining, and outfall pipe elevation and associated effect on groundwater flow;
Mr. Jeffrey Foster, P.E., P.G.
11 March 2019
Page 14

- Changes in groundwater flow and flux to Hogan’s Creek and to/from the decorative pond based upon active remediation via in-situ solidification (ISS) of a portion of the model grid area;
- Changes in groundwater flow and flux to Hogan’s Creek and to/from the decorative pond based upon short term limited groundwater extraction; and,
- Changes in groundwater flow and flux to Hogan’s Creek and to/from the decorative pond based upon combinations of technologies (i.e. lining a portion of the creek, limited area of ISS, and passive groundwater uptake via engineered phytoremediation).

For the purposes of this cost proposal it is assumed that one permutation of any of the above listed possible scenarios will be considered as one scenario.

Depending on the overall project needs, a determination will be made whether the addition of a groundwater contaminant transport software package is warranted to further assess, refine, and evaluate potential remedial scenarios. Costs for contaminant modeling and/or additional modeled permutation have not been included in this proposal.

**Subtask 5.4 – Sensitivity Analysis**

A sensitivity analysis is a quantitative evaluation of the influence on model outputs from variation of model inputs. Therefore, a sensitivity analysis will identify those model parameters that are most influential in determining changes in the flux of water to Hogan’s Creek as influenced by the selected remedial design. The sensitivity analysis will consist of varying soil hydraulic conductivity to evaluate changes in reduction in flux of the selected remedial system.

**Subtask 5.5 – Model Documentation**

Geosyntec will describe the model construction, calibration, and results in a groundwater flow modeling report. This report will document the model and allow for its review and evaluation. We have assumed that we will address one round of comments from the City of Jacksonville and one round of comments from the FDEP.

**Task 6 – Site Civil Survey**

Task 6 includes the costs for a professional licensed surveyor to conduct a special use survey of the project area. In addition to the surveyor time, labor hours are included for Geosyntec personnel to walk the Site with the surveyor to confirm features/level of detail. The survey will be used to form the basis for prepared Figures and future remedial design drawings. The survey will be provided as a signed/sealed hard copy in addition to electronic CAD files. Estimated costs and associated labor hours by labor category for Task 6 are provided on Table 1.
TASK 1 THROUGH TASK 6 ESTIMATED COSTS

Estimated costs and associated labor hours by labor category for Task 1 through 6 are provided on Table 1. Geosyntec estimates that the work described above can be completed for $491,829.

All work proposed herein will be performed under the terms and conditions of the existing Master Services Agreement (MSA) for Professional Services between the City of Jacksonville and Geosyntec dated 8 February 2013. Services will be billed on a time and materials rate basis according to the existing terms of the MSA. We have attached our current rate schedule (Attachment A). Geosyntec will not perform any work not specifically referenced in this proposal without prior approval from the City.

SCHEDULE

Geosyntec can proceed with the preparation of Tasks 1 through 6 described above immediately upon receipt of notice to proceed from the City. Geosyntec will provide monthly updates to the City as it pertains to the implementation of the various Work Plan tasks. It is estimated that the field work activities will be completed within 3 to 4 months of receipt of notice to proceed and that the groundwater modeling will be completed within 6 months of notice to proceed.
Mr. Jeffrey Foster, P.E., P.G.
11 March 2019
Page 16

CLOSING

Geosyntec appreciates the opportunity to provide the services described herein. If you need clarification or have questions regarding this scope of work or cost estimate, please do not hesitate to call Jim Langenbach at (321) 269-5880.

Sincerely,

[Signature]

Andrew P. Brey, P.G.
Senior Geologist

[Signature]

Jim Langenbach, P.E., BCEE
Senior Principal

Enclosure: Table 1 – Work Plan Implementation Cost Summary
Attachment A: Rate Schedule

cc: Mr. William L. Pence, Esq. – Baker Hostetler
Ms. Rachel A. Klinger – Geosyntec
TABLE
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*Table 1: Project Management Details*
ATTACHMENT A
GEOSYNTEC CONSULTANTS
2019 RATE SCHEDULE FOR CITY OF JACKSONVILLE

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Rates are provided on a confidential basis and are client and project specific. Unless otherwise agreed, rates will be adjusted annually based on the US Bureau of Labor Statistics Consumer Price Index. Rates for field equipment, health and safety equipment, and graphical supplies presented upon request.
April 29, 2019

Alex Baker
Professional Services Specialist
Finance and Administration Department, Procurement Division
214 N. Hogan Street, Suite 800
Jacksonville, FL 32202

RE: Patrick R. Phipps, MAI
Colliers International

Dear Ms. Baker:

I have completed my review of the information provided by Patrick R. Phipps, on behalf of Colliers International, and concluded that Colliers Valuation & Advisory Services, LLC, is a qualified, interested, and available source for appraisal and evaluation services for real estate. Accordingly, I recommend that Colliers Valuation & Advisory Services, LLC, be added to the list maintained pursuant to Section 126.308(b), Ord. Code.

Please contact me with any questions.

Sincerely,

Jeff Close
Assistant General Counsel
April 29, 2019

Alex Baker
Professional Services Specialist
Finance and Administration Department, Procurement Division
214 N. Hogan Street, Suite 800
Jacksonville, FL 32202

RE: J. Mark Williams, MAI
Moody Appraisal Group

Dear Ms. Baker:

I have completed my review of the information provided by J. Mark Williams, on behalf of Moody Appraisal Group, and concluded that Moody Appraisal Group is a qualified, interested, and available source for appraisal and evaluation services for real estate. Accordingly, I recommend that Moody Appraisal Group be added to the list maintained pursuant to Section 126.308(b), Ord. Code.

Please contact me with any questions.

Sincerely,

Jeff Close
Assistant General Counsel

GC-#1269391-v1-Fusral._-Legal_Related_Services_List._-confirmation_ltr
April 29, 2019

Alex Baker
Professional Services Specialist
Finance and Administration Department, Procurement Division
214 N. Hogan Street, Suite 800
Jacksonville, FL 32202

RE: Michelle Baden
U.S. Legal Support

Dear Ms. Baker:

I have completed my review of the information provided by Michelle Baden, on behalf of U.S. Legal Support, and concluded that U.S. Legal Support is a qualified, interested, and available source for court reporting. Accordingly, I recommend that U.S. Legal Support be added to the list maintained pursuant to Section 126.308(b), Ord. Code.

Please contact me with any questions.

Sincerely,

Jeff Close
Assistant General Counsel

GC-#1279344-v1-U.S._LEGAL_SUPPORT_INC._Court_Reporter._legal_services_list