

**TASK WORK ORDER NO. 2**

REQUESTED BY: George Fidler

DATE: \_\_\_\_\_

CLIENT: Savannah Airport Commission  
Savannah / Hilton Head International Airport

REFERENCE AECOM JOB NO.: \_\_\_\_\_

ADDRESS: 400 Airways Avenue, Savannah GA 31408

CLIENT P.O. NO.: \_\_\_\_\_

To confirm your authorization for services as they relate to our existing Agreement dated **May 1, 2019**, AECOM will furnish the following: **"Southeast Quadrant Storm Drainage Improvements"**.

Client agrees to pay AECOM as compensation for its services on a monthly basis as invoices are submitted. The following methods of payments will be used:

- 1-( ) Employee actual hourly rate times 2.80 plus expenses at cost \_\_\_\_\_.
- 2-( ) According to the provisions set forth for additional services in the original Agreement.
- 3-(X) A not-to-exceed fee of **\$ 459,255.00**.
- 4-( ) Other method as described in Attachment \_\_\_\_\_.

The above services are anticipated to be completed in **18 months** after receipt of this signed Authorization. All other provisions of our original Agreement dated **May 1, 2019** remain in effect.

If the above meets with your approval, please sign in the appropriate space on both copies of this Authorization, retain one copy for your files, and return one copy to URS.

Agreed to:

Agreed to:

SAVANNAH AIRPORT COMMISSION  
(CLIENT'S NAME)

AECOM

BY: \_\_\_\_\_  
Chairman

BY:   
Vice President

Date: \_\_\_\_\_

Date: 5/17/19

ATTEST: \_\_\_\_\_  
Executive Director

ATTEST: 

Date: \_\_\_\_\_

Date: 5-17-19

# **Savannah Hilton Head International Airport**

## **Southeast Quadrant Storm Drainage Improvements**

### **Attachment A Scope of Services for Design, Permitting and Preparation of Bid Documents**

#### **1. Project Description**

The Savannah Hilton Head International Airport (SAV) requests that AECOM Inc. prepare construction documents and submit permit applications for the proposed drainage improvements identified as Alternative 5 in the Southeast Quadrant Drainage Area Stormwater Master Plan (SE SWMP) prepared by AECOM and submitted to the SAV in April 2019. The purpose of the proposed drainage improvements is to provide a regional stormwater management system to re-route and convey stormwater runoff to two interconnected regional ponds to treat and attenuate stormwater runoff from areas where future development is proposed. The proposed drainage system also alleviates flooding at the driveway entrance to the Georgia Air National Guard (GANG) off Robert Miller Drive.

The proposed improvements include a new underground closed storm sewer system that routes stormwater runoff from the areas planned for development to the existing wet detention pond located within the GANG facility. The existing wet detention pond does not have the capacity to treat and attenuate stormwater runoff from the additional drainage area being re-routed to the pond from the Airport property. Therefore, the berm elevation of the existing pond will be raised approximately 1-foot and a new wet detention pond located in the forested wetland to the north will be constructed to add more storage volume. The existing running and walking track adjacent to the pond will not be disturbed to raise the berm elevation on the east side of the existing pond.

The proposed storm sewer system is comprised of underground pipes with ditch bottom inlets placed in swales to collect the stormwater runoff. One of the storm sewer systems extends approximately 2,700-feet starting from the intersection of Bob Harmon Road and Corporate Road, runs along the north side of Corporate Road and Armstead Avenue up to Billy B. Hair Drive where it turns eastward and runs along the north side of Billy B. Hair Drive up to Dean Forest Road where it turns northward adjacent an existing utility easement up to the existing wet detention pond at the GANG facility. A second storm sewer system routes stormwater runoff for approximately 1,200-feet from an existing ditch on the west side of Robert B. Miller Drive to the proposed wet detention pond located in the forested area in the GANG facility.

This scope of services includes the preparation of construction plans, specifications and permit applications. The plans will include new underground piped storm sewer systems, modifications to an existing wet detention pond, a new wet detention pond, erosion and sediment control and utility relocations to accommodate the construction of the new storm sewer pipe. Tentative storm sewer pipe sizes range from 48" RCP to 60" RCP. The project also includes removing the existing control structure in the existing wet detention pond and replacing it with new cast in place reinforced concrete structures located in both wet detention ponds. The following two permit applications will be prepared and submitted to the relevant governmental agencies:

- Land Disturbance Activity (LDA) Permit submitted to the City of Savannah Development Services
- Individual Permit submitted to the United States Army Corps of Engineers (USACOE)

## **2. SCOPE OF WORK**

The Scope of work by AECOM staff is comprised of fourteen tasks described herein in Attachment A. The scope of services for survey, subsurface utility engineering (SUE) and the design of offsets and relocations for existing sanitary and water utilities where conflicts occur are performed by our sub-consultant the Coleman Company and are described in Attachment C. The scope of services for the environmental services associated with evaluating the forested wetland impacted by this project and the preparation of the permit application to the USACOE are performed by our sub-consultant Environmental Services, Inc. are described in Attachment D. The scope of services for the geotechnical exploration and laboratory services are performed by our sub-consultant Cal-Tech Testing, Inc. and are described in Attachment D.

### **Task 1: Project Setup and Management**

Upon receipt of a Notice-to Proceed from the SAV, the ENGINEER will prepare a work plan for internal use in managing the project and communicating the work to be done with AECOM staff members and subcontractors performing the survey tasks, geotechnical tasks, environmental permitting tasks and utility relocation tasks. This work plan will include initiating the contract with the SAV, and inputting staffing assignments, definition of work tasks, anticipated deliverables, task and sub-task budgets, and schedules into the AECOM internal project management system. The ENGINEER will develop a project schedule identifying all project tasks and the time required to complete all tasks. The ENGINEER will develop a Health and Safety Plan (HASP) in order to guide AECOM staff and their sub-contractors in following the safety protocols required by AECOM policies and procedures. This task also includes general project management duties such as monitoring the project schedule, project budget and issuing invoices.

### **Task 2: Coordination Meetings**

The following meetings will be scheduled during specific milestones to provide a formal forum for all key project team members with the AECOM, Sub-Contractors, SAV and the

City Savannah Stormwater Department to discuss relevant topics associated with the project:

**2(a) Project Kick-off Meeting** – Upon receipt of the Notice to Proceed (NTP) from the SAV, AECOM will schedule a project kick-off meeting. The kick-off meeting will be conducted by teleconference. The purpose of the project kick-off meeting is as follows:

- Introduce key staff members,
- Review the overall and specific project objectives,
- Review the project schedule and budget,
- AECOM staff responsibilities,
- Responsibilities for each Sub-contractor,
- Identify data and information the SAV can furnish AECOM of which the ENGINEER may use and rely upon in performing services under this scope, and
- Determine project management protocols such as billing procedures, correspondence and communication procedures, access to the project site, QA/QC documentation and deliverables.

The following seven project staff members representing AECOM will attend the project kick-off meeting; the Principal Engineer, QA/AC Engineer, Senior Drainage Engineer, Senior Civil Engineer, Structural Engineer, Junior Civil Engineer and AutoCAD Designer. AECOM will prepare a written meeting agenda, graphics and other information needed to communicate the project. AECOM will prepare meeting minutes and distribute copies to all relevant parties within one week after the meeting.

**2(b) Progress Meetings** - Three progress meetings will be scheduled at least two weeks prior to submitting a milestone deliverable. The first, second and third progress meetings will be scheduled prior to the 30% design phase, 60% design phase and final design phase deliverables. The first two progress meetings will be conducted by teleconference and will be attended by the following six AECOM project staff members; the Principal Engineer, Senior Drainage Engineer, Senior Civil Engineer, Structural Engineer, Junior Civil Engineer and AutoCAD Designer. The last progress meeting will be conducted at the Savannah Airport and will be attended by the following three AECOM project staff members: the Principal Engineer, Senior Drainage Engineer and Senior Civil Engineer. Project team members from the sub-contractors performing survey, geotechnical, environmental and utility design services will attend the progress meetings.

The purpose of the progress meetings is to inform the SAV on what will be included with the forthcoming deliverable, the general progress of the project and all topics that need discussion to ensure the design is achieving all goals required by the SAV and to keep the project on schedule.

### **2(c) Pre-Application Meeting with the City of Savannah**

A Pre-application meeting with representatives from the City of Savannah Stormwater Department of will be conducted at the SAV offices, to coordinate final design criteria, permit requirements, and permit fees for the proposed project. The pre-application meeting will be scheduled after the 30% design phase has been reviewed and approved by the SAV. Two project staff members representing the AECOM will attend the pre-application meeting, the Senior Drainage Engineer and a Senior Civil Engineer. AECOM will prepare a written meeting agenda and bring aerials, the 30% design plans and other information needed to communicate the project to the meeting. AECOM will prepare meeting minutes and distribute copies to all relevant parties within one week after the meeting.

### **Task 3: Data Collection and Review**

Existing plans, aerials, reports, survey, as-built drawings and other information specific to the project site will be collected and reviewed. AECOM will collect and review the design and permitting requirements mandated by the Georgia and Soil and Water Conservation Commission (GSWCC) to prepare the erosion and sediment control plan and collect and review the latest design and permitting requirements mandated by the City of Savannah to prepare the design in accordance with LDA permit requirements.

### **Task 4: Field Review**

Key team members with AECOM will perform a detailed site reconnaissance to confirm existing site conditions, determine and evaluate design constraints, locate above ground utilities, and determine survey requirements needed for the design.

Professional engineers involved in the design assessment will inspect the project area, areas adjacent to the project area and the offsite area within the wetland on the east side of Dean Forest Road to accomplish the following activities:

- Field verify drainage basins,
- Evaluate the runoff potential of existing land uses in the contributing drainage basin,
- Inspect pipes, ditches and open channels to determine flow patterns, erosion issues and potential improvements,
- Locate where potential utility conflicts could occur,
- Locate and stake areas to be surveyed such as pipes and ditch cross-sections,
- Evaluate areas outside of and adjacent to the project area that could be impacted by the proposed restoration activities,
- Locate design constraints such as existing fencing and other land uses that can inhibit the design,
- Collect and Compile Photographs and,
- Document the field reconnaissance in a memorandum.



One site trip with the following three AECOM staff members: Senior Drainage Engineer, Senior Civil Engineer and Junior Civil Engineer are expected to accomplish the site reconnaissance activities listed above.

**Task 5: Survey and Subsurface Utility Engineering (SUE)**

The field survey and SUE services are provided by our sub-consultant the Coleman Company. The detailed survey and SUE scope provided by the Coleman Company is provided in Attachment B.

This task describes the services provided by AECOM with regard to the survey and SUE for this project. AECOM will coordinate with the survey sub-consultant on the proposed survey locations and scope and review the submitted survey and SUE documents prior to incorporation into AutoCAD design files for the construction plan set. AECOM will review the survey and SUE to determine its accuracy with regards to the existing conditions determined from the field review in Task 4, request additional survey and SUE information be provided if required based on the review, create a base map in AutoCAD format from the survey and SUE to be incorporated into the construction plans and prepare the Digital Terrain Model (DTM) utilizing the tools in AutoCAD Civil 3D to create an existing surface of the project area. The existing surface will be depicted in AutoCAD format as contours lines in half foot increments and be included in the construction plans.

**Task 6: Hydrologic/Hydraulic Model Update**

AECOM will update the existing condition model and the proposed condition model that included the selected Alternative 5 created for the Southeast Quadrant Drainage Area Stormwater Master Plan project. The models were created in ICPR Version 3.02 and will be upgraded to the latest version of ICPR, Version 4.03.02.

The drainage features such as pipe sizes, pipe inverts, channel cross sections, grate elevations etc. from the survey data provided by the sub-consultant will be incorporated into the models. Sub-basin boundaries, and storage volumes at drainage nodes will also be modified from information provided in the survey data.

The models created for the Southeast Quadrant Drainage Area Stormwater Master did not include the large wetland area on the east side of Dean Forest Road. This large wetland contains a drainage ditch that receives stormwater discharge form the portion of the Savannah Airport that includes the project area. This ditch extends approximately 3,000-feet from the downstream end of the 30-inch outfall pipe from the Savannah Airport at the intersection of Davidson Road and Dean Forest Road to the Pipe Makers Canal. The City of Savannah Stormwater Department Water Department indicated during a meeting held on April 2, 2019 that they want this ditch evaluated in the model to ensure adverse impacts to this channel do not occur.

The models will be utilized to design and evaluate the components of the proposed stormwater management systems, such as pipe sizes, pipe slopes, drainage structures, pond volumes for the two proposed wet detention ponds and weirs for the proposed outfall

structure(s) for the two proposed wet detention ponds. The project design and model will be evaluated through several iterations and refined to ensure the permitting stormwater runoff reduction criteria, stormwater quality protection, aquatic resource protection, overbank flood protection and extreme flood protection criteria mandated by the City of Savannah Stormwater Department are satisfied.

#### **Task 7: Environmental Evaluation**

The environmental services are provided by our sub-consultant Environmental Services, Inc. The detailed scope for environmental services provided by Environmental Services, Inc. is provided in Attachment C.

This task describes the services provided by AECOM with regard to assisting the sub-consultant with the environmental services and preparing the permit application to be submitted to the Savannah District of the United States Army Corps of Engineers (USACOE). A permit from the USACOE is required because an existing forested wetland will be impacted to accommodate the construction of the new wet detention pond.

AECOM will coordinate with the environmental sub-consultant and review and comment on any deliverables prepared by the environmental sub-consultant prior to submission to the SAV. A senior drainage engineer with AECOM will prepare for and attend the pre-application meeting at the offices of the USACOE Savannah District located in Savannah, Georgia. AECOM will assist the environmental consultant in preparing the permit application to the USACOE which includes adding notes and details in the construction plans pertinent to defining the wetland impacts, assist in writing a purpose and need for the proposed project and summarizing the alternative analysis from the Southeast Quadrant Stormwater Master Plan to support the justification for the selected alternative. AECOM will review the completed permit application prior to submission to the USAOCE.

AECOM will the revise the plans up to two times in response in response to comments provided by the USACOE.

#### **Task 8: Utility Evaluation**

The design to offset and relocate existing water and sanitary utilities is provided by our sub-consultant the Coleman Company. The detailed scope for the design to offset and relocate existing water and sanitary utilities provided by the Coleman Company is provided in Attachment B.

This task describes the services provided by AECOM with regard to assisting the sub-consultant in the utility design. AECOM will coordinate with the sub-consultant and review the utility design prior to incorporation into AutoCAD design files for the construction plan set. AECOM will review the utility design to determine if all conflicts are addressed and if the design conforms to current engineering standards. AECOM will incorporate the AutoCAD design files prepared by the sub-consultant into the AutoCAD sheet set for the construction plans.

### **Task 9: Geotechnical Evaluation**

The geotechnical exploration and laboratory testing services are provided by our sub-consultant Cal-Tech Testing, Inc. The detailed scope for geotechnical exploration and laboratory testing services provided by Cal-Tech Testing, Inc. is provided in Attachment D.

This task describes the services provided by AECOM with regard to assisting the sub-consultant with the geotechnical exploration and laboratory testing services. AECOM will prepare and exhibit showing the location of borings at the pond sites and along the route for the proposed storm sewer system. AECOM will coordinate with the geotechnical sub-consultant and review and comment on any deliverables prepared by geotechnical sub-consultant prior to submission to the SAV.

### **Task 10: Design Plans**

AECOM will prepare construction plans (in AutoCAD) for the project area in non-SI (English) units that will be submitted to SAV for review at the 30%, 60%, and final project completion stages. The 30% plans will include the design survey and layout of the proposed storm sewer system, a plan view grading plan of the two wet detention plans and reflect the results of utility check coordination. The construction plans will be submitted to the applicable private utilities for review and markup at the 30% completion stage. The 60% design plans will include refinement of the project design plans and inclusion of SAV comments on the 30% plans. The 60% design plans will include detailed cross sections through the two proposed wet detention ponds, details of the proposed control structures for the wet detention ponds and the initial, interim and final stabilization phases of the erosion and sediment control plan. The final design plans will include refinement of the project design plans and inclusion of SAV comments on the 60% plans and depiction of proposed private utility relocations and sanitary and water utilities offsets and relocations. The final construction plans will be used for submittal to City of Savannah with the LDA permit application and the USACOE for the individual permit application for the dredge and fill in the wetland.

Landscaping and irrigation plans, dewatering plans, staging and stockpile area plans are not included in this scope and would be considered additional services.

**Plans Contents:** It is anticipated that approximately 150 plan sheets (22"x 34"size) of construction plans will be prepared and will include:

- Cover Sheet (1 Sheet)
- Key Map ( 1 Sheet)
- Drainage Map ( 2 Sheets)
- Legend and Abbreviations and General Notes (1 Sheet)
- Typical Sections ( 1 Sheet) (including street restoration)
- Construction Phasing (2 Sheets)
- Maintenance of Traffic (2 Sheets)
- Demolition Sheets for Wet Detention Ponds and Storm Sewer (22 Sheets)
- Grading Plan Wet Detention Ponds (6 Sheets)



- Geometric Control for Wet Detention Ponds (2 sheets)
- Plan Sheets for Storm Sewer from Bob Harmon Rd. to Existing Wet Detention Pond at GANG facility (20' scale) (11 sheets)
- Profile Sheets for Storm Sewer from Bob Harmon Rd. to Existing Wet Detention Pond at GANG facility (20' scale) (11 Sheets)
- Plan Sheets for Storm Sewer from GANG facility to the Proposed Wet Detention Pond in Wetland (20' scale) (6 Sheets)
- Profile Sheets for Storm Sewer from GANG facility to the Proposed Wet Detention Pond in Wetland ) (20' scale) (6 Sheets)
- Cross Sections for Wet Detention Ponds (6 sheets)
- Cross Sections for Storm Sewer at 25' intervals and specific points of interest) (12 sheets)
- Sanitary Sewer and Water Utilities Offsets and Relocations (20' scale) (20 sheets)
- Plan View for Fence Layout around Proposed Wet Detention Pond (2 sheets)
- Structural Detail Sheets for Outfall Structures (1 sheet)
- Storm drainage details (2 sheets)
- Miscellaneous Details Sheets (2 sheets)
- Utility Relocation Details (2 sheets)
- Fence Details (1 sheet)
- Erosion and Sediment Control Plan View, for Initial, Interim and Final Stabilization phases (40' scale) (30 sheets)
- Drainage Maps, Soil Maps, General Notes, LDA Permit Check List, NPDES Monitoring Plan (8 Sheets)
- Erosion and Sediment Control Details (10 sheets)

**Total Estimated Sheets = 170 sheets**

#### **Task 11: Specifications**

Construction specifications (documents) will be submitted to the SAV at the final project stage. The construction specifications will use the standard format utilized by the SAV to include the front end section, general provisions, supplementary provisions, applicable technical specifications and bid tabulation sheet.

#### **Task 12: Cost Estimates**

AECOM will prepare probable construction cost estimates for the proposed storm sewer improvements at the 30%, 60% and final design phases. The cost estimates will be based on the best available information for item unit costs.

#### **Task 13: LDA Permit Application**

AECOM will prepare one permit application and associated attachments for submittal to the City of Savannah Stormwater Department for a Land Disturbance Activity (LDA) permit.

AECOM will prepare a detailed design of temporary and permanent erosion and sediment control best management practices (BMPs) at the initial phase, interim construction phase and final stabilization phase in plan views to be included in the construction plans. The erosion and sediment control plans will also include, drainage maps, soil maps, general notes, an NDPEs monitoring plan and the check list associated with all required items associated with the LDA permit application.

A detailed drainage report will be prepared describing the existing condition and proposed condition hydrologic/hydraulic model analysis, water quality treatment analysis, proposed stormwater management system and a summary of the results from the model and water quality analysis demonstrating the proposed design satisfies criteria mandated by the City of Savannah.

AECOM will prepared all permit applications and submit the permit application to the City of Savannah. AECOM will respond up to two responses for additional information from the City of Savannah Stormwater Department. The SAV will be responsible for all permit fees.

#### **Task 14: Special Access Permit Application to Georgia Department of Transportation**

The project involves accessing the right-of-way of State Road 307 (Dean Forest Road) to construct the downstream ends the pipes discharging water from the two wet detention ponds. Therefore, a Special Access Permit from the Georgia Department of Transportation (GDOT) will be required. The permit application will follow the procedures outlined in the "Regulations for Driveway and Encroachment Control published by the (GDOT)"

AECOM will prepare one permit application and associated attachments including the drainage report prepared under Task 13 for submittal to the GDOT for a Special access permit.

AECOM will prepared all permit applications and submit the permit application to the GDOT. AECOM will respond up to two responses for additional information from the GDOT. The SAV will be responsible for all permit fees.

#### **Task 15: Quality Assurance and Quality Control**

AECOM will conduct a detailed review of all deliverables at the 30%, 60% and final stages prior to submittal to the SAV. The review will be conducted by qualified AECOM staff members who have not worked on the project to ensure an unbiased and independent review is performed. The review includes written comments with responses for each.

#### **Project Deliverables to be provided to the City by AECOM**

The following items will be provided by AECOM to SAV as part of this project.

- Topographic survey of the sites (electronic format) (plus certified on paper)
- Geotechnical report for the site (3 copies) (certified)
- SUE report for the site (3 copies) (certified)
- Drainage Report and calculations (3 copies) (certified)
- Environmental Report (3 copies)
- Construction Plans
  - 30% plans (3 copies)
  - 60% plans (3 copies)
  - Final Plans (3 copies, one signed and sealed set, plus flash drive of AutoCAD files including all needed external references)
- Cost Estimates
  - 30%, 60%, and final cost estimates with quantity take-off - (3 copies)
- Specification Booklet (3 copies, one signed and sealed)
- LDA Permit Package- (3 copies)
- Individual Dredge and Fill Permit Package- (3 copies)

### **Exclusions**

The following tasks are not included in this Scope of Services and will require additional services.

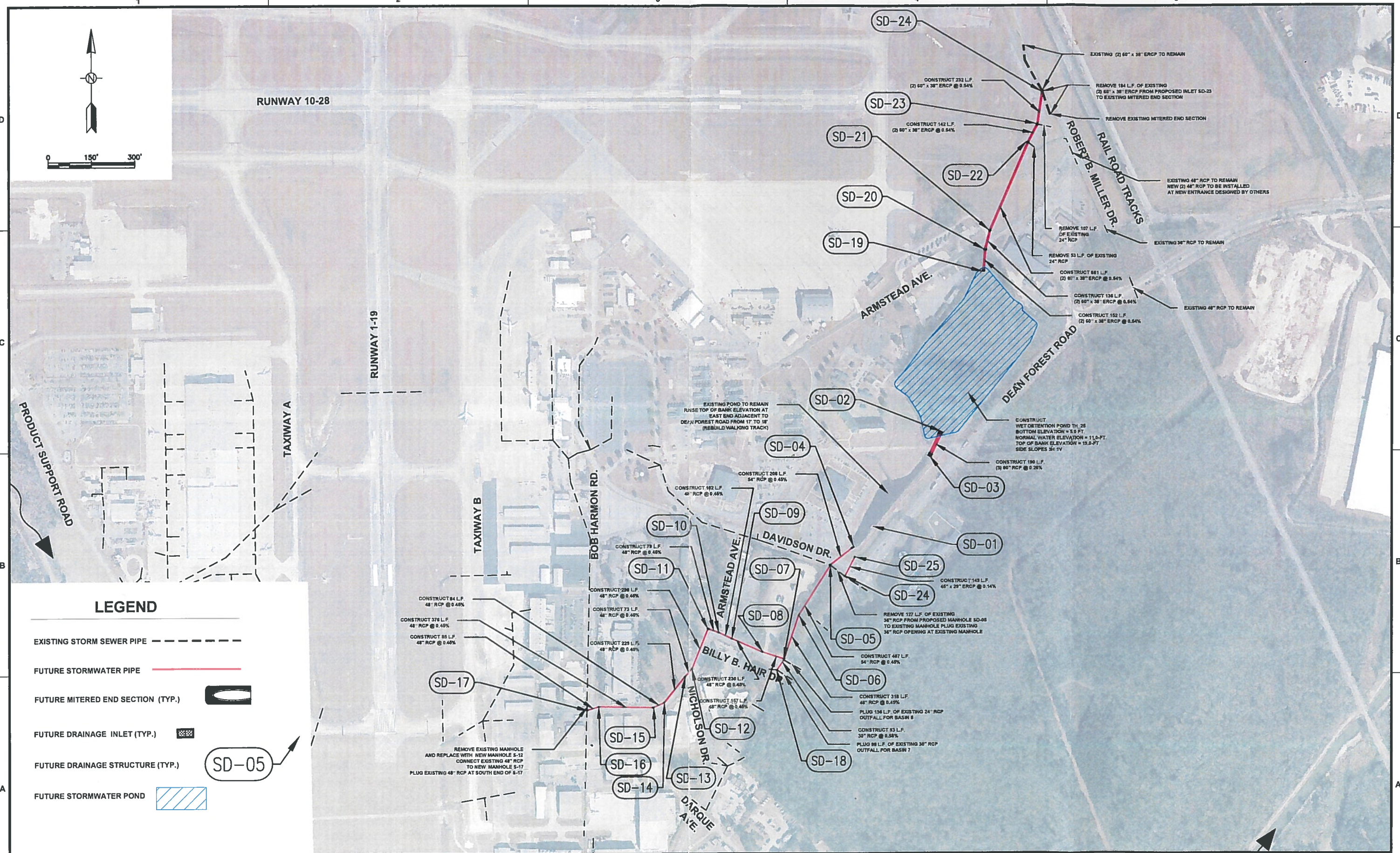
- FEMA Flood Insurance Rate Map (FIRM) revisions
- Title Search, Right-of Way and Land Acquisition Services
- Hazardous Material survey or remediation
- Excavated material stockpile location design and permitting
- NDPES NOI Permitting for Construction Activities (to be completed by contractor)
- Excavating and surveying elevations of buried utilities beyond those to be performed under Task 5.
- Hazardous Material survey or remediation
- Public Meetings
- Pre-Bid Conference
- Addenda Preparation
- Bid Evaluation
- Construction Phase Services

### **3. COMPENSATION**

The SAV will compensate AECOM on a lump sum basis for labor and expenses associated with all tasks described in this scope of services. The lump sum Fee Estimate is detailed in Attachment E.



FILE NAME: D:\Sera A and O\Seamless\Figures\Fig\_18a\_18b\_18c\_18d\_18e\_18f\_18g\_18h\_18i\_18j\_18k\_18l\_18m\_18n\_18o\_18p\_18q\_18r\_18s\_18t\_18u\_18v\_18w\_18x\_18y\_18z\_18aa\_18ab\_18ac\_18ad\_18ae\_18af\_18ag\_18ah\_18ai\_18aj\_18ak\_18al\_18am\_18an\_18ao\_18ap\_18aq\_18ar\_18as\_18at\_18au\_18av\_18aw\_18ax\_18ay\_18az\_18ba\_18bb\_18bc\_18bd\_18be\_18bf\_18bg\_18bh\_18bi\_18bj\_18bk\_18bl\_18bm\_18bn\_18bo\_18bp\_18bq\_18br\_18bs\_18bt\_18bu\_18bv\_18bw\_18bx\_18by\_18bz\_18ca\_18cb\_18cc\_18cd\_18ce\_18cf\_18cg\_18ch\_18ci\_18cj\_18ck\_18cl\_18cm\_18cn\_18co\_18cp\_18cq\_18cr\_18cs\_18ct\_18cu\_18cv\_18cw\_18cx\_18cy\_18cz\_18da\_18db\_18dc\_18dd\_18de\_18df\_18dg\_18dh\_18di\_18dj\_18dk\_18dl\_18dm\_18dn\_18do\_18dp\_18dq\_18dr\_18ds\_18dt\_18du\_18dv\_18dw\_18dx\_18dy\_18dz\_18ea\_18eb\_18ec\_18ed\_18ee\_18ef\_18eg\_18eh\_18ei\_18ej\_18ek\_18el\_18em\_18en\_18eo\_18ep\_18eq\_18er\_18es\_18et\_18eu\_18ev\_18ew\_18ex\_18ey\_18ez\_18fa\_18fb\_18fc\_18fd\_18fe\_18ff\_18fg\_18fh\_18fi\_18fj\_18fk\_18fl\_18fm\_18fn\_18fo\_18fp\_18fq\_18fr\_18fs\_18ft\_18fu\_18fv\_18fw\_18fx\_18fy\_18fz\_18ga\_18gb\_18gc\_18gd\_18ge\_18gf\_18gg\_18gh\_18gi\_18gj\_18gk\_18gl\_18gm\_18gn\_18go\_18gp\_18gq\_18gr\_18gs\_18gt\_18gu\_18gv\_18gw\_18gx\_18gy\_18gz\_18ha\_18hb\_18hc\_18hd\_18he\_18hf\_18hg\_18hh\_18hi\_18hj\_18hk\_18hl\_18hm\_18hn\_18ho\_18hp\_18hq\_18hr\_18hs\_18ht\_18hu\_18hv\_18hw\_18hx\_18hy\_18hz\_18ia\_18ib\_18ic\_18id\_18ie\_18if\_18ig\_18ih\_18ii\_18ij\_18ik\_18il\_18im\_18in\_18io\_18ip\_18iq\_18ir\_18is\_18it\_18iu\_18iv\_18iw\_18ix\_18iy\_18iz\_18ja\_18jb\_18jc\_18jd\_18je\_18jf\_18jg\_18jh\_18ji\_18jj\_18jk\_18jl\_18jm\_18jn\_18jo\_18jp\_18jq\_18jr\_18js\_18jt\_18ju\_18jv\_18jw\_18jx\_18jy\_18jz\_18ka\_18kb\_18kc\_18kd\_18ke\_18kf\_18kg\_18kh\_18ki\_18kj\_18kk\_18kl\_18km\_18kn\_18ko\_18kp\_18kq\_18kr\_18ks\_18kt\_18ku\_18kv\_18kw\_18kx\_18ky\_18kz\_18la\_18lb\_18lc\_18ld\_18le\_18lf\_18lg\_18lh\_18li\_18lj\_18lk\_18ll\_18lm\_18ln\_18lo\_18lp\_18lq\_18lr\_18ls\_18lt\_18lu\_18lv\_18lw\_18lx\_18ly\_18lz\_18ma\_18mb\_18mc\_18md\_18me\_18mf\_18mg\_18mh\_18mi\_18mj\_18mk\_18ml\_18mm\_18mn\_18mo\_18mp\_18mq\_18mr\_18ms\_18mt\_18mu\_18mv\_18mw\_18mx\_18my\_18mz\_18na\_18nb\_18nc\_18nd\_18ne\_18nf\_18ng\_18nh\_18ni\_18nj\_18nk\_18nl\_18nm\_18nn\_18no\_18np\_18nq\_18nr\_18ns\_18nt\_18nu\_18nv\_18nw\_18nx\_18ny\_18nz\_18oa\_18ob\_18oc\_18od\_18oe\_18of\_18og\_18oh\_18oi\_18oj\_18ok\_18ol\_18om\_18on\_18oo\_18op\_18oq\_18or\_18os\_18ot\_18ou\_18ov\_18ow\_18ox\_18oy\_18oz\_18pa\_18pb\_18pc\_18pd\_18pe\_18pf\_18pg\_18ph\_18pi\_18pj\_18pk\_18pl\_18pm\_18pn\_18po\_18pp\_18pq\_18pr\_18ps\_18pt\_18pu\_18pv\_18pw\_18px\_18py\_18pz\_18qa\_18qb\_18qc\_18qd\_18qe\_18qf\_18qg\_18qh\_18qi\_18qj\_18qk\_18ql\_18qm\_18qn\_18qo\_18qp\_18qq\_18qr\_18qs\_18qt\_18qu\_18qv\_18qw\_18qx\_18qy\_18qz\_18ra\_18rb\_18rc\_18rd\_18re\_18rf\_18rg\_18rh\_18ri\_18rj\_18rk\_18rl\_18rm\_18rn\_18ro\_18rp\_18rq\_18rr\_18rs\_18rt\_18ru\_18rv\_18rw\_18rx\_18ry\_18rz\_18sa\_18sb\_18sc\_18sd\_18se\_18sf\_18sg\_18sh\_18si\_18sj\_18sk\_18sl\_18sm\_18sn\_18so\_18sp\_18sq\_18sr\_18ss\_18st\_18su\_18sv\_18sw\_18sx\_18sy\_18sz\_18ta\_18tb\_18tc\_18td\_18te\_18tf\_18tg\_18th\_18ti\_18tj\_18tk\_18tl\_18tm\_18tn\_18to\_18tp\_18tq\_18tr\_18ts\_18tt\_18tu\_18tv\_18tw\_18tx\_18ty\_18tz\_18ua\_18ub\_18uc\_18ud\_18ue\_18uf\_18ug\_18uh\_18ui\_18uj\_18uk\_18ul\_18um\_18un\_18uo\_18up\_18uq\_18ur\_18us\_18ut\_18uu\_18uv\_18uw\_18ux\_18uy\_18uz\_18va\_18vb\_18vc\_18vd\_18ve\_18vf\_18vg\_18vh\_18vi\_18vj\_18vk\_18vl\_18vm\_18vn\_18vo\_18vp\_18vq\_18vr\_18vs\_18vt\_18vu\_18vv\_18vw\_18vx\_18vy\_18vz\_18wa\_18wb\_18wc\_18wd\_18we\_18wf\_18wg\_18wh\_18wi\_18wj\_18wk\_18wl\_18wm\_18wn\_18wo\_18wp\_18wq\_18wr\_18ws\_18wt\_18wu\_18wv\_18ww\_18wx\_18wy\_18wz\_18xa\_18xb\_18xc\_18xd\_18xe\_18xf\_18xg\_18xh\_18xi\_18xj\_18xk\_18xl\_18xm\_18xn\_18xo\_18xp\_18xq\_18xr\_18xs\_18xt\_18xu\_18xv\_18xw\_18xx\_18xy\_18xz\_18ya\_18yb\_18yc\_18yd\_18ye\_18yf\_18yg\_18yh\_18yi\_18yj\_18yk\_18yl\_18ym\_18yn\_18yo\_18yp\_18yq\_18yr\_18ys\_18yt\_18yu\_18yv\_18yw\_18yx\_18yy\_18yz\_18za\_18zb\_18zc\_18zd\_18ze\_18zf\_18zg\_18zh\_18zi\_18zj\_18zk\_18zl\_18zm\_18zn\_18zo\_18zp\_18zq\_18zr\_18zs\_18zt\_18zu\_18zv\_18zw\_18zx\_18zy\_18zz



DATE	DESCRIPTION	BY	AUTH	SCALE: AS NOTED	PM: RWP
				PROJECT NO. 60438891	DWG. BY: RWP
				DATE: JAN. 2018	CHK. BY: RD
					DSG. BY: RWP

**AECOM**

7650 West Courtney Campbell Causeway  
Tampa, FL 33607-1462  
Tel: 813.286.1711

**SAVANNAH HILTON HEAD INTERNATIONAL**

Savannah / Hilton Head  
International Airport  
400 Airways Avenue  
Savannah, Georgia 31408

SHEET TITLE

**FIGURE 18a - PLAN VIEW OF SOUTHEAST QUADRANT FUTURE STORMWATER MANAGEMENT PLAN (ALTERNATIVE 5)**

DRAWING SIZE REDUCED IF LESS THAN 34"x22"



**ATTACHMENT B**

**SAVANNAH HILTON HEAD INTERNATIONAL AIRPORT  
SOUTHEAST QUADRANT STORM DRAINAGE IMPROVEMENTS**

**FEE SUMMARY**

AECOM Labor	\$289,540.00	Lump Sum
AECOM Expenses	\$12,200.00	Lump Sum
Environmental Services, Inc.	\$50,100.00	Not-to-Exceed
Coleman Company	\$95,490.00	Not-to-Exceed
Caltech Testing, Inc.	<u>\$11,925.00</u>	Lump Sum
<b>TOTAL</b>	<b>\$459,255.00</b>	<b>Not-to-Exceed</b>

Savannah Airport Southeast Quadrant Stormwater Master Plan Design Phase AECOM														Totals						
Task	Principal Engineer		QA/QC Engineer		Sr. Drainage Eng.		Sr. Civil Eng.		Structural Eng.		Jr. Civil Eng.		Jr. Drainage Eng.		Designer AutoCAD		Administrative			
	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost	Hr Rate	Cost		
Task 11: Specifications																				
Final Design	8	\$2,200.00	12	\$2,200.00	10	\$1,750.00	40	\$7,000.00	0	\$0.00	60	\$5,400.00	0	\$0.00	20	\$1,700.00	150	\$20,330.00		
Sub-Total	8	\$2,200.00	12	\$2,200.00	10	\$1,750.00	40	\$7,000.00	0	\$0.00	60	\$5,400.00	0	\$0.00	20	\$1,700.00	150	\$20,330.00		
Task 12: Cost Estimate																				
30% Design	1	\$275.00		\$0.00		\$0.00	10	\$1,750.00		\$0.00	20	\$1,800.00		\$0.00		\$0.00	31	\$3,825.00		
60% Design	1	\$275.00		\$0.00		\$0.00	10	\$1,750.00		\$0.00	20	\$1,800.00		\$0.00		\$0.00	31	\$3,825.00		
Final Design	1	\$275.00		\$0.00		\$0.00	10	\$1,750.00		\$0.00	20	\$1,800.00		\$0.00		\$0.00	31	\$3,825.00		
Sub-Total	3	\$825.00	0	\$0.00	0	\$0.00	30	\$5,250.00	0	\$0.00	60	\$5,400.00	0	\$0.00	0	\$0.00	93	\$11,475.00		
Task 13: LDA Permit Application																				
LDA Permit with City of Savannah	0	\$0.00	10	\$1,750.00	10	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	20	\$1,800.00	40	\$6,800.00	40	\$5,400.00	70	\$8,750.00
Drainage Report	0	\$0.00	20	\$3,500.00	20	\$3,500.00	0	\$0.00	0	\$0.00	0	\$0.00	40	\$3,600.00	40	\$5,400.00	60	\$7,100.00	130	\$16,850.00
Sub-Total	0	\$0.00	30	\$5,250.00	30	\$5,250.00	0	\$0.00	0	\$0.00	0	\$0.00	60	\$3,600.00	40	\$5,400.00	60	\$7,100.00	130	\$16,850.00
Task 14: Special Access Permit to GOOT																				
Permit Application	0	\$0.00	10	\$1,750.00	10	\$1,750.00	0	\$0.00	0	\$0.00	0	\$0.00	20	\$1,800.00	20	\$1,800.00	30	\$3,550.00		
Drainage Report	0	\$0.00	20	\$3,500.00	20	\$3,500.00	0	\$0.00	0	\$0.00	0	\$0.00	40	\$3,600.00	0	\$0.00	60	\$7,100.00		
Sub-Total	0	\$0.00	30	\$5,250.00	30	\$5,250.00	0	\$0.00	0	\$0.00	0	\$0.00	60	\$3,600.00	0	\$0.00	60	\$7,100.00		
Task 15: QA/QC																				
30% Design	1	\$275.00	12	\$2,200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	13	\$2,555.00
60% Design	1	\$275.00	12	\$2,200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	13	\$2,555.00
Final Design	1	\$275.00	12	\$2,200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	13	\$2,555.00
Sub-Total	3	\$825.00	36	\$6,600.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	39	\$7,665.00
Labor Totals	55	\$15,125.00	49	\$8,310.00	507	\$88,725.00	167	\$29,225.00	114	\$19,950.00	402	\$36,180.00	264	\$23,760.00	406	\$62,930.00	51	\$4,335.00	2,015.00	\$289,540.00
Expenses																				
Airfare (4 Trips x 3 people) = 12 people @ \$600/ticket)																				\$7,200
Hotel (1 Trips x 3 people) = 12 people @ \$100/night)																				\$2,160
Rental Car (6 days @ \$40/day)																				\$320
Meals (6 days x 3 people x \$50/day)																				\$320.00
Fuel																				\$320.00
Printing																				\$1,000.00
Expenses Totals																				\$12,200.00
Subconsultants																				
Survey, SUE and Utility Subconsultant (Coleman)																				\$95,490.00
Environmental Subconsultant (ESI)																				\$50,100.00
Geotechnical Subconsultant																				\$11,925.00
Subconsultant Totals																				\$157,515.00
Total																				\$459,255.00

Savannah Airport Southeast Quadrant Stormwater Master Plan Design Phase AECOM												Totals										
Task	Principal Engineer: Steve Henriquez		QA/QC Engineer: Ed Figueroa		Sr. Drainage Eng. Russell Pratt		Sr. Civil Eng. Keith Pency		Structural Eng.		Jr. Civil Eng. Mitchell Morgan		Jr. Drainage Eng. Jabari Lee		Designer AutoCAD: Norma Pratsky		Administrative: Diane Kline		Hours	Cost		
	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours	Hr Rate	Hours				
Task 1: Project Setup and Management																						
EPM Documentation	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Health and Safety Plan	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Survey Subcontract	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Geotechnical Subcontract	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Environmental Subcontract	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Utility Subcontract	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Invoicing and General Administration	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Subtotal	\$1,925.00	7	\$1,325.00	7	\$1,175.00	7	\$1,175.00	0	\$1,175.00	0	\$1,175.00	0	\$1,175.00	0	\$1,175.00	0	\$1,175.00	0	\$1,175.00	0	7	\$1,925.00
Task 2: Coordination Meetings																						
Kick-off Meeting	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Progress Meeting No. 1 (Teleconference)	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Progress Meeting No. 2 (Teleconference)	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Progress Meeting No. 3 (A/C/V)	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Pre-Application Meeting with City	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$275.00	3	\$190.00	3	\$175.00	3	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	3	\$275.00
Task 3: Data Collection & Review																						
Data Collection / Data Review	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Task 4: Field Review																						
Field Review	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Field Review Memo	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Task 5: Survey and SUE																						
Coordination with Survey Subcontractor (AECOM)	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Review Survey (AECOM)	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Process Survey Prepare DTM (AECOM)	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Task 6: Hydrologic/Hydraulic Model Update																						
Existing Conditions Model Update	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Proposed Conditions Model Update	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Task 7: Environmental Evaluation																						
Coordination with Environmental Sub-Contractor	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Assist in Preparing Permit to USACE	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Pre-Application Meeting with USACE	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	\$0.00	0	0	\$0.00
Subtotal	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Task 8: Utility Design																						
Coordination with Utility Sub-Contractor	\$1,100.00	4	\$770.00	4	\$700.00	4	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	4	\$1,100.00
Subtotal	\$1,100.00	4	\$770.00	4	\$700.00	4	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	\$700.00	0	4	\$1,100.00
Task 9: Geotechnical Evaluation																						
Coordination with Geotechnical Sub-Contractor	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Subtotal	\$275.00	1	\$190.00	1	\$175.00	1	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	\$175.00	0	1	\$175.00
Task 10: Design Plans																						
30% Design	\$2,200.00	8	\$1,540.00	8	\$1,400.00	8	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	8	\$2,200.00
50% Design	\$2,200.00	8	\$1,540.00	8	\$1,400.00	8	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	8	\$2,200.00
Final Design	\$2,200.00	8	\$1,540.00	8	\$1,400.00	8	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	\$1,400.00	0	8	\$2,200.00
Sub-Total	\$6,600.00	24	\$4,840.00	24	\$4,480.00	24	\$4,480.00	0	\$4,480.00	0	\$4,480.00	0	\$4,480.00	0	\$4,480.00	0	\$4,480.00	0	\$4,480.00	0	24	\$6,600.00

ENVIRONMENTAL SERVICES, INC.  
101 B Estus Drive  
Savannah, GA 31404

Phone 912-236-4711 \* Fax 904-470-2112

[www.environmentalservicesinc.com](http://www.environmentalservicesinc.com)

3 May 2019

Mr. Steve Henriquez  
AECOM  
7650 Courtney Campbell Causeway  
Tampa, Florida 33607

**RE: SAV SE Quad Drainage Improvements (ES19013.00)  
Chatham County, Georgia**

Dear Mr. Henriquez:

Thank you for contacting Environmental Services, Inc. (ESI). Pursuant to our recent conversation, ESI is pleased to enclose the attached proposal. Please note under our Terms section at the end of the proposal that, as the client, you assure ESI that we have permission to work on the property being evaluated and that you will advise us regarding the proper procedures for accessing the property.

If the attached meets your requirements, please approve by signing and returning the enclosed document to us by mail to the address above, by fax (904-470-2112) or via email ([mdemell@esinc.cc](mailto:mdemell@esinc.cc)). We are prepared to proceed upon receipt of the signed contract and retainer in the amount of \$500.00. We look forward to working with you.

Please contact me should you have any questions. Thank you for selecting ESI to assist with your environmental consulting needs.

Sincerely yours,

ENVIRONMENTAL SERVICES, INC.



Michael J. DeMell  
Senior Vice President II/Technical Director



ENVIRONMENTAL SERVICES, INC.

**PROPOSAL FOR SERVICES  
ESI PROJECT NO. ES19013.00**

The following Contract for Services is an agreement between Environmental Services, Inc., (ESI) and AECOM, (Client) with the terms specified herein. Client agrees that the company/individual signing this agreement has the ability to compensate ESI for the work described herein whether or not the proposed project materializes. ESI agrees to perform the following tasks for the associated fee.

**Project Name: SAV SE Quad Drainage Improvements**  
**Project Location: Chatham County, Georgia**

**SCOPE OF SERVICES**

**FEE**

**Task 1. Project Team Orientation and Meetings**

**\$4,350.00**  
estimate

To prepare for the following tasks, ESI will coordinate with the project team to initiate a project orientation meeting to review the existing site plan(s), discuss implications of that plan as it relates to regulatory review and permitting scenarios, and as appropriate, make suggestions related to the plan that may assist with successful permitting.

In addition, Task 1 is written to attend project team meetings during the life of the project. The budget is set to accommodate six two-hour meetings either on-site, or teleconference with the team. Any additional meetings will be billed to the General Consultation task outlined below.

**Task 2. Pre-application Meeting**

**\$2,450.00**  
estimate

At the point where site plans are sufficient to share with the resource agencies, ESI will conduct a pre-application meeting with the U.S. Army Corps of Engineers (ACOE) to discuss the project and determine permitting requirements. This task is used to vet the site plan with the resource agencies, gauge the receptiveness of the plan and identify any significant obstacles, and determine what, if any additional studies may be required by the agencies to make application.

We suggest team participation in this meeting; however, if certain members are not available, we will gather specific questions they may have leading up to the meeting and debrief the team with the results of the meeting thereafter.

ENVIRONMENTAL SERVICES, INC.

**Task 3. Individual Permit Application**

\$20,000.00 to  
\$30,000.00  
Estimated range

When proposed wetland impact exceeds 0.5-acres, an Individual Permit will be required. ESI will prepare the necessary permit application for the proposed project for submittal to ACOE and applicable review agencies.

\*\* The preparation of this document is dependent upon the client supplying additional information pertaining to the final site plan, specific project *purpose* and *need* sufficient to support permitting the proposed project impacts, as well as an alternative site analysis sufficient to support the current project site.

The costs outlined to the right are to prepare and submit the application to the review agencies. If additional information is requested by a review agency that is not currently available, additional costs may be incurred to acquire this information.

Please note, processing permit applications with the Savannah District are becoming more and more challenging. One reason for this is the current staff availability to handle the work load and project experience.

Furthermore, the District is being very prudent in their review and evaluation of permit applications pertaining to Section 404 (b)(1) guidelines. These guidelines include wetland avoidance, wetland minimization of unavoidable impacts, followed by appropriate wetland mitigation. This translates to evaluations of off-site alternatives for the same project and on-site alternatives to demonstrate avoidance and minimization of wetland impacts. The off-site alternatives contemplate you have reviewed various sites prior to siting this project in this wetland. Knowing more about your site search and site selection criteria will be necessary for application preparation. On-site alternatives will need to address how different drainage plans have been assessed to meet your project purpose and need, while working through the 404 guidelines.

The information above is aimed to assist you with understanding the process we will go through to prepare the application materials. Our cost estimate anticipates a level of effort needed to prepare these materials and coordinate with the project team who will supply the other deliverables. As stated, time delays may be experienced due to staff deficiencies at the Corps. The way to combat delays is to prepare the most thorough application we can to avoid the need for questions and answers

moving forward.

**Task 4. Protected Species Assessment**

\$3,500.00  
estimate  
(not to exceed)

ESI will survey the property for the presence of any state or federally protected wildlife species and their habitat. If protected species or habitats are encountered, ESI will perform preliminary mapping of the potential habitat area. Implications to development for any identified protected species will be addressed in the letter report. Expecting none exist in this area, the deliverable for this Task will become an appendix to the permit application materials.

However, as identified in the Environmental Assessment (EA) conducted for the Air National Guard (AND), pondberry is a listed species in Chatham county and could potentially occur within the wetland based on habitat requirements. Pondberry is federally listed as endangered. Therefore, ESI will conduct a plant survey for the pondberry within the 14.64-acre wetland, during it's fruiting time in late summer (June – October).

Should a population of pondberry be discovered on site, ESI will initiate coordination with the project team and then the applicable resource agencies at the appropriate time to discuss this issue. Following initial discussions with the resource agencies, ESI will advise the team on options to resolve this matter and, if needed, provided a separate cost proposal for the agreed upon resolution. Estimating costs for any further work regarding this issue is unrealistic currently.

**Task 5. Phase I Cultural Resource Assessment Survey**

\$3,000.00  
estimate  
(not to exceed)

Tasks will include background research, pedestrian inspection of exposed ground surface, subsurface testing at prescribed intervals, laboratory analysis (if applicable), preparation of a final report according to professional standards, and correspondence with the appropriate agencies. If archaeological sites are encountered, artifacts will be delineated with additional shovel tests at reduced intervals, and the appropriate form will be filled out and submitted to the Georgia Site Files after the review process.

If any archaeological sites or historic structures are deemed potentially eligible, they will need to be preserved in place or be subjected to additional testing if preservation is not a viable option to the project. Additional testing will exceed the scope

ENVIRONMENTAL SERVICES, INC.

and budget of the Phase I survey and will require modifying the contract.

This task is written to assess the undeveloped area of the project, and no work is included along or within the currently developed areas of the site. As you are aware, given the need for ground disturbance throughout the developed portions of the site, there is a potential the resource agencies could request or require additional information associated with the linear improvements as well. If this information is not already available and should additional testing or historic structure evaluations be required, ESI will prepare a separate proposal that is written to specifically address the addition items required at the point.

**Task 6. Mitigation Purchase Coordination**

\$1,800.00  
estimate  
(not to exceed)

Once the wetland impacts are calculated, ESI will apply the current mitigation standard operating procedure to define the required mitigation credits (RMC) to off-set these impacts. In addition, ESI will determine the most appropriate mitigation bank(s) that can provide the RMC for this project. ESI will contact suitable mitigation bank(s) to determine credit availability, negotiate the most favorable price for the purchase of these credits and complete and submit the necessary paperwork to ACOE to gain approval of the mitigation purchase. The costs outlined for this task are for coordination of the purchase. This task does not include the purchase price of the mitigation credits themselves. The actual purchase of these credits will likely be a direct transaction between the applicant and the chosen mitigation bank which will be coordinated and facilitated by ESI.

**Task 7. General Consultation**

\$5,000.00  
Time &  
Materials Upset  
Limit

The above tasks spell out anticipated costs and services necessary to complete the level of work authorized by this contract. Services not otherwise anticipated, or which are beyond our control, such as additional meetings or information required by the client, the client's attorney, planner, engineer, or surveyor, will be billed on a time and material basis.

Additional information requested by other resource agencies, that is not normally part of the scope(s), will be billed on a time and materials basis. Prior to initiating this work, ESI will discuss the requests and acquire your authorization.



ENVIRONMENTAL SERVICES, INC.

Additional services not specifically addressed herein will be invoiced on a time and materials basis at standard ESI hourly rates. We will provide you with a written proposal for these tasks if, or when, they become necessary. We are prepared to proceed upon receipt of the signed contract and a retainer in the amount of \$500.00.

ESI is committed to providing quality service to our clients. Every project is reviewed by a senior technical manager to ensure that the work has been performed in compliance with our goal of providing superior service and solutions to our clients.

ENVIRONMENTAL SERVICES, INC.

**Project Name:** SAV SE Quad Drainage Improvements (ES19013.00)  
**Project Location:** Chatham County, Georgia

Task 1:	Project Team Orientation and Meetings	Fee:	\$4,350.00 est.
Task 2:	Pre-application Meeting	Fee:	\$2,450.00 est.
Task 3:	ACOE Individual Permit Application	Fee:	\$30,000.00 est.
Task 4:	Protected Species Assessment	Fee:	\$3,500.00 est. NTE
Task 5:	Cultural Resource Assessment Survey	Fee:	\$3,000.00 est. NTE
Task 6:	Mitigation Purchase Coordination	Fee:	\$1,800.00 est. NTE
Task 7:	General Consultation	Fee:	\$5,000.00 T&M
		<b>Total Fee:</b>	<b>\$50,100.00</b>

**TERMS:**

- . ESI will complete the work described above in a timely manner unless delayed by Client's request, lack of information, or intervening factors beyond our control.
- . Client assures ESI that it has permission to work on the subject property and will advise ESI of proper procedures for accessing subject property.
- . **ESI will maintain a minimum \$1,000,000 errors and omissions (professional liability) insurance; \$1,000,000 per occurrence and \$2,000,000 aggregate general liability insurance for the duration of the project. If any additional insurance requirements are necessary, please return the specifications with the signed proposal. They will become a part of this contract as agreed by both parties.**
- . Outside services and expenses such as subcontractors and special purchases will be invoiced with a handling fee of 15 percent.
- . **A retainer of \$500.00 is required; the retainer will be subtracted from the last invoice and is required by ESI to initiate work.**
- . Client will provide ESI with any special billing formats or considerations with the signed contract.
- . Billing is done monthly. **Payment is due immediately upon receipt of the invoice;** after 30 days the Client agrees to pay 1.5 percent late fee per month or portion thereof on unpaid balances. Unpaid balances after 60 days from the date of the invoice may result in work stoppage until overdue accounts are resolved.
- . Failure to pay within 60 days from the date of invoice will be considered by ESI to be a breach of contract, and ESI may cease work and withhold all work product immediately without penalty from the Client.
- . Client agrees that this contract is an agreement between Client and ESI. Payment is due from Client at the time services are performed. Payment shall not be contingent upon regulatory action or upon resolution of any legal matter that ESI is not a party to. If ESI is being contracted to complete work which Client will use in a legal dispute, Client agrees to pay ESI in a timely manner without regard to the current standing of that legal dispute. ESI fees may not be incorporated into real estate closings without prior written consent from ESI.
- . This agreement shall be governed by the laws of the State of Florida, United States. Any lawsuit, proceeding or action arising out of or relating to this agreement must be brought in any court of competent jurisdiction located within Duval County, Jacksonville, Florida. Each of the parties irrevocably submits and consents to the exclusive jurisdiction of such court in any such lawsuit, proceeding or action, and waives any defense or objection it may now or hereafter have to personal jurisdiction, venue, or inconvenient forum. . ESI rates change on March 1 of each year.
- . **This proposal is valid for a period of 60 days following the date of issuance.**

**TERMS ACCEPTED:**

**ENVIRONMENTAL SERVICES, INC.**

SIGNATURE: \_\_\_\_\_

SIGNATURE: 

NAME: \_\_\_\_\_

NAME: Michael J. DeMell

FIRM: \_\_\_\_\_

FIRM: Environmental Services, Inc.

TITLE: \_\_\_\_\_

TITLE: Senior Vice President II/Technical Director

DATE: \_\_\_\_\_

DATE: 3 May 2019

BILLING ADDRESS AND CONTACT IF DIFFERENT FROM ABOVE:



~~May 14, 2019 REVISED March 25, 2019-REVISED May 14, 2019~~

Mr. Steven Henriquez, P.E.  
Vice President - Florida Aviation Group  
AECOM Technical Services  
7650 West Courtney Campbell Causeway  
Tampa, FL 33607-1462

E-mail: [steve.henriquez@aecom.com](mailto:steve.henriquez@aecom.com)

Re: **Professional Surveying Services for:  
Savannah/Hilton Head International Airport SE Quadrant  
Savannah, Georgia  
CCI File No: 19-236.000**

Dear Mr. Henriquez:

Coleman Company, Inc. (CCI) is pleased to present this proposal for providing professional services for the above referenced project. Generally, the project ("Project") consists of preparing a base map to aid in the drainage improvements for the southeast quadrant of the Savannah/Hilton Head International Airport located in Savannah, Georgia. The following scope of services are intended to cover the areas indicated on the attached exhibits. A more specific description of services to be provided is contained in the Scope of Services attached hereto.

Payment for our services will be as described in the attached General Conditions. It is necessary that you advise us in writing at an early date if you have budgetary limitations for the overall project cost. We will endeavor to work within those limitations.

The agreement ("Agreement") between AECOM and CCI consists of this letter, the Scope of Services, and the General Conditions. The Scope of Services and General Conditions are attached hereto and incorporated herein by this reference.

If the arrangements set forth in this Agreement are acceptable to you, please sign this letter and initial the Scope of Services and General Conditions in the spaces provided and return them to us. This proposal will be open for acceptance for 180 days from the date this agreement was drafted unless changed by CCI in writing. We appreciate the opportunity to prepare this proposal and look forward to working with you on the Project.

17 Park of Commerce Blvd., Suite 201 / Savannah, GA 31405  
(Office) 912-200-3041 • (Fax) 912-200-3056

Owner's Initials \_\_\_\_\_  
CCI's Initials \_\_\_\_\_

The parties agree and acknowledge that any of the parties hereto may execute this agreement and the other party may rely upon such electronic signature as an original record of signature. The parties warrant and represent that the person executing this Agreement for each party has the authority to bind that party.

Very Truly Yours,

**Coleman Company, Inc.**



Greg Coleman  
Project Manager and CFO

GC/sawr

Attachments: Scope of Services  
General Conditions  
Hourly Rate Schedule  
AECOM Survey Exhibits

ACCEPTED:

**AECOM – Steve Henriquez**

By: \_\_\_\_\_

Its: \_\_\_\_\_

Date: \_\_\_\_\_

Owner's Initials \_\_\_\_\_  
CCI's Initials \_\_\_\_\_





**SCOPE OF SERVICES FOR  
AGREEMENT  
BETWEEN CCI AND AECOM**

We propose to provide services as follows:

**1. SURVEYING SERVICES**

- A. Perform a topographic survey of the defined area at 100 foot cross sections as needed to prepare construction documents. CCI will indicate known utilities within defined area.

FEE: \$ 18,220.00.00

- B. Perform a Tree Survey per the City of Savannah Ordinance.

FEE: \$ 1,880.00

**2. SUE BUDGETS**

- A. Ground Penetrating Radar and Magnetic Utility Locate Budget

1. The estimated timeframe for item 2A is 6 days.
2. Below budget includes GPR/Magnetic Utility Locate Crew and a Survey Crew (\$3,560 per Day)

ESTIMATED FEE: \$ 23,140.00

- B. Civil Design Services Budget

1. Construction Documents for the necessary utility relocates due to the proposed storm drainage infrastructure shown in the attached exhibits.
2. Construction Documents to include design of any wet utilities and plan/design coordination of any dry utilities to be relocated with the appropriate service provider.
3. Water and Sewer Models for the City of Savannah are also included in the below estimate.

ESTIMATED FEE: \$ 38,500.00

- C. Civil Permitting Services Budget

1. Permitting services for the utility relocation plans to include the following issuing authorities:
  - a. City of Savannah
  - b. Savannah Airport Commission

ESTIMATED FEE: \$ 13,750.00

3. ADDITIONAL SERVICES

- A. Should the Owner request any services not listed above then the cost of those services will be (a) as agreed to in a written modification of the Agreement or (b) in accordance with the terms of "Services on a Time and Expense Basis" schedule attached hereto as Exhibit "A" (Hourly Rate Schedule).

4. EXCLUSIONS

- A. Items not included in the scope of services are as follows:
1. PLANNING SERVICES
  2. ENVIRONMENTAL SERVICES
  3. EROSION & STORMWATER POLLUTION CONTROL PLANS
  4. CIVIL CONSTRUCTION PHASE SERVICES
  5. CIVIL CONSTRUCTION CLOSE-OUT PHASE SERVICES
  6. FINAL PLAT
  7. NPDES SERVICES
  8. NPDES SAMPLING & REPORTING
  9. SOIL / GEOTECHNICAL
  10. TRAINING/SAFETY/SECURITY MEETINGS AND BADGING OTHER THAN AOA OR GULFSTREAM
- B. CCI services do not include day to day observation, construction monitoring or work performed by others unless otherwise stated above.
- C. Including Exclusions as outlined in the General Conditions (Payment for Services).

Sincerely,

**Coleman Company, Inc.**



Greg Coleman  
Project Manager and CFO

GC/sawr

Owner's Initials \_\_\_\_\_  
CCI's Initials \_\_\_\_\_

**GENERAL CONDITIONS TO AGREEMENT  
BETWEEN COLEMAN COMPANY, INC.  
AND AECOM**

**1. PAYMENT FOR SERVICES**

For services rendered, Owner shall pay CCI the amount outlined in the Scope of Services.

Project related costs for printing; reproductions; postage, handling and delivery; and authorized out of town travel and subsistence will be billed as Reimbursable Expenses.

Projects will be billed monthly or at the completion of the work, whichever comes sooner, with payment due upon receipt. Payment shall be considered overdue after forty-five (45) days from date of invoice, with interest charged at a monthly rate of 1.5 percent (18 percent annual rate).

CCI reserves the right to suspend work under this Agreement or any other work to be performed by CCI for Owner or any of its affiliates under a separate agreement or agreements with CCI in the event of delinquent payment by Owner to CCI hereunder or in the event of delinquent payment by Owner or its affiliates to CCI under a separate agreement or agreements. For all purposes hereof, affiliate shall mean (i) in the case of an individual, any relative of any person listed among the following, (ii) any officer, director, trustee, partner, manager, employee or holder of 5 percent or more of any class of the voting securities of or equity interest in the Owner, (iii) any corporation, partnership, limited liability company, trust or other entity controlling, controlled by or under common control with the Owner, or (iv) any officer, director, trustee, partner, manager, employee or holder of 5 percent or more of the outstanding voting securities of any corporation, partnership, limited liability company, trust or other entity controlling, controlled by, or under common control with the Owner.

**2. OWNERSHIP OF INSTRUMENTS OF SERVICE**

All reports, drawings, specifications, computer files, field data, notes and other documents and instruments prepared by CCI as instruments of service shall remain the property of the CCI. CCI shall retain all common law, statutory, and other reserved rights, including, without limitation, the copyrights thereto. CCI shall retain these records for a period of two (2) years following their completion during which period copies will be made available to the Owner at reasonable times.

**3. INDEPENDENT CONTRACTOR**

CCI shall be an Independent Contractor with respect to all work performed hereunder and neither CCI nor those employed by CCI to perform such work shall be deemed the agents, representative, employees, or servants or Owner in the performance of such work or any part thereof.

**4. OWNERS RESPONSIBILITIES**

**A. Access**

Owner shall make provisions for CCI to enter upon public and private lands as required to perform such work as surveys and inspections in development of the Project.

**B. Owner's Representative**

The Owner shall designate in writing one person to act as Owner's Representative with respect to the work to be performed under this Agreement. This Representative shall have complete authority to transmit instructions, receive information, interpret, and define Owner's policy and decisions, with respect to the product, materials, equipment, elements, and systems pertinent to the work covered by this Agreement.

**C. Fees**

The Owner is responsible for payment of fees associated with the Project. Such fees include permit review and application fees, impact fees, and capacity fees. CCI will notify the Owner regarding the amount of fees and timing of payment.

**5. CCI'S STANDARD OF CARE**

The professional services performed under this Agreement, as defined in the Scope of Services, shall be consistent with sound practices, and shall incorporate federal, state, and local regulations and standards that are applicable at the time CCI rendered its services. CCI will strive to perform services under this Agreement in a manner consistent with that level of care and skill ordinarily exercised by members of the profession currently practicing in the area under similar conditions. No other representation, express or implied, and no warranty or guarantee is included or intended in the Agreement, or in any report, opinion, document, or otherwise.

**6. OPINIONS OF PROBABLE COSTS**

Since CCI has no control over the cost of labor, materials, or equipment; the Contractor's methods of determining prices; competitive bidding or market conditions, its opinions of probable construction costs provided for herein are to be made on the basis of its experience and qualifications. These opinions represent his/her best judgment as a design professional familiar with the construction industry. However, CCI cannot and does not guarantee that proposals, bids, or the construction cost will not vary from opinions of probable construction costs prepared by CCI.

**7. INSURANCE**

During the term of the Agreement, CCI shall maintain insurance listed below with insurers satisfactory to Owner:

**A. Workers Compensation and Employers Liability**

Employer's liability coverage shall be for a minimum of \$1,000,000.00. CCI shall provide for or require any subcontractor to maintain similar coverage for the subcontractor's employees employed in connection with the Project.

**B. Public Liability Including Completed Operations**

(i) Bodily injury and property damage shall be for a minimum of \$1,000,000 for a Combined Single Limit.

(ii) Public Liability Insurance shall include "contractual" coverage for the indemnity clause set forth in Paragraph 10.

\_\_\_\_\_  
Owner's Initials  
\_\_\_\_\_  
CCI's Initials

**GENERAL CONDITIONS TO AGREEMENT  
BETWEEN COLEMAN COMPANY, INC.  
AND AECOM**

(iii) If the work involves hazards due to blasting or explosion, or the hazards of the collapse of or any building due to excavation, pile driving, shoring, underpinning, etc., or the hazards of injury to or destruction of underground wiring, piping, etc., arising from the use of mechanical equipment then the policy shall be expressly endorsed to cover such hazards.

**C. Automobile Liability**

Coverage shall be for non-owned hired vehicles and owned vehicle set forth below:

Bodily injury and property damage shall be for a minimum of \$1,000,000 each occurrence for a combined single limit.

**D. Professional Liability**

Professional liability insurance in the amount of \$1,000,000 each claim with an aggregate of \$2,000,000 to include the failure of CCI to perform the services covered under this contract and for the acts or omissions of CCI, its agents, and employees performing any of CCI's services under this contract.

**8. LIMITS OF LIABILITY**

Services to be performed by CCI under this Agreement are intended solely for the benefit of the Owner. Nothing contained herein shall confer any rights upon or create any duties on the part of CCI toward any person or persons not a party to this Agreement including, but not limited to, any contractor, subcontractor, supplier, or the agents, officers, employees, insurers, or sureties of any of them.

**A. General Liability**

The Owner agrees to limit CCI's and its employees' liability to the Owner and to all construction Contractors and Subcontractors on the project due to CCI's negligent acts, errors, or omissions, such that the total aggregate liability of CCI to those named shall not exceed \$50,000.00 or CCI's total fee for services rendered on the project described in this contract, whichever is greater. This liability cap may be increased by mutual consent of both parties and in exchange for additional compensation.

**B. Construction Staking**

The Owner agrees to limit CCI's and its employees' liability to the Owner and to all construction Contractors and Subcontractors on the project due to CCI's negligent acts, errors, or omissions, such that the total aggregate liability of CCI to those named shall not exceed CCI's total fee for services rendered on the project described in this contract. This liability cap may be increased by mutual consent of both parties and in exchange for additional compensation.

**9. ACTS OF OTHERS**

CCI shall not be responsible for the means, methods, techniques, sequences, or procedures of construction selected by Contractor(s) or the safety precautions and programs incident to the work of Contractor(s). CCI shall not be responsible for the failure of Contractor(s) to perform the work in accordance with contract documents.

CCI shall not be responsible for the acts, omissions, means, methods, or specifications of other design professionals involved in the project. Unless specifically stated otherwise, CCI's work and responsibility under this Contract terminates at the building pad or within five (5) feet of the building, whichever is greater, for any proposed building. The Owner/Architect/Contractor is responsible for compliance with codes, regulations, manufacturer specifications, and construction methods related to the building structure. In no circumstances is CCI responsible for any portion of the building, especially as relates to moisture or mold.

**10. INDEMNIFICATION**

To the fullest extent permitted by law, CCI shall indemnify and hold harmless Owner, Owner's officers, directors, partners, employees, and agents from and against claims, costs, losses and damages caused solely by the negligent acts of CCI or CCI's officers, directors, partners, employees, agents and CCI's consultants in the performance of CCI's services under this Agreement. The indemnification does not extend beyond the work of CCI.

**11. APPLICATIONS FOR PERMITS AND CERTIFICATES REQUESTED ON BEHALF OF OWNER**

The Owner shall indemnify and hold CCI harmless from and against any and all judgments, losses, damages, and expenses (including attorney fees and defense costs) arising from or related to claims by third parties to challenge the issuance of permits or certificates of the Project by agencies with jurisdictions in the premises. Defense costs shall include the time and expenses of CCI's personnel to assist in the defense of the issuance of the permit or certificate.

**12. SIGNAGE**

Owner agrees to allow CCI to place a sign on the job site during construction. The sign will indicate that CCI performed services. CCI is responsible for the sign installation and removal.

**13. ASSIGNMENT**

Neither this contract nor any rights or duties hereunder may be assigned or delegated to any other person or entity by either party without the express written consent of the other party.

**14. MERGER/MODIFICATIONS**

This Agreement represents the entire understanding between you and us with respect to the Project. All proposals, negotiations, and representations with reference to the matters covered by this Agreement are merged herein. This Agreement may only be modified in writing signed by both of us.

\_\_\_\_\_  
Owner's Initials  
\_\_\_\_\_  
CCI's Initials





Billing Rates  
March 2019

President / Registered Land Surveyor	\$ 185.00 per hour
Vice President / Professional Engineer	\$ 150.00 per hour
Senior Project Engineer	\$ 150.00 per hour
Senior Professional Engineer	\$ 130.00 per hour
Professional Engineer	\$ 120.00 per hour
Civil Project Manager / CFO	\$ 130.00 per hour
Civil Project Manager	\$ 105.00 per hour
Senior Civil CADD Technician	\$ 90.00 per hour
Senior Survey CADD Technician	\$ 85.00 per hour
Survey Quality Control	\$ 90.00 per hour
CADD Technician	\$ 75.00 per hour
Survey CADD Technician	\$ 65.00 per hour
2 Man Survey Crew	\$ 120.00 per hour
3 Man Survey Crew	\$ 135.00 per hour
Environmental Consultant	\$ 95.00 per hour
Landscape Architect / Land Planner	\$ 110.00 per hour
Landscape Designer	\$ 85.00 per hour
Senior Construction Inspector	\$ 85.00 per hour
Construction Inspector	\$ 65.00 per hour
Administrative	\$ 50.00 per hour





**CAUTION**  
 SURFACE UTILITIES, UNDERGROUND UTILITIES AND  
 STRUCTURES ARE NOT SHOWN. THE INFORMATION  
 AND REPRESENTATION IS THE BEST AVAILABLE AT THE TIME  
 OF PLANNING AND IS NOT INTENDED TO REPRESENT  
 UTILITIES AND ASSOCIATED APPLICANCES AND ARE PROVIDED  
 FOR GENERAL INFORMATION ONLY.

DATE: 08/14/13  
 BY: J. L. WILSON

GRAPHIC SCALE (IN FEET)

**FAWNAH**  
 INTERNATIONAL  
 1111 Peachtree Street, N.E.  
 Atlanta, Georgia 30309

**AECOM**  
 AECOM Technical Services, Inc.  
 7000 Peachtree Dunwoody Road, N.E.  
 Atlanta, Georgia 30328  
 Tel: 404.239.1400

**SOUTHEAST QUADRANT DRAINAGE IMPROVEMENTS**  
 SURVEY EXHIBIT

SHEET NO. C-01









EXISTING UTILITIES WITHIN THE LIMITS OF SURVEY SHALL BE LOCATED AND FIELD VERIFIED.

THIS AREA WILL BECOME WET DETENTION POND.

DITCHED POND BOTTOM FOR SECTION 1.

CATCHING BASIN DRAIN SYSTEM.

ROUTE 147.

**SOUTHEAST QUADRANT DRAINAGE IMPROVEMENTS**

DATE: 12/11/11  
 SHEET NO: 3

**AECOM**

**HAYWARD**  
 CONSULTANTS

GENERAL SCALE: 1" = 40'

DATE	DESCRIPTION	BY	CHKD

CAUTION: THESE DRAWINGS, SPECIFICATIONS AND CONDITIONS ARE PREPARED BY THE ENGINEER AND REPRESENT THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. THE USER SHALL BE RESPONSIBLE FOR THE NUMBER OF CONSTRUCTION DETAILS, FIELD VERIFICATION, MATERIALS AND ASSOCIATED APPURTENANCES AND BE ENTERED FOR RECORD, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

GENERAL SCALE: 1" = 40'

DATE: 12/11/11  
 SHEET NO: 3

**SOUTHEAST QUADRANT DRAINAGE IMPROVEMENTS**

DATE: 12/11/11  
 SHEET NO: 3

**AECOM**

**HAYWARD**  
 CONSULTANTS

GENERAL SCALE: 1" = 40'

DATE	DESCRIPTION	BY	CHKD

CAUTION: THESE DRAWINGS, SPECIFICATIONS AND CONDITIONS ARE PREPARED BY THE ENGINEER AND REPRESENT THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. THE USER SHALL BE RESPONSIBLE FOR THE NUMBER OF CONSTRUCTION DETAILS, FIELD VERIFICATION, MATERIALS AND ASSOCIATED APPURTENANCES AND BE ENTERED FOR RECORD, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

GENERAL SCALE: 1" = 40'

DATE: 12/11/11  
 SHEET NO: 3

**SOUTHEAST QUADRANT DRAINAGE IMPROVEMENTS**

DATE: 12/11/11  
 SHEET NO: 3

**AECOM**

**HAYWARD**  
 CONSULTANTS

GENERAL SCALE: 1" = 40'

DATE	DESCRIPTION	BY	CHKD

CAUTION: THESE DRAWINGS, SPECIFICATIONS AND CONDITIONS ARE PREPARED BY THE ENGINEER AND REPRESENT THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION. THE USER SHALL BE RESPONSIBLE FOR THE NUMBER OF CONSTRUCTION DETAILS, FIELD VERIFICATION, MATERIALS AND ASSOCIATED APPURTENANCES AND BE ENTERED FOR RECORD, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

GENERAL SCALE: 1" = 40'

DATE: 12/11/11  
 SHEET NO: 3





**CAUTION:** ALL DATA, INSTRUMENTATIONS AND ADDITIONAL FIELD DATA ARE FOR INFORMATION ONLY AND REPRESENT THE BEST INFORMATION AVAILABLE AT THE TIME OF ACQUISITION OF DATA. CABLES, UNDERGROUND UTILITIES AND ASSOCIATED APPURTENANCES ARE NOT SHOWN FOR CLARITY AND IDENTIFICATION ONLY.

**SAVANNAH HISTORICAL INTERNATIONAL AIRPORT**  
 Savannah / Hilton Head International Airport  
 Savannah, Georgia 31408

**AECOM**  
 AECOM Technical Services, Inc.  
 7820 W. Lakeview Dr., Suite 200  
 Tampa, FL 33607-8422  
 Tel: 813.288.1711

**SOUTHEAST QUADRANT DRAINAGE IMPROVEMENTS**

SURVEY EXHIBIT (4)

C-04



## Cal -Tech Testing, Inc.

- Engineering
- Geotechnical
- Environmental

LABORATORIES

P O Box 1625 • Lake City, FL 32056  
Tel (386) 755-3633 • Fax (386) 752-5456

450 SR 13N, Suite 106-308, Jacksonville, FL 32259  
Tel (904) 381-8901 • Fax (904) 381-8902

April 4, 2019

Mr. Steven Henriquez, P.E.  
AECOM  
7650 W. Courtney Campbell Cswy.  
Tampa, Florida 33607

**RE: Proposal for Geotechnical Engineering Exploration Services  
Savannah Hilton Head International Airport-SE Quadrant Detention Pond  
Savannah, Georgia**

Dear Mr. Steven Henriquez, P.E.:

Cal-Tech Testing, Inc. (CTTI) is pleased to submit this proposal to provide geotechnical engineering exploration services for the proposed SE Quadrant Detention Pond as part of the drainage improvement at the Savannah Hilton Head International Airport in Savannah, Georgia.

### **SITE & PROJECT INFORMATION**

According to information you provided to us and observations during our visit on March 28, 2019, the site, which is surrounded by Bourne Avenue to the southeast and facilities of the Air National Guard (ANG) elsewhere, consists of a rough, heavily under-brushed, wooded land with perimeter creeks, underwater areas and limited accessibility by foot only.

Based on the information conveyed to us, the project consists of the design and excavation of an approximately 15 ft. deep wet detention pond as part of the proposed SE Quadrant Drainage Improvements development.

### **SCOPE OF SERVICES**

Based on your request, the mentioned site accessibility constrains and requirements for minimal disturbance as conveyed to us by the ANG environmental engineer during our site visit, our proposed field subsurface soil exploration program consists of performing six (6), 15-ft deep, Standard Penetration Test (SPT) borings at the approximate locations indicated in the enclosed Boring Location Plan and laid out by our field crew using a Global Positioning System (GPS) hand-held device.



The SPT borings will be performed in general accordance with applicable ASTM standards utilizing a manually-set tripod drilling method. The resulting boreholes will be backfilled with soil cuttings at completion.

CTTI will transport the boring soil samples to our laboratory for examination and classification by our geotechnical engineer in general accordance with the Unified Soil Classification System.

Prior to the drilling work, we will contact pertinent utility agents to mark-out the location of known underground utilities in the area of the proposed borings.

CTTI will provide AECOM with a site specific Safe Work Plan and attend to a safety orientation prior to the drilling work and attend or conduct daily safety tailgate meetings thereafter.

At completion of the field and laboratory work, we will prepare a report presenting the site inferred subsurface soil profile.

#### **ESTIMATED FEE**

Based on the proposed scope of work the fee for our geotechnical engineering exploration services is as follows:

<b>Mobilization</b>	<b>\$ 900.00</b>
<b>SPT Borings (90 ft. @ \$48/ft)</b>	<b>\$ 4,320.00</b>
<b>Soil Laboratory Testing</b>	<b>\$ 600.00</b>
<b>Management (safety, utility clearance, layout etc.)</b>	<b>\$ 3,500.00</b>
<b>Lodging and 3-man crew Perdiem</b>	<b>\$ 1,475.00</b>
<b>Engineering Report Preparation</b>	<b>\$ 880.00</b>
<b>Administration</b>	<b><u>\$ 250.00</u></b>
<b>Total</b>	<b>\$11,925.00</b>

Our SPT boring fee above includes tripod manual mobilization through heavily, under-brushed, wooded land and set up between test locations.

#### **Schedule**

Based upon our present work load, we can begin the field work within 8 working days (allow 3 days for utility clearance) of receipt of a written authorization. We anticipate that our field work will encompass five (5) working days. Our report should be issued within 5 working days of completion of the field and laboratory work.

#### **Limitations**

The soil boring detailed in this proposal presumes standard geotechnical drilling and does not include provisions for drilling through or into environmentally contaminated material. If environmental contaminants are encountered, we will cease drilling operations and notify you.



Proposal for Geotechnical Engineering Exploration Services  
Savannah Hilton Head International Airport-SE Quadrant Detention Pond  
Savannah, Georgia

**Authorization**

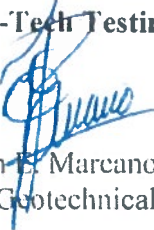
If this proposal is acceptable, please authorize us to proceed with the proposed services by signing below and return to our office. A sub-contract agreement will also be sufficient as authorization.

**Closing**

CTI appreciates the opportunity to provide this proposal and we look forward to serving you on this and future projects. Should you have any questions concerning this proposal or the services proposed, please do not hesitate to contact me at our Lake City, FL office (386) 755-3633.

Sincerely,

**Cal-Tech Testing, Inc.**



Ivan B. Marcano, P.E.  
Sr. Geotechnical Engineer



Mike Stalvey, Jr.  
Vice-President

Proposal: Proposal for Geotechnical Engineering Exploration Services-Savannah Hilton Head International Airport, SE Quadrant Detention Pond.	
Name of Representative (Print)	Date
Title:	
Representative Signature:	



**CAL-TECH TESTING, INC.**  
P.O. BOX 1625  
Lake City, Florida 32056-1625  
Phone: (386) 755-3633  
Fax: (386) 752-5456

**PROPOSED BORING LOCATION PLAN**  
Savannah Hilton Head International Airport  
SE Quadrant Detention Pond  
Savannah, Georgia