

**CONTINUING PROFESSIONAL CONSULTING AGREEMENT  
SERVICES AUTHORIZATION #18166(2)**

*THIS SERVICES AUTHORIZATION* is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between the **City of Orlando, Florida**, a municipal corporation existing under the laws of the State of Florida (CITY), and **AVCON, INC.**, doing business locally at 5555 E. Michigan Street, Ste 200, Orlando, Florida 32822 (CONSULTANT).

*WHEREAS*, the CITY and the CONSULTANT have previously entered into an agreement for the CONSULTANT's professional services (AGREEMENT) effective October 5, 2015; and

*WHEREAS*, the CITY and the CONSULTANT shall refer to the AGREEMENT herein, and desire to have it incorporated by reference; and

*WHEREAS*, the CITY and the CONSULTANT now wish to memorialize their understanding for the CONSULTANT's professional services for the East Lake Arnold Drainage Project (PROJECT).

*NOW, THEREFORE*, in consideration of the mutual promises and covenants contained herein and given one to the other, the sufficiency of which is hereby acknowledged, the parties agree as follows:

**I. SCOPE OF WORK**

The scope of work has been agreed to by the parties, and is attached hereto and incorporated herein by reference, as APPENDIX I.

**II. FEE**

The not-to-exceed fee of \$234,801.71 has been agreed to by the parties, as set forth on APPENDIX I.

**III. TERM**

CONSULTANT shall complete all work in accordance with the timeframes set forth in the scope of work provided, however, that all work and the term of this SERVICES AUTHORIZATION shall be completed by the end of business twenty-four (24) months from issuance of Notice to Proceed. It is also agreed that the CITY shall have an option for extension of this SERVICES AUTHORIZATION, as necessary to complete the present scope of services (APPENDIX I) or to provide additional services.

#### IV. ENTIRE AGREEMENT

This SERVICES AUTHORIZATION supersedes all previous authorizations, agreements, or representations, either verbal or written, heretofore in effect between the CITY and the CONSULTANT that may have concerned the matters covered herein, except that this SERVICES AUTHORIZATION shall in no way supersede or amend the AGREEMENT or other authorizations except as specifically provided herein. No additions, alterations, or variations to the terms of this SERVICES AUTHORIZATION shall be valid, nor can the provisions of this SERVICES AUTHORIZATION be waived by either party, unless such additions, alterations, or waivers are expressly set forth in writing in a document duly executed by the parties. CONSULTANT acknowledges and agrees that any proposals or proposed agreements from subconsultants attached to this SERVICES AUTHORIZATION are attached solely to reflect the scopes of work to be performed and the fees to be charged by such subconsultants. By executing this SERVICES AUTHORIZATION, the CITY does not become a party thereto or bound by the terms thereof.

*IN WITNESS WHEREOF*, the parties hereto have executed this SERVICES AUTHORIZATION on the day and year first written above.

**City of Orlando, Florida**

By: \_\_\_\_\_  
David Billingsley, CPSM, C.P.M.  
Chief Procurement Officer

APPROVED AS TO FORM AND LEGALITY  
for the use and reliance of the  
City of Orlando, Florida, only.

\_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Michael O'Dowd  
Assistant City Attorney  
Orlando, Florida

AVCON, INC.

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

Print Name: \_\_\_\_\_

Title: \_\_\_\_\_

STATE OF FLORIDA        }

COUNTY OF \_\_\_\_\_ }

*PERSONALLY APPEARED* before me, the undersigned authority, \_\_\_\_\_  
[ ] well known to me or [ ] who has produced \_\_\_\_\_ as identification, and  
known by me to be the \_\_\_\_\_ of the corporation named above, and acknowledged before  
me that he/she executed the foregoing instrument on behalf of said corporation as its true act and  
deed, and that he/she was duly authorized to do so.

*WITNESS* my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_,  
20\_\_\_\_.

\_\_\_\_\_  
NOTARY PUBLIC

Print Name: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_

## SCOPE OF SERVICES

### SECTION 1. PROJECT BACKGROUND

In August, 2014, the City initiated a study to address flooding and water quality concerns in the East Lake Arnold drainage basin. The study evaluated approximately 83 acres on the south side of Lake Arnold generally bounded by Curry Ford Road to the south, Crystal Lake Drive to the west, and Berwyn Road to the east.

The 2014 study provided recommendations to improve three existing outfalls and provide additional piping to better connect the basin areas to those outfalls. The additional pipes also will provide a more balanced distribution of the basin areas to the outfalls. The three outfalls are being called the Western Outfall, the Eastern Outfall and the Northern outfall. In the existing condition, the Western Outfall serves a sub-basin of approximately 43.7 acres, the Eastern Outfall serves a sub-basin of approximately 20.3 acres, and the Northern Outfall serves a sub-basin of approximately 13.4 acres. In the proposed condition, the Western Outfall serves a sub-basin of approximately 33.4 acres, the Eastern Outfall serves a sub-basin of approximately 30.6 acres, and the Northern Outfall serves a sub-basin of approximately 13.4 acres.

The original study included three additional basins totaling 171 acres that contribute to the Lake Arnold Basin. These areas are included to incorporate future potential connections to the system in an attempt to size the outfall correctly to meet future additions to the system. Land uses within the study area are primarily residential and include some commercial and roadway areas. The existing outfalls serve primarily the roads and property near the lakefront and do not extend far into the basin area. The Dover Shores commercial area is served by an existing on-site 12" drain well.

The proposed improvements are mostly located within existing City rights-of-way with the exception of the outfalls. The previous study did not locate any existing easements for two of the outfalls (western and eastern). This will be further evaluated as part of this scope of services, but easements may need to be acquired to perform the recommended outfall upgrades.

The project has the potential to provide impacts or disruption to existing utilities and vehicular traffic. The major utility conflicts appear to be with water and sewer, so a high level of utility coordination will be required. In addition, the construction will create impacts to the local residents so providing public information will also be an important element of the design phase.

The CONSULTANT shall perform design services identified in the above noted report and further outlined in this scope of work.

### SECTION 2. SCOPE OF SERVICES

The following services outlined below shall be provided. The anticipated level of effort to perform these tasks is presented in the Project Budget Estimate.

#### Task 1 - Project Administration

- 1.1 The CONSULTANT shall provide general project control and team coordination with all subconsultants.
- 1.2 The CONSULTANT shall provide monthly status reports of the project.
- 1.3 The CONSULTANT shall attend a minimum of five (5) meetings with the CITY related to the design services, one (1) kick-off meeting, three (3) review meetings at the 30%, 60%, 90% construction plans submittal phase, and one (1) utility coordination meeting after 30% review comments have been received and reviewed by the CONSULTANT.

#### Task 2 - Surveying Services

Portions of the survey have been provided by the City from Southeastern Survey and Mapping. The areas provided are the full portion of the Western Outfall, Canberra Ave. Ceylon Dr. and Montclair Rd. in Eastern Outfall Basin and Strathmore Dr. and Dover St. in the Northern Outfall Basin. The additional survey will be provided by **L&S Diversified**, as outlined in their proposals attached to this scope of services, and will be merged with the Southeastern survey to provide a single survey file. The subsurface utility exploration shall be performed by **Barnes Ferland &**

**Associates, Inc.** as outlined in their proposals attached to this scope of services. All survey data shall be based on published CITY benchmarks and in the North American Vertical Datum of 1988 (NAVD88), and in Florida State Plane Coordinates, based on NAD83/1990 adjustments or newer for horizontal datum. The final survey shall be provided in AutoCAD Civil 3D along with three (3) signed and sealed hard copy to the CITY. A minimum of 40 utility VVH locates are anticipated for this project (30 in dirt and 10 in pavement).

### **Task 3 - Soil Survey and Geotechnical Services**

Sub-surface soil investigation shall be performed by **NADIC Engineering Services, Inc.** as outlined in the geotechnical proposal attached to this scope of services. All soil or roadway borings shall be filled with like material removed. Soil Boring placement shall be no more than 200' separation without CITY approval.

### **Task 4 - Design Services**

The CONSULTANT shall prepare the Construction Plans Package. This work effort includes the design needed to provide complete construction plans and specifications for the project with sufficient information to allow for constructing and permitting. The design shall include plans for the construction of a stormwater system including the following:

**The proposed Eastern Outfall improvements include replacement of an existing segment of 30-inch RCP from Hargill Drive to Lake Arnold with 36-inch RCP, except for a short segment where the 30-inch RCP will remain. For this segment, a parallel 24-inch RCP is proposed. The improvements are configured in this manner because an existing structure currently exists over top of this segment of existing 30-inch RCP. Since the City does not currently have an easement at this outfall, it is proposed to allow this segment of existing pipe to remain. The proposed improvements include the following:**

- Extensive new pipe system is proposed to better connect upstream project area to the improved eastern outfall;
- Inlet and manhole improvements are proposed along the pipe route to improve flow from the street into the stormwater system;
- Pipe improvements include upsizing and lowering elevations of existing pipe segments and replacing CMP segments with RCP;
- Outfall improvements to Eastern Outfall shall include a baffle box. This scope will include an analysis of the appropriate size of the box based on the anticipated flows and the available land area near the outfall.

**The proposed North Outfall improvements include adding pipes in areas not currently being served by a stormwater system. And upgrades to the existing system. Specific improvements include the following:**

- Existing pipe system is proposed to be extended and upsized to better connect upstream project area to the relocated northern outfall;
- Inlet and manhole improvements are proposed along the pipe route to improve flow from the street into the stormwater system;
- Outfall to be improved and relocated within the existing drainage easement north of Dover Street;
- Outfall improvements will also include a new baffle box, which will be sized based on anticipated flows and the land available for placement of the box.

**The proposed Western Outfall improvements are focused along City maintained roads and does not include improvements along Crystal Lake Drive. In addition, 10.3 acres of the existing sub-basin associated with the Western Outfall will be diverted to the Eastern Outfall as part of the implementation of the report recommendations and included in this scope. Specific improvements will include:**

- Pipe improvements extending from Crystal Lake Drive at Nancy Street to the outfall at Hargill Drive and Newcastle Drive;
- Inlet and manhole improvements are proposed along the pipe route to improve flow from the street into the stormwater system;
- Pipe improvements include upsizing and lowering elevations of existing pipe segments and

- replacing corrugated metal pipe (CMP) segments with RCP;
- **Outfall improvements to Lake Arnold will mainly consist of upsizing the outfall pipe and providing an upgraded end treatment. An existing baffle box is in place and will be retained and designed into the propose system.**

Design services shall include field reconnaissance, stormwater modeling, and development of construction plans at 30%, 60% and 90% incorporating CITY comments, and final (100%) construction plans. These plans shall be suitable for the use by the Contractor to bid and build the project and for the CITY to ensure the project is built as designed and to specifications. Design items covered by standard CITY and FDOT specifications shall be addressed in the construction plans using standard index references. Project specifications shall include Special Provisions for design items not covered by CITY or FDOT standards.

#### **4.1 Drainage Design**

##### **4.1.1 Field Visits**

The CONSULTANT shall conduct the necessary field visits as part of the data collection phase to develop an understanding of the area, potential conflicts, and concerns that may impact the proposed design.

##### **4.1.2 Design Documentation, Computation Book, Quantities, and Cost Estimate**

The CONSULTANT shall submit pertinent design notes, design calculations and computations in book form to document the decisions and conclusions reached during the development of the construction plans. The CONSULTANT shall also submit quantity computations that provide a breakdown of the quantity calculations and pay items necessary to construct the project. The CONSULTANT shall prepare pay items, item specification, quantity estimate, and an engineer's cost estimate for construction of the project at 60% and updated at 90% and final submittals.

##### **4.1.3 Drainage Design and Summary Report**

The CONSULTANT shall write the project summary as part of the permit submittal. The ICPR modeling shall be performed. The re-evaluation of the concept layout presented in the final drainage study shall be performed. The storm events to be checked shall include 5 design storms as mutually agreed by CITY and CONSULTANT. These events are anticipated to be the 25yr/6hr, 25yr/24hr, 10yr/6hr and 100yr/96hr plus the 25yr/96hr as required by SJRWMD.

#### **4.2 Construction Plans**

The CONSULTANT shall review and analyze the survey and geotechnical borings, conduct necessary field visit, prepare the construction plan sheets, notes and details to include sheets necessary to convey the intent and scope of the project for the purposes of construction. All elevation related sheets shall state the datum used.

##### **4.2.1 Preliminary Plans**

Preliminary plans (30%) shall include the following:

1. Key Sheet (CITY Template)
2. General Notes (CITY Template plus EOR's additions)
3. Typical Sections (Estimated 6 sheets)
4. Project Layout Sheet
5. Plan and Profile Sheets (1"=20' horizontal and 1"=2' vertical) (Estimated 16 sheets)
6. Roadway Cross Sections every 50 feet (1"=10' horz. and 1"=5' vert.) (Estimated 20 sheets @ 6 per sheet)
7. Utility Adjustment Plans – Base Sheets (1"=20' horizontal) (Estimated 8 sheets double stacked)

#### **4.2.2 Final Plans**

Upon review and approval of the 30% Preliminary Plans by the CITY, the CONSULTANT shall prepare plans for submittal at the 60%, 90%, and Final Plans stages. The plan sheets shall include the sheets in the following order:

1. Key Sheet (CITY Template)
2. Summary of Pay Items and Notes
3. Summary of Drainage Structures
4. General Notes (CITY Template plus EOR's additions)
5. Typical Sections (Estimated 6 sheets)
6. Survey Control Sheet(s) (Estimated 8 sheets)
7. Project Layout Sheet
8. Drainage Map (1"=40' horizontal and 1"=4' vertical) (3 sheets)
9. Geotechnical Soil Survey
10. Plan and Profile Sheets (1"=20' horizontal and 1"=2' vertical) (Estimated 16 sheets)
11. Roadway Cross Sections every 50 feet (1"=10' horz. and 1"=5' vert.) (Estimated 20 sheets @ 6 per sheet)
12. Drainage Structure Cross Sections (Estimated 40 sections = 14 sheets) (1"=10' horizontal and 1"=5' vertical)
13. Utility Adjustment Sheets (1"=20' horizontal and 1"=2' vertical) (Estimated 8 sheets double stacked)
14. Utility and Miscellaneous Details – Including Baffle Box
15. Traffic Control Plan (MOT) (Estimated 32 sheets)
16. SWPPP and Erosion Control Sheets (CITY Template, 1"=20')

The drainage map shall be presented as a separate figure in the permit application (Task5) and tree protection shall be noted on the plan and profile sheets as applicable.

#### **Task 5 - Permit Services**

The CONSULTANT shall schedule and attend one pre-application meeting with SJRWMD to discuss permitting requirements. The CONSULTANT shall prepare an ERP application and supporting documentation for the project permit, upon approval of the 60% construction plans by the CITY. The ERP application shall be provided to the CITY for signature and submitted to SJRWMD electronically. The CONSULTANT shall submit 90% construction plans in support of the ERP application. This task also includes addressing SJRWMD RAI(s), if required.

The CONSULTANT shall prepare and submit a Notice of Intent (NOI) in order to obtain the NPDES permit for construction activities.

The CONSULTANT shall also coordinate with the Army Corp of Engineers, however no permit with the Corp is anticipated.

#### **Task 6 - Utility Coordination**

The CONSULTANT shall evaluate existing utilities and propose a design that minimizes conflict. The CONSULTANT shall coordinate with all affected utility providers within the project limits by furnishing plans at the 30%, 60%, and 90% plan stages to the utilities for review and confirmation of utility location. The CONSULTANT shall provide to the CITY a list of all utilities that have been provided copies of the construction plans, and the dates the plans were delivered to each utility. The CONSULTANT shall also provide a summary of the response received from each utility. The CONSULTANT shall invite all affected utility providers to attend the 30%, 60%, and 90% construction plans review meetings, and conduct one separate meeting with all utility owners. The CONSULTANT shall coordinate with utilities as needed should potential conflicts be identified based on utility location and test hole results.

#### **Task 7 - Bid Phase Services**

The CONSULTANT shall assist the CITY in the bidding of the construction contract. The anticipated tasks associated with these bidding services are described below.

- 7.1 The CONSULTANT shall prepare the project description, review standard City Technical Specifications, and provide additional specifications for special project elements not covered under the City Standard Specifications. The CONSULTANT shall prepare the Summary of Work, Description of Project Site **by street names and intersections**, Construction Sequence/MOT, Bid Form, and Measurement & Payment Section.
- 7.2 The CONSULTANT shall attend the pre-bid meeting.
- 7.3 The CONSULTANT shall respond to contractor Requests for Information (RFI) during bidding of the project.

#### **Task 8 - Construction Phase Services**

The CONSULTANT shall support the CITY with limited construction phase services. The anticipated tasks are described below.

- 8.1 The CONSULTANT shall attend one pre-construction meeting to resolve technical issues and answer questions.
- 8.2 The CONSULTANT shall review shop drawing submittals for conformance with the plans and specifications.
- 8.3 The CONSULTANT shall respond to Request for Information (RFIs) during the course of construction in the event that further interpretation of the construction documents is required.
- 8.4 The CONSULTANT shall coordinate with the CITY to perform site visits or attend construction progress meetings if requested to discuss any issues to be resolved and accompany CITY staff during the final completion inspection for the project.
- 8.5 The CONSULTANT shall provide record drawings (pdf and digital copy in Civil 3D format) to the City for the as-built survey. The consultant shall review the as-built survey done by a licensed surveyor to confirm substantial conformance to the design and permit and certify them. The CONSULTANT shall complete and submit the SJRWMD As-Built Certification form for the project.

#### **SECTION 3. SERVICES NOT INCLUDED**

The following services are not provided as part of this Scope of Services:

- Construction engineering inspection services.
- Drainage or Right-of-Way easement acquisition.
- All fees associated with regulatory permit applications, reviews or determinations.
- Redesign of CITY owned utilities or utilities owned by others.

#### **SECTION 4. DELIVERABLES**

The CONSULTANT shall provide the CITY with the following deliverables:

- One (1) hard copy and one (1) digital copy in pdf format of the geotechnical report.
- Two (2) hard copies and one (1) digital copy of drainage design and summary report with back up calculations (ICPR input/output data, TC & CN, pre and post development drainage basin maps and node-reach diagram, etc.)
- Four (4) copies each for 30%, 60% and 90% construction plans (both 11x17 and 24x36).
- Pdf files for 30%, 60%, and 90% construction plans (both 11x17 and 24x36).
- Two (2) copies of the ERP submittal, including supporting documents, for electronic submittal to SJRWMD.
- Six (6) sets (11x17) and pdf files (both 11x17 and 24x36) of the 100% construction plans for internal final City review and eSupply (advertised electronically)
- Six (6) sets (24x36) of final 100% construction plans (three (3) signed and sealed), four (4) sets (11x17) final 100% plans, and pdf files (both 11x17 and 24x36) plus one (1) digital copy of construction plans in Civil 3D format.
- Three (3) sets (24x36) of the final survey (signed and sealed), pdf files (both 11x17 and 24x36), plus one digital copy of the survey in Civil 3D format. The digital copy shall have all reference files attached.

#### **SECTION 5. INFORMATION AND SERVICES TO BE PROVIDED BY CITY**

The CITY will provide the following information and services at the time of notice to proceed:

- Access to the CITY's facilities and properties associated with the project.



- Assist in coordinating with regulatory agencies and/or other utility owners.
- Review and provide comments for submittals within two (2) weeks.
- Payment of all permit application fees required.
- Assemble contract documents for bidding and prepare advertisement for bidding.
- Construction phase services except as provided in this scope.
- Survey files for areas already completed by Southeastern Survey and Mapping.

## SECTION 6. PROJECT SCHEDULE

The services described are anticipated to be completed in accordance with the following schedule. Unless noted otherwise, all time durations listed below are in calendar days. The schedule provided is based on the timely receipt of the information to be provided by the CITY. The schedule assumes two week submittal review time by the CITY.

- Schedule Kick-off Meeting: Upon receipt of notice to proceed (NTP).
- Schedule Pre-Application Meeting with SJRWMD: Upon receipt of NTP.
- Additional Topographic and Utility Survey: 45 days from receipt of NTP
- 30% Construction Plans: Submitted to CITY within **3** months of receipt of NTP.
- 60% Construction Plans and construction cost estimate: Submitted to CITY within **6** months of receipt of NTP.
- Geotechnical Report: Submitted with 60% Construction Plans.
- SJRWMD ERP application: Submitted after receipt/review of 60% CITY comments.
- 90% Construction Plans and construction cost estimate: Submitted to CITY within **9** months of receipt of NTP.
- 100% Construction Plans and construction cost estimate: Submitted to CITY within **11** months of receipt of NTP.
- Final 100% Construction Plans: Submitted to CITY within **12** months of receipt of NTP.

The total project period, including construction phase services, is estimated to be **24** months.

## SECTION 7. COMPENSATION

The CONSULTANT shall perform the Scope of Services on a Not-to-Exceed basis per task. The total Not-to-Exceed fee for this Scope of Services is **\$234,801.71 (Two Hundred Thirty Four Thousand, Eight Hundred One dollars and Seventy-One cents)**.

The CONSULTANT shall submit monthly status reports and invoices to the CITY's Project Manager for work performed during each calendar month. Invoicing shall be itemized per task accompanied by a brief description of the work effort completed and man-hour charged during the billing period. Reimbursable costs shall be itemized, and supporting documentation provided. The CONSULTANT shall submit monthly status reports during design phase of the project even there is no invoice attached.

**Table 1**  
**Scope of Services, Man-hour Summary, & Labor Budget - Eastern, Northern and Western Outfall - approx. 5800 LF of pipe**

|   | Labor Category  | Project Manager | Senior Engineer | Engineer | Designer | Clerical | Total Hours | Total Fee    |
|---|---|-----------------|-----------------|----------|----------|----------|-------------|--------------|
|   | Hourly Labor Rate with 2.99 Multiplier                            | \$212.98        | \$158.18        | \$115.17 | \$96.77  | \$65.81  |             |              |
| <b>Task 1 - Project Administration</b>                |   |                 |                 |          |          |          |             |              |
| 1.1   | Project Control and Team Coordination                             | 2               | 4               | 0        | 0        | 0        | 6           | \$1,058.68   |
| 1.2   | Monthly Status Reports  | 2               | 0               | 0        | 0        | 0        | 2           | \$425.96     |
| 1.3   | Kick-off, Review Meetings, Utility Coordination Meeting           | 1               | 10              | 10       |          |          | 21          | \$2,946.48   |
| <b>Total Task 1</b>                                   |   | 5               | 14              | 10       | 0        | 0        | 29          | \$4,431.12   |
| <b>Task 2 - Surveying Services</b>                    |   |                 |                 |          |          |          |             |              |
| See BFA Proposal                                      |   |                 |                 |          |          |          |             |              |
| <b>Task 3 - Soil Survey and Geotechnical Services</b> |   |                 |                 |          |          |          |             |              |
| See NADIC Proposal                                    |   |                 |                 |          |          |          |             |              |
| <b>Task 4 - Design Services</b>                       |   |                 |                 |          |          |          |             |              |
| <b>4.1 Drainage Design</b>                            |   |                 |                 |          |          |          |             |              |
| 4.1.1   | Field Visits  | 2               | 12              | 12       | 0        | 0        | 26          | \$3,706.16   |
| 4.1.2   | Design Documentation, Computation Book, Quantities, Cost Estimate | 2               | 8               | 16       | 0        | 0        | 26          | \$3,534.12   |
| 4.1.3   | Drainage Design & Summary Report                                  | 0               | 0               | 0        | 0        | 0        | 0           | \$0.00       |
| <b>4.2 Construction Plans</b>                         |   |                 |                 |          |          |          |             |              |
| 4.2.1   | <b>Preliminary Plans</b>  |                 |                 |          |          |          |             |              |
|   | Key Sheet   | 0               | 0               | 3        | 3        | 0        | 6           | \$635.82     |
|   | General Notes   | 0               | 0               | 3        | 3        | 3        | 9           | \$833.25     |
|   | Typical Sections (Existing showing utilities)                     | 3               | 6               | 24       | 32       | 0        | 65          | \$7,448.74   |
|   | Project Layout Sheet  | 3               | 3               | 12       | 16       | 0        | 34          | \$4,043.84   |
|   | Plan and Profile Sheets (10)                                      | 4               | 24              | 20       | 40       | 0        | 88          | \$10,822.44  |
|   | Roadway Cross Sections  | 4               | 24              | 20       | 40       | 0        | 88          | \$10,822.44  |
| 4.2.2   | <b>Final Plans</b>  |                 |                 |          |          |          |             |              |
|   | Key Sheet   | 0               | 0               | 3        | 3        | 0        | 6           | \$635.82     |
|   | Summary of Pay Items and Notes                                    | 2               | 4               | 12       | 4        | 0        | 22          | \$2,827.80   |
|   | Summary of Drainage Structures                                    | 4               | 8               | 16       | 24       | 0        | 52          | \$6,282.56   |
|   | General Notes   | 0               | 0               | 2        | 1        | 0        | 3           | \$327.11     |
|   | Typical Sections  | 3               | 6               | 16       | 8        | 0        | 33          | \$4,204.90   |
|   | Survey Control Sheet(s)   | 0               | 0               | 3        | 3        | 0        | 6           | \$635.82     |
|   | Project Layout Sheet  | 2               | 2               | 8        | 8        | 0        | 20          | \$2,437.84   |
|   | Drainage Map  | 3               | 8               | 12       | 16       | 0        | 39          | \$4,834.74   |
|   | Geotechnical Soil Survey  | 0               | 0               | 3        | 3        | 0        | 6           | \$635.82     |
|   | Plan and Profile Sheets (10)                                      | 2               | 20              | 60       | 60       | 0        | 142         | \$16,305.96  |
|   | Roadway Cross Sections  | 2               | 16              | 24       | 40       | 0        | 82          | \$9,591.72   |
|   | Drainage Structure Cross Sections                                 | 2               | 12              | 40       | 62       | 0        | 116         | \$12,930.65  |
|   | Utility Adjustment Sheets   | 2               | 16              | 32       | 40       | 0        | 90          | \$10,513.08  |
|   | Utility and Miscellaneous Details                                 | 3               | 6               | 6        | 3        | 0        | 18          | \$2,569.35   |
|   | Traffic Control Plan (MOT)  | 4               | 16              | 40       | 40       | 0        | 100         | \$11,860.40  |
|   | SWPPP and Erosion Control Sheets                                  | 3               | 6               | 12       | 12       | 0        | 33          | \$4,131.30   |
| <b>Total Task 4</b>                                   |   | 50              | 197             | 399      | 461      | 3        | 1110        | \$132,571.69 |
| <b>Task 5 - Permit Services</b>                       |   |                 |                 |          |          |          |             |              |
|   | Prepare NOI for NPDES Permit                                      | 1               | 4               | 0        | 0        | 4        | 9           | \$1,108.94   |
| <b>Total Task 5</b>                                   |   | 1               | 2               | 0        | 0        | 4        | 9           | \$1,108.94   |
| <b>Task 6 - Utility Coordination</b>                  |   |                 |                 |          |          |          |             |              |
|   | Furnish Plans to Utility Companies                                | 1               | 6               | 0        | 0        | 0        | 7           | \$1,162.06   |
|   | Review Responses from Utility Companies                           | 1               | 8               | 0        | 0        | 0        | 9           | \$1,478.42   |
|   | Provide List to City  | 1               | 2               | 0        | 0        | 0        | 3           | \$529.34     |
|   | Conduct Utility Meeting and Prepare Minutes                       | 1               | 4               | 0        | 0        | 1        | 6           | \$911.51     |
| <b>Total Task 6</b>                                   |   | 4               | 20              | 0        | 0        | 1        | 25          | \$4,081.33   |
| <b>Task 7 - Bid Phase Services</b>                    |   |                 |                 |          |          |          |             |              |
| 7.1   | Bid Documents   | 2               | 4               | 4        | 8        | 0        | 18          | \$2,293.52   |
| 7.2   | Attend Pre-bid Meeting  | 0               | 4               | 0        | 0        | 0        | 4           | \$632.72     |
| 7.3   | Respond to RFI's  | 2               | 4               | 4        | 2        | 0        | 12          | \$1,712.90   |
| <b>Total Task 7</b>                                   |   | 4               | 12              | 8        | 10       | 0        | 34          | \$4,639.14   |
| <b>Task 8 - Construction Phase Services</b>           |   |                 |                 |          |          |          |             |              |
| 8.1   | Pre-construction Meeting (3 projects)                             | 0               | 3               | 0        | 0        | 0        | 3           | \$474.54     |
| 8.2   | Review Shop Drawings  | 2               | 8               | 32       | 16       | 8        | 66          | \$7,451.64   |
| 8.3   | Respond to RFI's  | 2               | 8               | 12       | 12       | 4        | 38          | \$4,497.92   |
| 8.4   | Site Visits, Progress Meetings                                    | 2               | 8               | 16       | 0        | 2        | 28          | \$3,665.74   |
| 8.5   | As-built / WMD Certification                                      | 2               | 8               | 12       | 16       | 4        | 42          | \$4,885.00   |
| <b>Total Task 8</b>                                   |   | 8               | 35              | 72       | 44       | 18       | 177         | \$20,974.84  |
| <b>Total Project</b>                                  |   | 67              | 258             | 489      | 515      | 21       | 1350        | \$167,807.06 |

**Table 2**  
**Direct Reimbursable Budget**

| Description                       | Units  | Quantity | Cost    | Total              |
|-----------------------------------|--|----------|---------|--------------------|
| Plan Copies 11x17                 | 30% Submittal (48 sheets - 4 copies)                                   | 192      | \$ 0.15 | \$ 28.80           |
| Plan Copies 24x36                 | 30% Submittal (48 sheets - 4 copies)                                   | 192      | \$ 1.50 | \$ 288.00          |
| Plan Copies 11x17                 | 60% and 90% Submittals (115 sheets - 4 copies - 2 submittals)          | 920      | \$ 0.15 | \$ 138.00          |
| Plan Copies 24x36                 | 60% and 90% Submittals (115 sheets - 4 copies - 2 submittals)          | 920      | \$ 1.50 | \$ 1,380.00        |
| Plan Copies 11x17                 | 100% Submittal (115 sheets - 4 copies)                                 | 460      | \$ 0.15 | \$ 69.00           |
| Plan Copies 24x36                 | 100% Submittal (115 sheets - 4 copies)                                 | 690      | \$ 1.50 | \$ 1,035.00        |
| 8.5 x 11 copies                   | Geotechnical Report, SRWMD Application, Drainage Design, other reports | 2000     | \$ 0.10 | \$ 200.00          |
| <b>Total Direct Reimbursables</b> |  |          |         | <b>\$ 3,138.80</b> |

**Table 3**  
**Total Budget**

| Company                    | Task  | Cost                 | MBE/WBE %  |
|----------------------------|---|----------------------|------------|
| AVCON                      | Project Management, Drainage Design, Utility Coordination | \$167,807.06         |            |
| Barnes Ferland             | Subsurface Utility Exploration                            | \$ 26,423.00         | 11.25% MBE |
| L&S Diversified            | Survey  | \$ 19,150.50         | 8.16% WBE  |
| Modica                     | Environmental Consulting                                  | \$ 4,060.00          |            |
| NADIC                      | Geotechnical Engineering                                  | \$ 14,222.35         | 6.06% MBE  |
| Direct Reimbursable        |   | \$ 3,138.80          |            |
| <b>Total Not-to-Exceed</b> |   | <b>\$ 234,801.71</b> |            |

**BFA** Environmental Consultants  
*Barnes, Ferland and Associates, Inc.*

October 28, 2016

Mr. Rick Baldocchi, PE  
Vice President  
AVCON, Inc.  
5555 Michigan Street, Suite 200  
Orlando, Florida 32822

**Re: City of Orlando – Continuing Engineering Services  
East Lake Arnold Drainage Project**

Dear Mr. Baldocchi,

Pursuant to your request, Barnes, Ferland & Associates, Inc. (BFA) is pleased to submit our proposal to AVCON for subsurface utility exploration (SUE) services. As we understand your request, BFA will provide designation of underground utilities and utility excavations at the above noted City of Orlando project.

**Scope of Services:**

**Project Limits:** The project involves several roadways within the Dover Shores area which are shown highlighted in yellow on the attached “BFA Work Area Exhibit”.

**Utility Designation:** All underground utilities within the project area will be designated including service lines going to meters. Sanitary and storm systems are not included in this proposal. Electronic sensing equipment will be used to detect and mark those underground utilities that will transmit a signal. Ground Penetrating Radar (GPR) will be utilized in search of unknown utilities that may affect your project. GPR will also be used to locate sanitary sewer laterals where possible. Paint marks and/ or wire flags will be placed on the ground surface that will indicate the approximate location of the underground utility. Each utility will be color coded according to the ASCE standard industry color. Color coded sketches will be made depicting the results of the designation to assist your surveyor with the field location and drawing the lines connecting the utilities.

Utility designation will indicate the presence and approximate horizontal location of most underground utilities through the use and application of electronic sensing equipment and ground penetrating radar. BFA will notify Sunshine One Call for a Design Ticket to acquire utility provider information for the specified work areas. Those utilities that can be marked using the described techniques will be designated and marked with paint and/ or flags.

Please see the attached “Exhibit A Limitations” regarding underground utilities.

**Utility Location:** Utility excavations will be performed to positively locate and identify underground utilities. Excavations will provide the horizontal and vertical location of the utility as well as the size, type, material and general condition of the utility. A total of 40 excavations, 30 in soft soil and 10 in pavement, have been estimated for this project. A detailed Test Hole Report will be made for each excavation that will show a semi-permanent mark set directly above the utility for survey location. The sketch will show the measurement from the mark to the top of the utility with reference ties to nearby

**1230 Hillcrest Street • Orlando, Florida 32803  
Office (407) 896-8608 • Fax (407) 896-1822**

features to aid in the recovery of the mark. All other information obtained will also be on the sketch. Utility excavations will only be performed upon written authorization and direction from the City of Orlando.

A Locate Ticket will be acquired from Sunshine State One Call prior to excavation on utilities to have utility companies mark their lines. As required by law 2 full business days are required to allow utility companies mark utilities prior to excavation.

**Deliverables:** Designation will result in flag and/ or paint markings in the field. A color coded sketch of the designation will be prepared of the field marks. Excavation will result in a Test Hole Report showing the marker and other information obtained through the direct observation of the line. All Sunshine State One Call information and utility company provided plans will be included.

**Survey:** Survey services are not part of this proposal.

**Fee Estimate**

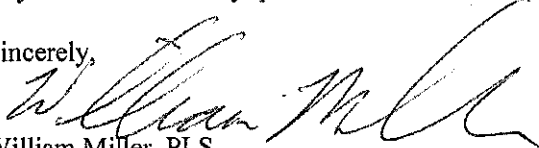
See the attached spread sheet for a breakdown of the man hours and our **Not to Exceed** fee estimated to provide you with the requested services.

**Schedule**

We are prepared to commence work within 5 working days of written notice to proceed with delivery of final products within 4 weeks thereafter.

If you should have any questions or need more information, please give me a call.

Sincerely,

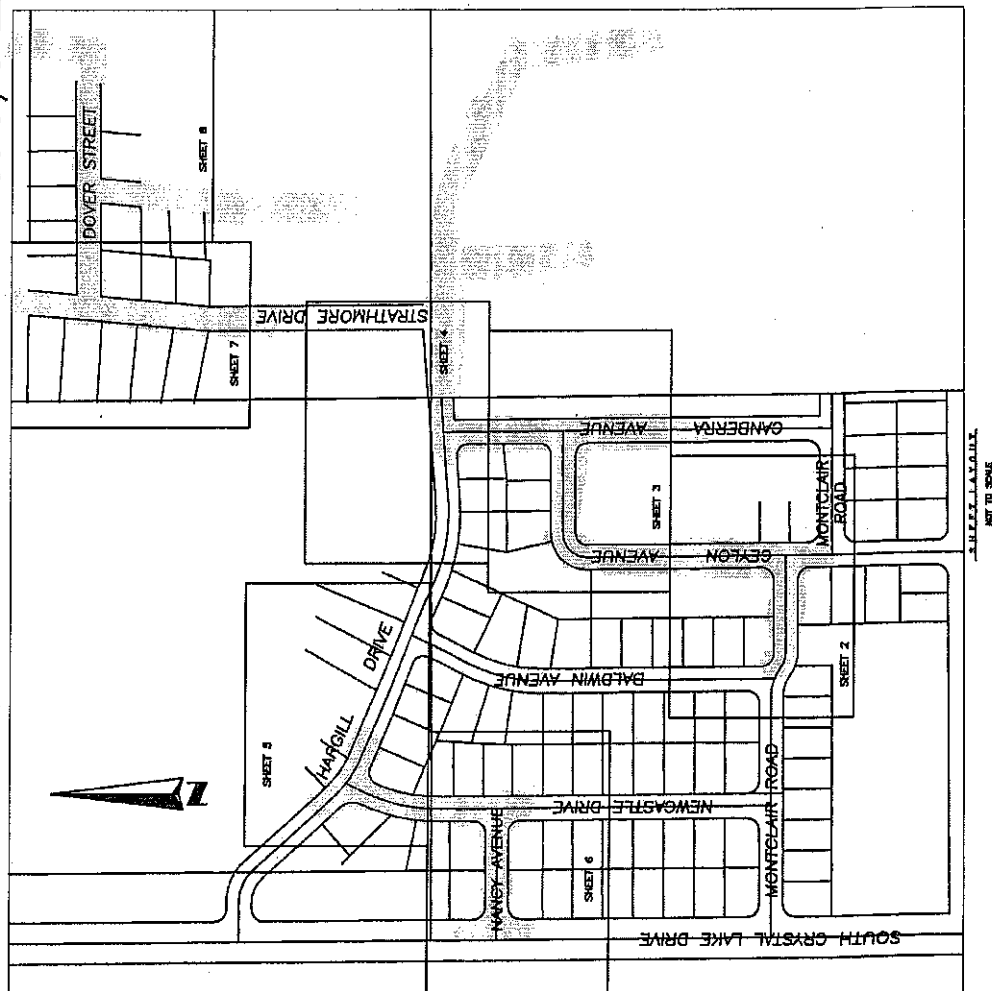
  
William Miller, PLS  
Survey Division Manager

Encl: Man hour and Fee estimate spread sheet  
BFA Work Area Exhibit  
Exhibit A Limitations



BFA WORK AREA EXHIBIT

**EAST LAKE ARNOLD  
ORANGE COUNTY, FLORIDA**



## LEGEND & APPRECIATION

- [illegible]

[illegible][illegible]

## Exhibit A Limitations

Subsurface Utility Engineering (SUE) services are utilized to identify and document the underground utility installations as stipulated in the scope of services and by contractual agreement. As in all disciplines, there are limitations of equipment, technology and personnel. The following describes, but is not limited to, the limitations usually encountered.

- Impervious subsurface material: Rock, below a depth of 3 feet. BFA will use pneumatic techniques to remove rock and pavement up to a depth of 3 feet. Below that depth we will rely solely on remote sensing and disclaim definitive results.
- Ground-water: BFA will make every reasonable attempt to definitively identify depth, size and type of underground utilities where ground-water is present. There are situations where groundwater will make visual inspection impracticable. We will use manual sensing to make the most reasonable measurements under these conditions, but it is understood that without direct visual confirmation the measurements and characteristic are limited to 'closely approximate'.
- Depth: Direct visual observation is limited to 7 feet under ideal conditions and diminishes as conditions deteriorate. Below 7 feet manual sensing is used to determine physical characteristics. Size by manual sensing is generally reliable, but the physical characteristics (type) of utility is dependent on too many variables to be considered definitive.
- There may be utilities that do not transmit electronic signals, that have not been made known to BFA, or that have no evidence at or above ground level. These utilities may not be detected or located.
- Ground penetrating radar has the ability to detect certain materials used for underground utilities however some materials such as clay are often difficult or impossible for detection due to the nature of the clay material being similar to adjacent soils.
- Ownership of underground utilities is not evident by observation of the buried utility. Every reasonable attempt will be made to determine ownership. Subsurface Utility Engineering (SUE) services do not include sanitary sewer installations/structures (gravity), or storm water lines/structures (gravity). However, the location of these utilities may be negotiated as a specific additional service.
- Consultant or Client Instructions: The Consultant or the Client may, from time to time, issue instructions or modify the scope of work. Any such instructions or modifications will be documented and the issuing party accepts liability for deviations from the agreed-upon Scope of Services.

If the Consultant or Client has plans, surveys, or other documentation that might assist in determining what utilities are present, they will be provided. As part of the Quality Assurance process, completed plans showing data derived from BFA's services will be submitted for review and confirmation.

BFA's services are intended as an aid to the designers of this project and it may affect actual construction operations. The information provided by BFA is based, in part, upon data furnished by utility owners and their representatives, or by the Consultant or Client, for which Barnes, Ferland & Associates Inc. cannot be held liable due to omissions, for clarity purposes or discrepancies. BFA shall remain harmless from any damage that may occur during construction based on BFA's information alone, as it is the contractor's responsibility to abide by Fl. Statutes #556.106.



Project: East Lake Arnold Drainage Project

Date: January 23, 2017

Firm: Barnes, Ferland and Assoc.

### East Lake Arnold Drainage Project

| Task                     | Senior Surveyor and Mapper |            | Surveyor and Mapper |        | Survey Tech. |        | Utility Coordinator |             | SUE Crew (2 person) |            | SUE Crew (3 Person) |            | Total Salary Costs | Total Hours | Remarks   |
|--------------------------|----------------------------|------------|---------------------|--------|--------------|--------|---------------------|-------------|---------------------|------------|---------------------|------------|--------------------|-------------|---|
|                          | \$131.56                   | (Rate)     | \$97.17             | (Rate) | \$67.27      | (Rate) | \$78.48             | (Rate)      | \$ 139.78           | (Rate)     | \$175.21            | (Rate)     |                    |             |   |
|                          | Hrs                        | Cost       | Hrs                 | Cost   | Hrs          | Cost   | Hrs                 | Cost        | Hrs                 | Cost       | Hrs                 | Cost       |                    |             |   |
| <b>Designation</b>       |                            |            |                     |        |              |        |                     |             |                     |            |                     |            |                    |             |   |
| a. Research/ Coordinate  | 3.0                        | \$394.68   | 0.0                 | \$0.00 | 0.0          | \$0.00 | 11.0                | \$863.28    | 0.0                 | \$0.00     |                     | \$0.00     | \$1,257.96         | 14          | 17,500 linear feet of underground utility designation and includes services lines; GPR approximately 100 sanitary laterals ; color coded utility sketch |
| b. Designation           | 8.0                        | \$1,062.48 | 0.0                 | \$0.00 | 0.0          | \$0.00 | 75.0                | \$5,886.00  | 0.0                 | \$0.00     | 0.0                 | \$0.00     | \$6,938.48         | 8           |   |
| c. GPR                   | 2.0                        | \$263.12   | 0.0                 | \$0.00 | 0.0          | \$0.00 | 25.0                | \$1,962.00  | 0.0                 | \$0.00     | 0.0                 | \$0.00     | \$2,225.12         | 2           |   |
| d.                       |                            | \$0.00     | 0.0                 | \$0.00 | 0.0          | \$0.00 | 0.0                 | \$0.00      | 0.0                 | \$0.00     | 0.0                 | \$0.00     | \$0.00             | 0           |   |
| e.                       | 0.0                        | \$0.00     | 0.0                 | \$0.00 | 0.0          | \$0.00 | 0.0                 | \$0.00      | 0.0                 | \$0.00     | 0.0                 | \$0.00     | \$0.00             | 0           |   |
| <b>SubTotal</b>          | 13                         | \$1,710.28 | 0                   | \$0.00 | 0            | \$0.00 | 111                 | \$8,711.28  | 0                   | \$0.00     | 0                   | \$0.00     | \$10,421.56        | 124         | 40 excavations estimate, 30 in dirt/soft soil and 10 in pavement; must be authorized by city  |
| <b>Excavation Option</b> |                            |            |                     |        |              |        |                     |             |                     |            |                     |            |                    |             |   |
| a. Utility Excavation    | 6                          | \$789.38   | 0                   | \$0.00 | 0            | \$0.00 | 20                  | \$1,569.60  | 60                  | \$8,386.80 | 30                  | \$5,266.30 | \$16,002.08        | 116         |   |
| <b>Sub Total</b>         | 0                          | \$789.38   | 0                   | \$0.00 | 0            | \$0.00 |                     | \$1,569.60  |                     | \$8,386.80 |                     |            | \$16,002.08        | 240         |   |
|                          |                            |            |                     |        |              |        |                     |             |                     |            |                     |            | \$0.00             |             |   |
| <b>TOTAL</b>             | 19                         | \$2,499.64 | 0                   | \$0.00 | 0            | \$0.00 | 131                 | \$10,280.88 | 60                  | \$8,386.80 | 30                  | \$0.00     | \$28,423.62        | 240         |   |



# L & S Diversified

Professional Surveyors and Mappers

When it is not  
in our power to  
follow what is true,  
we ought to follow  
what is most  
probable.  
~Rene Descartes

October 28, 2016

L & S Proposal No. 1945, 1959, 1960\_Rev5

AVCON, INC.  
Rick V. Baldocchi  
5555 E. Michigan Street, Suite 200  
Orlando, Florida 32822

Subject: City of Orlando – East Lake Arnold – Western, Eastern, and Northern Outfall

Dear Rick,

We appreciate your consideration of L&S Diversified, LLC to provide professional surveying services for the above referenced project. Below we have outlined a proposed schedule of services and the associated fees for this project.

## SCOPE OF SERVICES

The following scope is based on Information provided by Client

Recover and verify survey control set by Southeastern Surveying and Mapping (SSMC) as shown in the Topographic Survey of the East Lake Arnold Drainage Study, dated April 3, 2014.

Recover monumentation to establish apparent right of way and set additional survey control points along the proposed route.

Perform a topographic survey along the proposed route and within the established apparent right of way. For portions of proposed route previously performed by SSMC, perform cross sections at approximately 200 feet intervals for verification and locate any changes or new improvements since the date of last survey.

Field locate and map utility designation as marked by BFA.

Prepare a survey map and report of the survey tasks described above and compile with previous survey performed by SSMC. The survey will clearly define the areas performed by L&S and SSMC. Prepare one combined surface (DTM).

After preliminary design, field locate and map 40 subsurface utility excavations.

### Certifications

#### M/WBE

City of Orlando  
Orange County  
Osceola County  
State of Florida  
G.O.A.A.  
F.D.O.T.

#### DBE

F.D.O.T.

#### LDB

G.O.A.A.

#### SSBE

Expressway Authority

L & S Diversified, LLC

#### Principal

Sherry Lee Manor, PSM

405 Lake Howell Rd.  
Suite 1001

Maitland, FL 32751  
Phone (407) 681-3836  
Fax (407) 681-6541

www.LSsurveyor.com





## **PART 1 Survey Control and Specific Purpose Right of Way Survey**

Survey Tasks for Part 1 shall consist of: the position and description of all recovered monuments; right-of-way and adjacent parcels with recording information; survey control set at 600 foot intervals to facilitate project engineering.

Survey control will consist of the following:

Recover closest two (2) NGS, Orange County or City of Orlando geodetic control monuments; Monument and reference each end of baseline near project site. Utilize GPS static or redundant RTK control survey methods to establish control pairs at each end of project relative to North American Datum of 1983 adjustment of 2011 (NAD83/2011), state plane coordinates, Florida East zone. L&S will use GEOID 12A; Recover closest City of Orlando benchmarks; Measure closed differential level loop between control to establish elevations relative to North American Vertical Datum of 1988 (NAVD88) for each survey baseline monument.

The Survey will be performed and prepared in accordance with the State of Florida Standards of Practice, as set forth by the Board of Professional Surveyors and Mappers, Chapter 5J-17, Florida Administrative Code and per Section 472.027, Florida Statutes.

## **PART 2 Topographic Survey**

Survey Tasks for Part 2 shall consist of: cross sections at 50 foot intervals; location of existing improvements and visible above ground utilities; subsurface utilities (as marked by BFA); trees 6" and larger within approximately 15 feet of apparent right of way; and setting at least three (3) site bench marks in order to facilitate engineering for the project site.

The topographic survey will be displayed at one foot contours and will be based on the North American Vertical Datum (NAVD) of 1988.

The Topographic Survey will be prepared in accordance with the State of Florida Standards of Practice Chapter 5J-17, Florida Administrative Code, as set forth by the Board of Professional Surveyors and Mappers, pursuant to Section 472.027, Florida Statutes.

## **PART 3 VVHs (performed by Others)**

Survey Tasks for Part 3 shall consist of survey field location of VVHs and adding to Survey Deliverable. This Part will be a separate mobilization after Parts 1 and 2.

### **Deliverables**

3 signed and sealed surveys; Autocad dwg file of survey; PDF of survey



*The table below summarizes the costs associated with this proposal. Please review this information and let us know if you have any questions.*

| <b>Area 1 – Western Outfall</b>                                  |  |            |             |                   |
|--|--|------------|-------------|-------------------|
| <b>Part</b>  | <b>Description</b>   | <b>Qty</b> | <b>Rate</b> | <b>Amount</b>     |
| 1.1  | Verify and Set Survey Control<br>2 Person Survey Field Crew                                    | 8          | \$112.50    | \$900.00          |
| 2.1  | Data Collection - Topographic Survey<br>2 Person Survey Field Crew                             | 10         | \$112.50    | \$1,125.00        |
| 2.2  | Data Collection - Locate Utility Designation<br>Performed by BFA<br>2 Person Survey Field Crew | 2          | \$112.50    | \$225.00          |
| 2.3  | Drafting - Topographic Survey<br>Survey CAD Technician   | 14         | \$72.00     | \$1,008.00        |
| 2.4  | QA/QC<br>PSM   | 1          | \$120.00    | \$120.00          |
| 3.1  | Data Collection – Subsurface Utility<br>Excavations<br>2 Person Survey Field Crew              | 4          | \$112.50    | \$450.00          |
| 3.2  | Drafting - Subsurface Utility Excavations<br>Survey CAD Technician                             | 2          | \$72.00     | \$144.00          |
| <b>Total Not to Exceed Estimate for Area 1 – Western Outfall</b> |  |            |             | <b>\$3,972.00</b> |

| <b>Area 2 – Eastern Outfall</b>                                  |  |    |          |                   |
|--|--|----|----------|-------------------|
| 1.1  | Verify and Set Survey Control<br>2 Person Survey Field Crew                                    | 8  | \$112.50 | \$900.00          |
| 1.2  | Recover Monumentation<br>2 Person Survey Field Crew  | 6  | \$112.50 | \$675.00          |
| 2.1  | Data Collection - Topographic Survey<br>2 Person Survey Field Crew                             | 40 | \$112.50 | \$4,500.00        |
| 2.2  | Data Collection - Locate Utility Designation<br>Performed by BFA<br>2 Person Survey Field Crew | 4  | \$112.50 | \$450.00          |
| 2.3  | Drafting - Topographic Survey<br>Survey CAD Technician   | 26 | \$72.00  | \$1,872.00        |
| 2.4  | QA/QC<br>PSM   | 2  | \$120.00 | \$240.00          |
| 3.1  | Data Collection – Subsurface Utility<br>Excavations<br>2 Person Survey Field Crew              | 8  | \$112.50 | \$900.00          |
| 3.2  | Drafting - Subsurface Utility Excavations<br>Survey CAD Technician                             | 4  | \$72.00  | \$288.00          |
| <b>Total Not to Exceed Estimate for Area 2 – Eastern Outfall</b> |  |    |          | <b>\$9,825.00</b> |



| <b>Area 3 – Northern Outfall</b>   |  |    |          |                    |
|--|--|----|----------|--------------------|
| 1.1  | Verify and Set Survey Control<br>2 Person Survey Field Crew                                    | 8  | \$112.50 | \$900.00           |
| 1.2  | Recover Monumentation<br>2 Person Survey Field Crew  | 2  | \$112.50 | \$225.00           |
| 2.1  | Data Collection - Topographic Survey<br>2 Person Survey Field Crew                             | 18 | \$112.50 | \$2,025.00         |
| 2.2  | Data Collection - Locate Utility Designation<br>Performed by BFA<br>2 Person Survey Field Crew | 3  | \$112.50 | \$337.50           |
| 2.3  | Drafting - Topographic Survey<br>Survey CAD Technician   | 16 | \$72.00  | \$1,152.00         |
| 2.4  | QA/QC<br>PSM   | 1  | \$120.00 | \$120.00           |
| 3.1  | Data Collection – Subsurface Utility<br>Excavations<br>2 Person Survey Field Crew              | 4  | \$112.50 | \$450.00           |
| 3.2  | Drafting - Subsurface Utility Excavations<br>Survey CAD Technician                             | 2  | \$72.00  | \$144.00           |
| <b>Total Not to Exceed Estimate for Area 3 – Northern Outfall</b>                                |  |    |          | <b>\$5,353.50</b>  |
| <b>Total Not to Exceed Estimate for Areas 1,2 and 3 – Western, Eastern, and Northern Outfall</b> |  |    |          | <b>\$19,150.50</b> |

#### **Schedule**

L & S Diversified will begin the Survey on the subject property within 5 working days after receipt of your executed Notice to Proceed (NTP). This does not apply if extensive title work is involved, extensive certification requirements are needed, or if an ALTA/ACSM Survey is required. Proposed fee and schedule shown hereon is valid for up to 45 days from the date of receipt. We prefer at least 48 hours of notice for scheduling of a field crew.

**Total estimated time to complete Area 1, 2, and 3 – Western, Eastern, and Northern Outfall - Parts 1 and 2 is 2.5 months.**

#### **Additional Services**

If **AVCON, INC.** desires to change or expand upon these proposed services, an additional fee shall be negotiated. This renegotiation shall be accomplished prior to commencing the additional work, and may be necessary for any of the following services which are not a part of this contract:

Locating and/or flagging Flood Zone Line or Normal High Water Line (NHWL), tidal records, or locating 'O' or specific elevations, Research and ordering additional Maps, Records or Materials necessary for completing these specified tasks; client-imposed requirements not covered herein; Additional Certifications or Affidavits not specified herein; Elevation Certifications; Wetland Delineation or Location; sub-surface Excavation or Underground Utility Location; Extensive Title Review and Plotting of Easements; Offsite Surveys or Sketches; Vertical Topographic information unless outlined in this



proposal; Requests by Third Parties (Buyer's Attorney, Seller's Attorney, Lender or Lender's Counsel, Real Estate Agents, Title Company Personnel, etc.) for additions, deletions or revisions to be made to the survey drawings or maps before or after initial submittal to client; Additional Meetings and Errands not covered herein which are necessary to complete these specified tasks; Client-Authorized on-site instruction given to field crew for extra field work not covered herein; Client-approved overtime; Additional ALTA Table A Items.

Reimbursable such as overnight mailings, sending electronic files, copying charges, blueprinting costs, plotting of extra drawings not covered herein, delivery, shipping, or rush charges, etc. will be billed as an Extra cost on a Time, Materials and Expense basis.

It may be necessary for the Project Manager to call the client to receive verification and authorization for Extra Costs stated above in the preceding paragraph, and may further require the client to sign an Additional Work Authorization Form for any out-of-scope requests.

All public entity or jurisdictional agency fees are to be paid directly by the client prior to obtaining approvals or permits. These fees include, but are not limited to, platting, impact, re-zoning, permitting, review and application fees. L & S Diversified has no control over the procedures of public entities or jurisdictional agencies, and therefore, cannot guarantee timing and outcome of permits and entitlements related to this site/project.

***Please see attached Exhibit "A" - Standard Provisions of Agreement for Professional Services and Exhibit "B" - Hourly Rates in addition to this Agreement.***

**The following additional provisions are included in this contract:**

1. The terms of this agreement shall be valid for client acceptance for a period of sixty (60) days from the date of execution by L&S Diversified, LLC after which time this contract offer becomes null and void if not accepted formally (evidenced by receipt of an executed copy of this document).
2. This agreement may be terminated by either party within fifteen (15) days written notice. In the event of termination, L&S Diversified, LLC shall be compensated to the date of termination, including direct expenses then due.
3. All rates and fees quoted in this document shall be effective for a period of twelve (12) months, after which time they may be renegotiated with the client.
4. For projects lasting over 30 days, L & S Diversified, LLC will bill on 25<sup>th</sup> of the month. The invoiced amount will include all work (time and materials) performed for the calendar month, up to the 20<sup>th</sup>.
5. The client will pay invoices to L & S Diversified within 15 days of receipt of invoices paid by the City of Orlando and understands interest charges of 1.5% per month will be applied to any unpaid balance. L&S Diversified, LLC may elect to stop work until payment is received. If work is stopped for thirty (30) days or more, L&S Diversified, LLC may be compensated for start-up costs when work resumes.
6. Upon client request, we will contract and/or coordinate with applicable transportation, environmental, geotechnical, and engineering consultants, and



will rely upon their work; however, L&S Diversified, LLC assumes no liability for the accuracy of their work.

Thank you for this opportunity and we look forward to working with you on this exciting new project. Please sign, date and return a copy of this agreement as your authorization to proceed with these professional services. Should you have any questions, please do not hesitate to call.

Sincerely,  
L & S Diversified, LLC

Sherry Lee Manor, PSM  
President

January 25, 2017

The undersigned agrees to the above terms and costs associated with project completion.

Accepted By:

\_\_\_\_\_  
Company

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

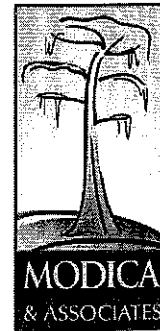
\_\_\_\_\_  
Title



Via Email: [RVB@AVCONINC.com](mailto:RVB@AVCONINC.com)

March 24, 2017

Rick V. Baldocchi, P.E.  
Vice President  
AVCON, Inc.  
5555 E. Michigan Street, Suite 200  
Orlando, Florida 32822



ENVIRONMENTAL  
PLANNING  
DESIGN &  
PERMITTING

**Re: Proposal for Environmental Resource Permitting  
Lake Arnold Drainage Improvements  
City of Orlando, Florida**

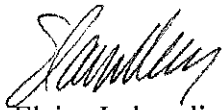
Dear Rick:

The attached revised Scope of Services is provided for proposed drainage improvements to Lake Arnold in the City of Orlando, Florida. This proposal comprehensively addresses improvements for the eastern, northern and western outfalls as indicated on Figure 4 of the *East Lake Arnold Drainage Study* Memorandum prepared by CDM Smith dated August 2014. Tasks to be completed by Modica & Associates include Environmental Resource Permitting (ERP) support through St. Johns River Water Management District (SJRWMD).

This Scope of Services does not include permitting through the U.S. Army Corps of Engineers (ACOE). It is understood that the City of Orlando does not believe that ACOE permitting will be required. In the event ACOE permitting is necessary, this task can be provided as additional services.

Modica & Associates appreciates the opportunity to provide you with our services. Please contact me directly if you have any questions regarding the attached proposal.

Sincerely,

  
Elaine Imbruglia  
President

PHONE 352.394.2000 FAX 352.394.1159  
302 MOHAWK ROAD, CLERMONT, FLORIDA 34715  
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**PROPOSAL FOR ENVIRONMENTAL RESOURCE PERMITTING SERVICES  
LAKE ARNOLD DRAINAGE IMPROVEMENTS  
CITY OF ORLANDO, FLORIDA  
March 24, 2017**

**SCOPE OF SERVICES**

The following Scope of Services is provided for proposed drainage improvements to Lake Arnold in the City of Orlando, Florida. This proposal comprehensively addresses improvements for the eastern, northern and western outfalls as indicated on Figure 4 of the *East Lake Arnold Drainage Study* Memorandum prepared by CDM Smith dated August 2014.

**Preliminary Site Inspection**

1. Modica & Associates will conduct a site inspection to document the existing conditions of the proposed location for the planned drainage improvements and all three outfall points. Existing vegetation along the shoreline will be observed and documented. A wetland line will be established if needed, in accordance with the statewide wetland delineation methodology set forth in Chapter 62-340 F.A.C. Any wildlife observations will also be documented.

**Cost: \$750.00**

**Environmental Resource Permitting**

2. Modica & Associates will prepare appropriate sections of the Environmental Resource Permit (ERP) application for submittal to St. Johns River Water Management District (SJRWMD). Information to be prepared includes a narrative describing current site conditions, summary of wetland impacts, wildlife information (as applicable) and map series of project site prepared using ArcGIS. This information also includes ERP Tables 1 – 3 as applicable.
3. Conduct a site inspection with SJRWMD to review the project site and flagged wetland limits, if applicable.
4. Coordinate with AVCON, Inc. to advise of any changes to the wetland lines or assumptions following the site inspection with SJRWMD staff.
5. It is anticipated that the wetland impacts associated with construction of the proposed outfall structure will be de minimus in nature, and no wetland mitigation will be required. In the event SJRWMD determines that mitigation will be required, Additional Services may be required to complete the necessary Uniform Mitigation Assessment Method (UMAM) worksheets to quantify the wetland impacts and determine required mitigation, and to negotiate an appropriate mitigation plan.

**Cost (Tasks 2-5): \$2,500.00**





6. Modica & Associates will respond to up to two Requests for Additional Information (RAI) issued by SJRWMD.

**Cost: Hourly @ \$95.00, not to exceed \$760.00**

**Reimbursables**

Reimbursable expenses include mileage and tolls for a minimum of two site inspections.

**Cost: \$50.00**

**TOTAL FEE (Not to Exceed):**

**\$3,250.00 + \$760.00 (if needed) + \$50.00 reimbursables = \$4,060.00**



**NES** **NADIC ENGINEERING SERVICES, INC.**  
**Civil, Environmental, and Geotechnical Consultants**

November 2, 2016  
(Revised January 20, 2017)

**Avcon, Inc.**  
5555 East Michigan Street,  
Suite 200  
Orlando, FL 32822

Attention: Mr. Rick Baldocchi, P.E.

RE: Fee Proposal for Geotechnical Engineering Services  
Northern-Eastern-Western Outfalls  
East Lake Arnold Drainage Improvements  
City of Orlando, Florida  
NES Proposal No. G16049

Dear Mr. Baldocchi;

**Nadic Engineering Services, Inc. (NES)** is pleased to submit this revised proposal to provide geotechnical subsurface exploration and geotechnical engineering evaluation for the above referenced project based on the information provided to us via your emails dated October 25, 2016 and January 5, 2017.

The purpose of this investigation will be to explore the subsurface soil to determine groundwater depths at the site and to use the information obtained to provide geotechnical engineering recommendation for site preparation and pipe backfill for the proposed drainage improvements. This proposal presents our understanding of the project, scope of services, cost and schedule for providing these services.

We understood the City of Orlando is planning to install the following stormwater pipes in order to improve the drainage system to East Lake Arnold:

Northern Outfall:

- 1047 linear feet of 18-inch RCP
- 372 linear feet of 24-inch RCP

Eastern Outfall:

- 1494 linear feet of 18-inch RCP
- 1442 linear feet of 24-inch RCP
- 464 linear feet of 36-inch RCP

Western Outfall:

- 101 linear feet of 18-inch RCP
- 278 linear feet of 24-inch RCP
- 376 linear feet of 30-inch RCP
- 263 linear feet of 42-inch RCP

Our recommended scope of services includes the following

1. Stake boring locations and coordinate utility clearance at the site.
2. Mobilize truck mounted drill rig and personnel.

**NES**  
601 N. Hart Boulevard,  
Orlando, Florida 32818

Phone: (407) 521-4771  
Fax: (407) 521-4772  
Email: [nadic@nadicinc.com](mailto:nadic@nadicinc.com)

**Northern-Eastern-Western Outfall  
East Lake Arnold Drainage Improvements - Fee Proposal  
Avcon, Inc.  
NES Proposal No. G16049**

January 20, 2017  
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3. Perform a total of 22 Standard Penetration Test borings to a depth of 15 feet each along the proposed stormwater improvement route.
4. Collect groundwater level measurements and estimate normal wet seasonal high groundwater tables.
5. Visually examine all recovered soil samples and perform laboratory tests on selected representative soil samples. The laboratory testing will include Sieve analysis, Atterberg limits, organic content and natural moisture content determinations, as appropriate.
6. Incorporate the results of the field and laboratory testing in a formal report with discussion and recommendations for site preparation, fill placement and compaction of the drainage pipe.

In accordance with the proposed scope of services and unit prices, we estimate the total cost of our geotechnical services to be **\$14,222.35**

In computing this budget amount, we assumed the site is accessible to our drill rig and field crew; that we have right of entry to the pipe route, and that we will not experience undue delays without are beyond our control. If such condition occurs and will affect the cost of exploration as provided, we will notify you and obtain approval for any additional work resulting from the delay before proceeding.

Our schedule to complete the described work will be four (4) weeks from your written notice to proceed. We anticipate mobilizing within five (5) to seven (7) days of your authorization to proceed. Laboratory and report preparation should be completed within two (2) week after completion of field work.

NES appreciates the opportunity of working with you, Avcon and the City of Orlando on this project. If you have any questions regarding this proposal, or if we may be of further assistance, please do not hesitate to contact the undersigned.

Sincerely,

**NADIC ENGINEERING SERVICES, INC.**



Godwin N. Nnadi, Ph.D., P.E.  
Principal Engineer

GNN:/G16049\_Northern Outfall Drainage\_01202017.pro

Attachment:

Attachment A – Computation of Geotechnical Cost

**NES**

ATTACHMENT A  
COMPUTATION OF GEOTECHNICAL COST  
EAST LAKE ARNOLD DRAINAGE IMPROVEMENTS  
EAST LAKE ARNOLD, CITY OF ORLANDO

| Component/Unit Description                               | UNIT | QTY | RATE     | TOTAL COST         |
|--|------|-----|----------|--------------------|
| <b>I. FIELD EXPLORATION:</b>                             |      |     |          |                    |
| 1. Crew & Equipment Mobilization:                        |      |     |          |                    |
| a. - Truck-Mounted Equipment                             | Ea.  | 2   | \$450.00 | \$900.00           |
| 2. Standard Penetration Test (SPT) Borings :             |      |     |          |                    |
| a. 0 to 15 ft. depths: (23@15')                          | LF   | 330 | \$12.40  | \$4,092.00         |
| 3. MOT (Signs & Barricades):                             | Ea.  | 3   | \$150.00 | \$450.00           |
| 4. Site Reconnaissance/Utility Coordination, Core Patch: |      |     |          |                    |
| a. - Engineer  | hrs. | 0   | \$86.53  | \$0.00             |
| b. - Senior Engineering Tech.                            | hrs. | 12  | \$66.23  | \$794.76           |
| 5. Grout Seal Boreholes:                                 | LF   | 330 | \$5.00   | \$1,650.00         |
| <b>Totals for Field Exploration</b>                      |      |     |          | <b>\$7,886.76</b>  |
| <b>II. LABORATORY TESTING:</b>                           |      |     |          |                    |
| 1. Visual Exam./Stratify(ASTM D-2488):                   |      |     |          |                    |
| - Senior Engineering Tech.                               | hrs. | 3   | \$66.23  | \$198.69           |
| 2. Grain Size Analysis:                                  |      |     |          |                    |
| a. - Full Grad.(FM 1-T 88)                               | Ea.  |     | \$75.00  |                    |
| b. - Single Sieve(FM 1-T 88)                             | Ea.  | 17  | \$40.00  | \$680.00           |
| 3. Organic Content(FM 1-T 267):                          | Ea.  | 4   | \$40.00  | \$160.00           |
| 4a. Atterberg Limits(FM 1-T 89/90):- Liquid Limit        | Ea.  | 4   | \$40.00  | \$160.00           |
| 4b. Atterberg Limits(FM 1-T 89/90):-Plastic Limit        | Ea.  | 4   | \$40.00  | \$160.00           |
| 5. Moisture Content                                      | Ea.  | 8   | \$12.00  | \$96.00            |
| <b>Totals for Laboratory Testing</b>                     |      |     |          | <b>\$1,454.69</b>  |
| <b>III. ENGINEERING AND TECHNICAL SERVICES:</b>          |      |     |          |                    |
| 1. Chief Engineer:                                       | hrs. | 0   | \$55.71  | \$0.00             |
| 2. Senior Engineer:                                      | hrs. | 2   | \$55.71  | \$111.42           |
| 3. Project Engineer:                                     | hrs. | 28  | \$45.19  | \$1,265.32         |
| 4. Cadd Technician:                                      | hrs. | 8   | \$24.42  | \$195.36           |
| 5. Senior Engineering Technician:                        | hrs. | 0   | \$22.91  | \$0.00             |
| 6. Secretarial/Clerical:                                 | hrs. | 3   | \$16.64  | \$49.92            |
| <b>Totals for Engineering and Technical Services</b>     |      |     |          | <b>\$1,622.02</b>  |
| <b>Multiplier</b>  |      |     |          | <b>3</b>           |
| <b>Reimbursement Expense</b>                             |      |     |          | <b>\$14.84</b>     |
| <b>Totals for all Services</b>                           |      |     |          | <b>\$14,222.35</b> |
| <b>GRAND TOTAL (Not-To-Exceed)</b>                       |      |     |          | <b>\$14,222.35</b> |