ATKINS

Member of the SNC-Lavalin Group

WORK ORDER INITIATION FORM
for the CITY OF CLEARWATER

Date: 5/14/2018

Project Number: _____

City Project Number: 14-0048-EN

Plan Set Number: _____

1. PROJECT TITLE:

Lower Spring Branch Stormwater Improvements Consulting Services

2. SCOPE OF SERVICES:

Atkins (ATKINS) has prepared this Work Order Initiation Form for the City of Clearwater (CITY) for the design of the Lower Spring Branch Stormwater Improvements, preparation of construction documents, preparation of permit applications, and limited construction phase services. The design of proposed improvements will be based on conceptual design preferred alternative described in the Lower Spring Branch Flood Control – Basis of Design Report & Cooperative Funding Support project prepared for the CITY by ATKINS (CITY Project Number 14-0048-EN). The Lower Spring Branch Stormwater Improvements is identified as Project 1B in the Stevenson Creek Watershed Management Plan (WMP) and is located within the Lower Stevenson Creek Subwatershed.

The objectives of the Lower Spring Branch Stormwater Improvements are to design and construct improvements to the stormwater conveyance system for a section of Lower Spring Branch extending from Douglas Avenue to Overbrook Drive. The goals of the project are to enhance flood protection. A schematic representation of the proposed stormwater conveyance improvements (Alternative 1b) is shown in **Figure 1** at the end of this scope.

The conceptual design of Lower Spring Branch Stormwater Improvements consisted of the replacing the following bridge/culvert crossings with larger conveyance structures with following approximate sizes.

- Douglass Avenue – Double 14’ x 8’ RCBC
- Springtime Avenue - 23’ x 10’ ConSpan bridge
- Overbrook Drive – 24’ x 11’ ConSpan Bridge

In addition to the design of the bridge/culvert crossings, if necessary, ATKINS will design the portion of the water and sewer mains that are attached the crossings that will need to be replaced concurrently. This scope does not include any additional water and sewer main design beyond the relocation of existing utilities associated with the bridge/culvert crossing. The design included herein does not include any design to the docks along Spring Branch.

In this Work Order, ATKINS will design the proposed improvements, prepare the construction documents, prepare permit applications for SWFWMD and USACE, and provide limited construction phase services for the proposed design for Lower Spring Branch Stormwater Improvements. The proposed scope of work for this Work Order is as follows. The design plans shall be compiled using the CITY of Clearwater Deliverables Standards, as referenced in Attachment "A".

1. PROJECT MANAGEMENT, MEETINGS & QA/QC

This task involves managing the technical tasks, communicating, and coordinating with the CITY staff and subconsultants. Atkins's Project Manager will be responsible for overall client satisfaction in all aspects of this Work Order including the schedule, deliverables, and quality control. Meetings will be held subsequent to each design deliverable as well as one kick-off meeting to be held at project initiation. Meeting minutes will be prepared and submitted to the CITY.

2. DATA COLLECTION

2.1 <u>Geotechnical Services</u> – ATKINS has retained the services of Gulf Coast Geotechnical Engineering (GCGE) to perform geotechnical investigations. This effort will consist of the following;

- Review published soils and topographic information. This published information will be obtained from the appropriate Florida Quadrangle Map published by the United States Geological Survey (USGS), as well as the Web Soil Survey of Pinellas County, Florida, published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).
- Execute a program of subsurface exploration consisting of borings, subsurface sampling, and field testing. We plan to perform two (2) Standard Penetration Test (SPT) boring to depths of approximately 80 feet below existing site grades at each bridge location. Boring samples will be collected and SPT resistances will be measured virtually continuously for the top 10 feet and on intervals of 5 feet thereafter.
- Visually classify the samples in the laboratory using the Unified Soil Classification System (USCS). Perform laboratory classification tests to confirm the visual classifications. Identify soil conditions at each boring location.
- Prepare a formal engineering report in accordance with the scope of services herein that summarizes the course of study pursued, the field data generated, subsurface

conditions encountered and our engineering recommendations in each of the pertinent topic areas.

2.2 <u>Subsurface Utility Exploration</u> – ATKINS has retained the services of George F. Young (GFY) to perform subsurface utility exploration (SUE) in the project area. This effort will consist of the following;

- Provide traffic control within the work areas while designating the underground utilities. Traffic control is to be maintained in accordance with applicable standards. Provide safety devices, signs and/or other safety equipment as appropriate.
- ASCE Quality Level B - Use Ground Penetrating Radar (GPR), designate and mark the horizontal location of found underground utilities from apparent ROW to ROW for 200 ft. in each direction at 3 bridge locations Overbrook Ave., Springtime Ave. and Douglas Ave.
- ASCE Quality Level A - GFY to provide a test hole (VVH-verified vertical and horizontal) on each found utility line on both sides of the bridge at each of the 3 locations (where access is available for crews and equipment).
- For each test hole, cut and remove existing pavement and excavate material down to the utility in a way that prevents damage to wrappings, coatings or other protective coverings of the utilities (i.e. vacuum/pressure excavations, hand digging, etc.). Backfill and compact with select material around the utility. Provide a restoration of the surface pavement, within the limits of the cut, at the time of the backfill.
- Client to survey found utility information, and to assist GFY in coordination of SUE and survey crews.

2.3 <u>Topographic Survey</u> - The limits of the survey for each site shall be 200 feet in both directions from the endpoints of each bridge as measured along the centerline of the street. The surveyor shall conduct the following services to support the project design;

- Review underlying plats of record to determine the location of rights of way
- Perform field recovery of horizontal and vertical survey control as required to meet the project objective.
- Locate all visible surface indications of utilities and drainage, including, but not limited to utility castings, driveways (including type of construction), sidewalks, pavements, curbs, gutters, medians and other significant features within the Project Area.
- Acquire elevations for rims, grates and inverts of all pipes, catch basins and manholes within the Project Area. Atkins will also measure elevations of natural grade, hardscape surfaces, pavements and high/low points for the Project Area at proper intervals throughout.

- Upon completion of the field survey element of the project, we will create a Topographic Survey Map and Report and submit certified sets of each, together with electronic files for informational purposes only. The Map will be drawn to an adequate scale in English Units of measurement, and will contain as many details as may be required to fully explain the project results.

3. DESIGN PHASE

3.1 Preparation of 60% Construction Plans - This involves generating the following design plan sheets and performing related design tasks and submitting applicable permits.

60% Construction Plan Sheets - The 60% submittal shall include the following:

1. Cover Sheet
2. Abbreviations, Legend, & Utility Information
3. General Construction Notes related to best management practices, utilities, and other conditions relevant to the project,
4. Drainage Map
5. Key Sheet
6. Existing Conditions Plan / Survey / Horizontal Control (3 Sheets)
7. Demolition Plans indicating existing improvements, utilities, and topography, and identification of trees to be removed (3 sheets).
8. Plan & Profile sheets with 60% layout of the proposed improvements including utility relocation/adjustment details indicating utility conflicts, relocation design (3 Sheets)
9. Roadway Restoration Plans (3 Sheets)
10. Roadway Cross Sections (3 sheets). Typical pavement sections shall indicate typical cross-sectional slopes, pavement requirements, right-of-way lines, sidewalks, curbs, gutters, and landscaped areas
11. Roadway & Sidewalk Details (2 Sheets)
12. Drainage Details including standard and nonstandard stormwater management structures, retaining walls, and related notes (2 Sheets),
13. Erosion control and tree protection details, including best management practices applied to the project (1 sheet)
14. Utility Details including proposed utility structures, conflict manholes, and design details (1 Sheets)

Associated 60% Design Tasks

- Perform a site visit to review survey information and changes to the site based on the design.
- Plan and attend a SWFWMD pre-application meeting.
- Conduct project meetings and coordination.
- Provide assistance with and/or attendance at a public meeting (if required).

- Utility coordination.
- Submit the 60% plans to the utility companies and the CITY's utility department for mark up.
- Generate the engineer's opinion of probable construction cost at the 60% level.
- Provide assistance with and/or attendance at a public meeting (if required).
- Submittal of permit applications for the SWFWMD and USCOE.
- Conduct Atkins' 5-step quality control (QC) process.
- Submit a 60% plan set.
- 60% Plan review meeting with the CITY.

3.2 Preparation of 90% Construction Plans - The 90% construction plans shall include the design items required for the construction of the project, including the special provisions and technical specifications. In addition to the items from the 60% submittal, requirements for the 90% submittal shall include the following additional items:

1. Maintenance of Traffic Plan,
2. Structural plans, details, and calculations, including design and details of shallow foundations, retaining walls, structural reinforcing, and tiebacks.
3. Detailed construction quantities based upon 90% design.
4. Generate the engineer's opinion of probable construction cost at the 60% level.
5. Technical specifications and Special Provisions.

Associated 90% Design Tasks

- Respond to 60% plans CITY review comments.
- Conduct project meetings and coordination.
- Utility coordination.
- Submit the 90% plans to the utility companies and the CITY's utility department for mark up.
- Generate the engineer's opinion of probable construction cost at the 90% level.
- RAIs from permit application submittals for the SWFWMD and USCOE.
- Conduct Atkins' 5-step quality control (QC) process.
- Submit a 90% plan set.
- 90% Plan review meeting with the CITY.

3.3 Final (100%) Construction Documents -The 100% submittal shall address the CITY's final review comments.

Plans shall be reviewed and checked by a civil engineer registered in the state of Florida as the Engineer of Record. The Engineer(s) of Record shall sign, seal and date the design calculations, technical specifications and contract drawings as required by Florida law.

See Attachment "A" – Deliverables – for specific labeling requirements.
The construction plans will be prepared at a scale of 1"=20' for full size plans (24"x36") conforming to the CITY of Clearwater deliverable standards as described in Attachment "A".

Associated Design Tasks 100% Submittal:

1. Respond to 90% CITY Review Comments
2. 100% Phase Project Coordination
3. 100% Utility Coordination
4. Submit 100% Design Package
5. 100% Technical Specifications
6. Generate the engineer's opinion of probable construction cost at the 100% level.
7. Conduct Atkins' 5-step quality control (QC) process for the 100% design package.
8. 100% Plan Review Meeting with CITY
9. Respond to 100% CITY Review Comments
10. Final Bid Package Submittal Preparation
11. Conduct Atkins' 5-step quality control (QC) process for the final bid package

4. BIDDING ASSITANCE

The bidding phase services will consist of the following activities:

1. Pre-Bid meeting attendance
2. Respond to bidding inquiries from contractors
3. Preparing addenda
4. Reviewing bid tabulations

5. LIMITED PHASE CONSTRUCTION SERVICES

Limited construction phase services will consist of the following activities:

1. Attend the pre-construction meeting
2. Construction phase project coordination
3. Monthly progress meetings (6-month construction period estimated)
4. Shop drawing reviews
5. Respond to Contractor RFIs and plan modification for field changes
6. Site visits (6 visits)
7. Final inspection walk-through and preparation of punch list
8. Prepare of record drawings
9. Prepare the of SWFWMD statement of completion

Shop Drawing Review

ATKINS shall review the Shop Drawing submittals for compliance with the applicable requirements of the Contract Documents. The review and approval, or other action, shall not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions and programs. ATKINS shall review, and approve, or take other appropriate action with respect to Shop Drawings and the results of tests and inspections and other data that the Contractor is required to submit. ATKINS shall receive and review the submittals for compliance with the requirements of the Contract Documents and shall determine and advise the CITY on the acceptability of substitute materials and equipment proposed by Contractor. ATKINS' approval of Contractor submittals is a representation to the CITY that said submittals have general conformance to applicable requirements of the Contract Documents, unless there is written exception. ATKINS shall not:

- Authorize any deviation from the Contract Documents or substitution of materials or equipment, unless authorized by the CITY.
- Undertake any of the responsibilities of the Contractor, subcontractors, or Contractor's superintendent.
- Advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
- Advise on, issue direction regarding or assume control over safety precautions and programs of the work. ATKINS shall immediately report to the Contractor and the CITY any safety concerns or violations observed.
- Accept shop drawing or sample submittals from anyone other than the Contractor.

Contractor RFIs and Project Site Visits

- RFIs – ATKINS shall provide, within reasonable time, written responses to requests from the Contractor for clarification of the requirements of the contract documents. Services shall be provided as part the Scope of Services. The included fee estimate (lump sum amount) is based on up to 10 RFI responses will be required.

- Construction Observation during Site Visits – ATKINS shall visit the site at intervals appropriate to the stage of construction, or as otherwise agreed to in writing by the CITY and ATKINS, in order to observe the progress and quality of the work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow ATKINS to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the Contract Documents. Based on general observation, ATKINS shall inform the CITY of the progress of work and shall advise the CITY of observed deficiencies. ATKINS shall not supervise, direct or have control over the Contractor's work nor have any responsibility for the

construction means, methods, techniques, sequences or procedures selected by the Contractor, nor for the Contractor's safety precautions or programs related to project construction.

Record Drawings

The CITY will provide one (1) copy of the red-lined project plan sheets, and ATKINS shall create the Record Drawings based on the information in the red-lined sheets and compose a memo describing any deviations from the permitted plans. ATKINS will submit five (5) signed and sealed Record Drawings, and the memo to the CITY.

SWFWMD Permit Statement of Completion

After completing the Record Drawings and reviewing the changes compared to the permitted drawings, ATKINS will prepare the SWFWMD Statement of Completion and Request for Transfer to Operation Entity form and submit to the CITY.

3. BUDGET:

See Attachment "B".

This price includes all labor and expenses for the completion of these tasks in accordance with Professional Services Method "B" – Lump Sum – Percentage of Completion by Task, **for a fee not to exceed Three Hundred Nine Thousand Forty-Four Dollars ($309,044)**.

Permit application fees will be paid by the consultant and invoiced to the CITY as a reimbursable. The project budget is detailed in Attachment "B".

4. SCHEDULE:

Development of bid documents and submitting project permits for the Lower Spring Branch Stormwater Improvements project will require approximately **two hundred twenty-five (225)** calendar days to complete from issuance of notice-to-proceed and receipt of survey data from the CITY. The project deliverables are to be phased as follows:

60% construction plans and permit applications	**120 calendar days**
90% construction plans	**180 calendar days**
Final construction documents	**225 calendar days**

5. STAFF ASSIGNMENT (Consultant):

Daniel Parsons, PE, CFM	Project Manager
Nicholas Stapf, EI	Lead Designer
Rudy Pein, PE	Structural Engineer

6. CORRESPONDENCE/REPORTING PROCEDURES:

Correspondence shall be directed to:

Daniel Parsons, PE, CFM (813) 281-4856, Daniel.parsons2@atkinsgloabl.com

All City project correspondence shall be directed to:
Roger Johnson, PE (727) 562-4592, roger.johnson@myclearwater.com with copies to others as may be appropriate.

7. INVOICING/FUNDING PROCEDURES:

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

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

Contingency services will be billed as incurred only after written authorization provided by the City to proceed with those services.

City Invoicing Code: ENST180010-DSGN-PROSVC

8. INVOICING PROCEDURES

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

A. Purchase Order Number and Contract Amount.
B. The time period (begin and end date) covered by the invoice.
C. A short narrative summary of activities completed in the time period.
D. Contract billing method – Lump Sum or Cost Times Multiplier.
E. If Lump Sum, the percent completion, amount due, previous amount earned and total earned to date for all tasks (direct costs, if any, shall be included in lump sum amount).
F. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

9. SPECIAL CONSIDERATIONS:

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

PREPARED BY:

_____
Charlotte Maddox, PE, PMP, DWRE
Senior Vice President
ATKINS

_____
Date

APPROVED BY:

_____
D. Scott Rice, PE
City Engineer
City of Clearwater

_____
Date

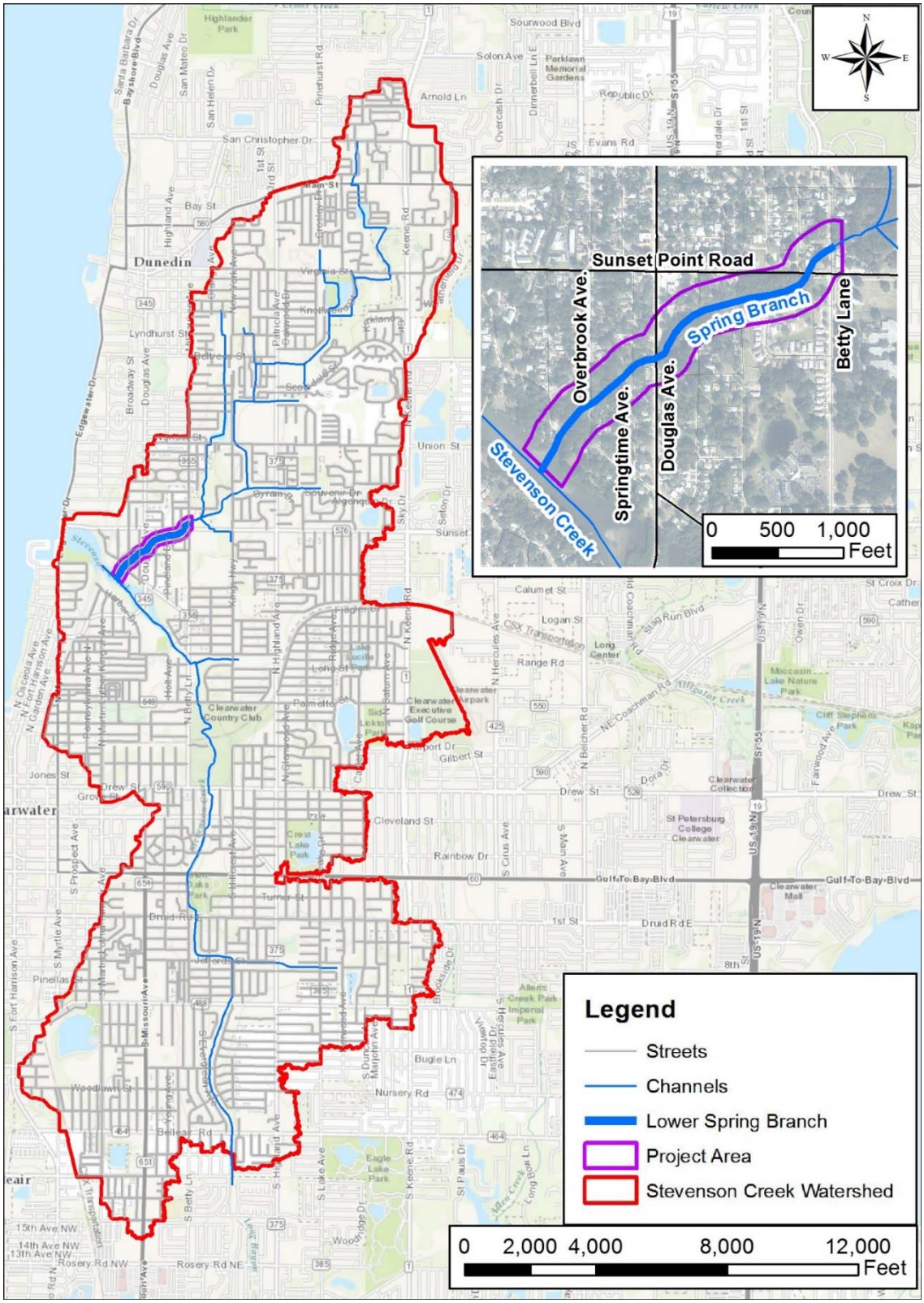

Figure 1 - Lower Spring Branch Stormwater Improvements Alternative (from BODR)

WORK ORDER INITIATION FORM

CITY OF CLEARWATER DELIVERABLES STANDARDS

FORMAT:

The design plans shall be compiled utilizing one of the following standards:

City of Clearwater CAD standards or Consultant’s CAD standards (please provide all supporting documents when utilizing Consultant’s Standards).

DATUM:

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

DELIVERABLES:

A minimum of two (2) signed and sealed Plans and Contract Documents (specifications book) labeled “ISSUED FOR BID” shall be provided at the onset of the bid phase, as well as electronic copies. Electronic plan copies in PDF and CAD and electronic contract documents in PDF and MS Word.

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20’ unless approved otherwise. The consultant shall also deliver all digital files in CAD drawing format and PDF format together with all project data in AutoCAD Civil 3D file format. All references, such as other drawings attached, images and graphic files, custom fonts and shapes shall be included in hard copy and electronic copy.

Prior to the City Council award date, a minimum of two (2) copies of signed and sealed plans and contract documents (specifications book) labeled “CONFORMED” shall be provided. All revisions made during the bid phase shall be included in the plan sets and noted in the revision block or as a footnote. Copies of each Addendum shall be included at the front of the contract and all revisions made during the bid phase shall be incorporated into the Contract Documents.

Electronic copies of “CONFORMED” plans (PDF and CAD) and contract documents (PDF and MS Word) shall be provided prior to the City Council award date.

NOTES:

- If approved deviation from using Clearwater CAD standards, the consultant shall include all necessary information to aid in manipulating and printing/plotting the drawings. Please address any questions regarding file format to Mr. Tom Mahony, Geographic Technology Manager, at (727) 562-4762 or email address: tom.mahony@myclearwater.com.

LOWER SPRING BRANCH STORMWATER IMPROVEMENTS
ATKINS

WORK ORDER INITIATION FORM
PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
1.0	**Project Management, Meetings & QA/QC**			$37,488
2.0	**Data Collection**			
2.1	Geotechnical	$29,100	$1,146	$30,246
2.2	Subsurface Utility Exploration	$13,160	$1,146	$14,306
2.3	Topographic Survey		$17,900	$17,900
3.0	**Design Phase**			
3.1	Preparation of 60% Construction Plans		$59,194	$59,194
3.2	Preparation of 90% Construction Plans		$62,424	$62,424
3.3	Final Construction Plans		$25,244	$25,244
4.0	**Bidding Assistance**		$5,962	$5,962
5.0	**Limited Phase Construction Services**		$26,200	$26,200
Subtotal, Labor and Subcontractors				**$278,964**
Permitting Fees				**$2,184**
Contingency (10%)				**$27,896**
Grand Total				**$309,044**

REVIEW PERIOD SUBMITTAL REQUIREMENTS

This list is intended as a guideline of the items to be completed at various levels of project completion. The specific list for each project shall be finalized in the work order.

60% Construction Plans

In addition to the items in the 30% submittal, requirements for the 60% submittal shall include the following:

a. General Construction Notes related to best management practices, utilities, and other conditions relevant to the project,
b. Typical pavement sections shall indicate typical cross sectional slopes, median improvements, pavement requirements, right-of-way lines, sidewalks, curbs, gutters, and landscaped areas,
c. Grading, Paving, and Drainage detail sheets, including standard and nonstandard stormwater management structures, retaining walls, and related notes,
d. Erosion control and tree protection details, including best management practices applied to the project,
e. Existing private utilities, as available, such as gas, electrical, telephone, fiber optic, and cable TV,
f. Detailed Cross Sections,
g. Wetland Planting Plans and Details,
h. Utility Plan including utility relocation/adjustment details indicating utility conflicts, relocation design, proposed utility structures, and conflict manholes, design details, and specific profiles, if required,
i. Permit Applications,
j. Estimated construction quantities,
k. Engineer’s/Architect’s updated opinion of probable construction cost and duration based on the 60% design submittal, and
l. Engineer/Architect will review City’s standard technical specifications and modify or supplement as necessary for the project.

90% Construction Plans

The 90% construction plans shall include the design items required for the construction of the project, including the special provisions and technical specifications. In addition to the items in the 60% submittal, requirements for the 90% submittal shall include the following:

a. Maintenance of Traffic Plan,
b. Structural plans, details, and calculations, including design and details of shallow foundations, pedestrian bridge abutments, retaining walls, structural reinforcing, tiebacks, and stability analyses for slopes and retaining walls,
c. Detailed construction quantities based upon 90% design,
d. Engineer’s/Architect’s updated opinion of probable construction cost and duration based on the 90% design submittal, and
e. Technical specifications and Special Provisions.

Final (100%) Construction Documents

The 100% submittal shall address the City’s final review comments.

Engineering Projects prepared and/or submitted shall be reviewed and checked by a civil engineer registered in the state of Florida as the Engineer of Record. The Engineer of Record shall sign, seal and date the design calculations, technical specifications and contract drawings as required by Florida law.

See Attachment “A” – Deliverables – for specific labeling requirements.