

## **TASK ORDER NO. 02**

### **CITY PROJECT #12182**

#### **FORT LAUDERDALE PUBLIC WORKS DEPARTMENT**

#### **LAKE ESTATES SMALL WATER MAIN IMPROVEMENTS**

### **I. BACKGROUND**

This Task Order is pursuant to the Continuing Contract for Civil Engineering Consultant Services (No. 626-10881-7) as amended, between the City of Fort Lauderdale, a Florida municipality, ("CITY") and Tetra Tech, Inc., ("CONSULTANT"), a Delaware corporation authorized to transact business in Florida, for Civil Engineering CONSULTANT Services in accordance with the terms of the agreement for professional services dated November 6, 2012 and expires on November 5, 2016, between CITY and CONSULTANT ("MASTER AGREEMENT").

The City of Fort Lauderdale has identified the area within the residential neighborhood of Lake Estates from NE 56<sup>th</sup> Street to NE 60<sup>th</sup> Street, excluding NE 57<sup>th</sup> Street, between N Federal Highway and Bayview Drive (excluding the water main on Bayview Drive) as an improvement project for CONSULTANT to design. The purpose of the improvements identified by the CITY to be designed is to address water quality concerns due to age of the existing water distribution system. Attachment A depicts the project area. The proposed improvements consist of approximately 10,850 feet of 8-inch diameter water mains within local CITY streets connecting to existing water mains on N Federal Highway and Bayview Drive. These improvements involve upgrading 6-inch diameter water mains one nominal size, providing water looping, installing fire hydrants per CITY requirements and replacing 8-inch diameter water mains with the same nominal size. The existing water utilities will be replaced with new PVC water mains. Isolation valves, fire hydrants, and water services will be designed. However, existing water meters and boxes will not be replaced as part of this project.

The CITY owns and operates various water, wastewater and stormwater utility infrastructure within the project right-of-way (ROW). Other existing utilities that typically share the ROW include power, telephone, cable, gas utilities, and others. The CITY would like to implement the potable water pipeline replacement and improvements while avoiding relocation of existing utilities, if possible. On N Federal Highway and Bayview Drive, tie-ins will be designed, via wet taps, to the existing water mains at two locations on each case.

### **II. SCOPE OF SERVICES**

This Task Order will include Professional Surveying and Engineering services required for the Water Main Replacement Project described in Section I.

The CONSULTANT is responsible for all work of their subconsultants and subcontractors to meet the deliverables included on this task order.

CONSULTANT shall provide the following services described in the tasks that follow:

### Task A – Surveying

Survey services will be performed by F.R. Aleman and Associates, Inc. (Surveyor) and shall provide a topographic/route survey of Right of Ways within the limits of work indicated in Attachment A.

Survey work will comply with the Standards and Practice for Surveying and Mapping, according to Chapter 5J-17.052 of Florida Administrative Code, as adopted by the Board of Professional Surveyors, Chapter 472, Florida Statutes and City of Fort Lauderdale Standards. Survey will consist of the following:

1. Full topographic survey for roads described above which will include but not be limited to asphalt pavement, sidewalks, trees, above ground evidence of underground utilities, drainage structures with invert information, driveways, roadway signs, etc. Survey at the intersection with NE 57<sup>th</sup> Street will extend to point of radius returns with elevations along center of cross streets and curb returns.
2. Cross sections will be performed at 100 foot intervals.
3. Right of Way Monumentation recovery and/or re-establishment in order to provide Right of Way Lines throughout limits of project. This will require field recovery of centerline control, and property corners through each listed street.
4. Horizontal control will be referenced to the State Plane Coordinate System, Florida East Zone North American Datum NAD83/90. Vertical control will be referenced to North American Vertical Datum 1988 (NAVD88)
5. Trees with 3-inch diameter trunk or larger will be located.
6. Rim, top and invert elevations of all existing sanitary sewers' manholes, drainage culverts, manholes and catch basins will be provided.
7. Cross sections will include elevations at the centerline, edge of pavement, top of curb, back of sidewalk, low and high points, lane line, drainage ditches (when applicable).
8. Baselines of survey will be set on the field at 100 foot intervals and elevation value for every Baseline Point will be provided.
9. Topographic survey will include survey features, baseline, baseline points, and drainage information, including inverts, pipe size, material and direction of each pipe as well as location of the test holes.
10. Survey Deliverable: CD with electronic copies of the Topographic Survey in Civil3D format along with two (2) signed and sealed originals of Topographic Survey.

Deliverables: Topographic Survey  
Not to Exceed: \$41,084

### **Task B - Utilities Verification and Subsurface Utility Excavations (SUE)**

Utilities Verification: CONSULTANT will be perform the utility verification for the existing power, telecommunication, cable television, gas, water, sewer and drainage facilities, and other identified facilities within limits of the project.

1. Subsurface Utility Excavations (SUE): Twenty (20) test holes. Report will include data sheet for every test hole performed and a summary table of verified utility detailing the test hole information, including the top and bottom of pipe elevations of the utilities in conflict with the proposed water mains.
2. CONSULTANT will coordinate with Sunshine State one call of Florida (SSOCOF) to open Design Tickets, will contact all existing utilities provided by SSOCOF and will submit sketches of the proposed work to obtain available atlas, mark-ups, records, as-builts, etc.
3. The locations of the existing underground utilities will be depicted based on the records received, by using the above ground visible features (i.e. valves, manhole covers, inlets) to approximate the locations of the utilities.
4. The horizontal locations of services will be approximated, to the extent possible, based on the limited information provided and above ground visible features within the right way (i.e. water meters).
5. Vertical locations for sewers will be approximated, to the extent possible, based on invert elevations at manholes and inlets, if accessible, etc. Vertical locations for services and laterals will be assumed based on CITY standards.

Deliverables: Design Ticket, Utility Matrix, and SUE Report  
Not to Exceed: \$20,590

### **Task C – Geotechnical Investigation**

A geotechnical engineering evaluation and subsurface explorations to facilitate design and construction of the proposed water mains will be performed by Ardaman & Associates, Inc. The scope for the geotechnical investigation includes the following:

1. Sixteen (16) 10-foot deep Standard Penetration Test auger borings for determination of soil conditions within the project area.
2. Associated laboratory testing and office analysis.

3. Report preparation including soil borings logs and classifications, existing groundwater levels, estimated seasonal high levels, pipe trench and backfill requirements, and roadway reconstruction requirements.

Deliverables: Geotechnical Report  
Not to Exceed: \$9,270.00

#### **Task D – 60 Percent Design Plans and Specifications**

CONSULTANT will prepare 60 percent drawings, technical specifications, and estimate of probable construction costs. This 60 percent submittal will only include plan view engineering drawings for all areas. However, because of FDOT permitting requirements, the permitting set and construction set drawings will include plan and profile views for the proposed water main improvements along NE 57<sup>th</sup> and 59<sup>th</sup> Streets, between NE 27<sup>th</sup> Avenue and N Federal Highway. The design will be predominantly PVC pipe installed by open trench construction. All connections to existing water mains will require contractor coordination with CITY staff for wet tap connections. The 60 percent water main improvements submittal will also include typical conflicts detailed and technical specifications.

The activities envisioned under this task include the following:

1. Prepare agenda, attend one (1) project kick-off meeting with the CITY, and prepare summary.
2. Site Visit: CONSULTANT staff will visit the project site with members of the CITY to observe existing conditions and review the pipeline corridors. One (1) day has been included in the proposal for this activity.
3. Review the survey and available CITY record drawings to identify pipeline locations for the CITY's replacement water mains. The CITY will provide GIS information of CITY owned water, sewer and stormwater facilities in digital format.
4. Coordinate with the CITY to discuss the proposed pipeline locations and potential conflicts.
5. Prepare drawings in AutoCAD based on survey and geotechnical engineering information. A preliminary list of drawings is presented below:
  - Cover Sheet and Location Map
  - Legends, Abbreviations and General Notes
  - Key Plan
  - Overall Water Sampling Points Map
  - Double Plan Drawings (17 Sheets at 1-inch = 20-ft Scale)
  - Plan and Profile Drawings for Federal Highway (2 sheets at 1-inch = 20-ft Scale)
  - Double Plan Drawings – Pavement Restoration (18 Sheets at 1-inch = 20-ft Scale)

- Standard CITY Water Details (3 Sheets)
  - FDOT Standard Details (5 Sheet)
  - Other Details (3 Sheets)
  - Pollution Prevention Notes and Specs (1 sheet)
  - Pollution Prevention Details (1 Sheet)
  - Maintenance of Traffic Plan & Details (2 Sheets)
6. Attend a 60 percent design review meeting, prepare agenda, and summary.
7. Prepare a 60 Percent Statement of Probable Construction Cost based on previous bid tabulations, vendor quotes, and estimates provided by the City or Contractors.

Deliverables: Two (2) Sets of 60 Percent Design Plans, Technical Specifications, and Statement of Probable Construction Costs.

Not to Exceed: \$31,245

#### **Task E – Permitting**

CONSULTANT will prepare and submit the permit applications and supporting documentation necessary to obtain permits required for the project to the Broward County Health Department (BCHD), FDOT, Broward County Traffic and City of Fort Lauderdale Building Department for the water main improvements project. Accordingly, CONSULTANT will perform the following tasks:

1. Prepare and submit one (1) “Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs [DEP Form 62-555.900(7)] to the BCHD and respond to up to two (2) “Requests for Additional Information” (RAI) issued by the regulatory agency or two (2) teleconferences with agency staff. All permit application fees are to be paid by the CITY.
2. Prepare and submit two (2) signed and sealed sets of plans to the City of Fort Lauderdale Building Department for review and response to two (2) anticipated “Requests for Additional Information” (RAI) issued by the regulatory agency or two (2) teleconferences with agency staff.
3. Prepare FDOT Utility Permit applications and corresponding Maintenance of Traffic (MOT) exhibits for water main(s) connections within N Federal Highway right-of-way for review and response to one (1) anticipated “Request for Additional Information” (RAI) issued by the regulatory agency or one (1) teleconference with agency staff.
4. All permit application fees will be provided by the CITY upon written request from the CONSULTANT.

Deliverables: Permit Application Submittals and Approved Broward County and Florida Department of Transportation Permits

Not to Exceed: \$10,200

### **Task F – 100 Percent Design Plans and Specifications**

CONSULTANT will prepare 100 percent drawings, technical specifications, and estimate of probable construction cost. The 100 percent water main improvements submittal will incorporate the comments received from all applicable regulatory agencies including the CITY's Building Department, FDOT, Broward County and BCDOH.

1. Prepare drawings in AutoCAD based on survey and geotechnical engineering information. A preliminary list of drawings is presented below:
  - Cover Sheet and Location Map
  - Legends, Abbreviations and General Notes
  - Key Plan
  - Overall Water Sampling Points Map
  - Double Plan Drawings (17 Sheets at 1-inch = 20-ft Scale)
  - Plan and Profile Drawings for Federal Highway (2 sheets at 1-inch = 20-ft Scale)
  - Double Plan Drawings – Pavement Restoration (18 Sheets at 1-inch = 20-ft Scale)
  - Standard CITY Water Details (3 Sheets)
  - FDOT Standard Details (5 Sheet)
  - Other Details (3 Sheets)
  - Pollution Prevention Notes and Specs (1 sheet)
  - Pollution Prevention Details (1 Sheet)
  - Maintenance of Traffic Plan & Details (2 Sheets)
2. Prepare a 100 Percent Final Statement of Probable Construction Cost based on previous bid tabulations, vendor quotes, and estimates provided by the City or Contractors.

Deliverables: Two (2) Sets of 100 Percent Design Plans, Technical Specifications, and Statement of Probable Construction Costs.

Not to Exceed: \$24,670

### **Task G - Bidding and Award**

The proposed improvements will be bid as one (1) project. Bidding and award activities will be led by the CITY. CONSULTANT will conduct the following services during the bidding process.

1. Work with the CITY staff to provide a master copy of the Bid Set construction drawings and specifications in electronic format (PDF). It is our understanding that the CITY will be responsible for distribution of bid packages to potential bidders via online plan distribution.
2. Attend the pre-bid meeting at the CITY, prepare agenda and minutes.
3. Support with addenda. CONSULTANT will respond to technical questions forwarded by the CITY for up to four (4) anticipated addenda as part of this scope of services.



CONSULTANT will respond to questions using the Addendum Form provided by the CITY for expedited response time and will generate necessary supporting documents, as applicable, and submit them to the CITY for distribution to registered plan holders.

4. Evaluate the bid schedules, contact and verify references, provide support for evaluation of the apparent low bidder's utilities contractor's qualifications for undertaking the utility work on the project, and provide a recommendation of award.

Deliverables: Bid Evaluation and Recommendation  
Not to Exceed: \$11,190

#### **Task H – Construction Administration**

The following scope is based on eight (8) months of Construction / Contract Time and on total hours specified within. The scope of services to be provided is for Construction Observation services to include limited / periodic observation of the construction of the project. Any additional time beyond this will require an approved agreement. The CITY shall furnish and assign a Construction Project Administrator and Project Inspector(s) to perform routine and periodic inspections during the course of the project construction activities. All instructions to the Contractor will be issued through the CITY's Project Administrator or Inspector, in writing on an as-needed basis. During the construction phase, CONSULTANT will:

1. Prepare conformed Contract Documents and attend one (1) pre-construction conference, prepare agenda and minutes.
2. Periodically observe construction of the proposed improvements. The overall project is expected to have a total duration of up to eight (8) months including project kick-off, shop drawing review and substantial and final completion. Periodic observation will be provided on a bi-monthly basis during active construction which will necessitate a total of 16 site visits. Site visits will occur on the same days as the progress meetings.
3. Attend up to eight (8) monthly progress meetings. The CITY Construction Project Administrator will be responsible for preparing meeting agenda and minutes for distribution.
4. Provide interpretation or clarification of the design documents during active construction (up to 8 months) when requested.
5. Review shop drawings and other submittals up to two (2) times per submittal subject area for general conformance with the Contract Documents. The Contract Documents will require the Contractor to pay for additional reviews.
6. Evaluate and determine the acceptability of substitute materials and equipment proposed by the Contractor.
7. Assist the CITY's full time Project Inspector or Construction Project Administrator with review of applications for payment, test reports for soils, concrete and other materials on a monthly basis.

8. Assist the CITY's Construction Project Administrator to evaluate claims made by the Contractor and prepare change orders as required.
9. Conduct substantial and final completion inspections and checklists.
10. Perform observations and recording of required pressure testing and connection to the existing water main.
11. Prepare and submit one (1) water main clearance application through the BCHD for project certification. Clearance applications are budgeted based on receipt of a single Contractor submittal containing four (4) hardcopy sets and one (1) AutoCAD CD set of as-built drawings that depict the information required in the contract documents along with original passing bacteriological sample reports and signed passing pressure test forms. Failure of the Contractor to provide the required information or submission of poor quality as-built drawings will count as an application review. Poor quality as-built drawings will be returned with comments one (1) time and subsequent reviews of poor quality as-built drawings submitted by the Contractor will be counted as one (1) application review per instance. The project manual and/or the drawings will specify the Contractor's responsibilities.
12. Review asbuilt drawings prepared, signed, and sealed by the Contractor's surveyor to identify deficiencies in information.
13. The deliverables shall include DWG, PDF, WORD, or other relevant files in the original format as required by the Contract. The drawings need to comply with CITY CAD Standards.

Deliverables: Construction Administration  
Not to Exceed: \$35,605

### III. ASSUMPTIONS

- CITY shall provide surveying and drafting standards.
- Laboratory testing shall be conducted by others and provided to Tetra Tech.
- CITY shall provide standard details to incorporate into the construction plans.
- CITY shall provide the water, sewer and drainage as-builts and atlas information in GIS format or hard copy format for this portion of the CITY's service area.
- CITY shall review and provide comments on design deliverables within 14 working days.



#### IV. ADDITIONAL SERVICES

If authorized in writing by the CITY as an amendment to this Task Order, the CONSULTANT shall furnish, or obtain from others, Additional Services of the types as listed in the Master Agreement. The CITY, as Indicated in the Master Agreement, will pay for these services.

The following services are NOT included in this proposal and will be considered Additional Services, which will be addressed in a separate contractual agreement. The services include but are not limited to:

1. Architectural, structural (i.e. retaining walls, bridges, docks), mechanical (i.e. fire pumps), fire protection, geotechnical and testing, environmental assessment, power, gas, telephone, cable television, site lighting services.
2. Calculations of off-site flood stages
3. Off-site engineering and negotiations for off-site easements, if required (other than as specified in the Scope of Services)
4. Professional services required due to conditions different from those itemized under the Scope of Services or due to events beyond the control of CONSULTANT.
5. Professional services required, due to changes in the site plan initiated by the CITY, their representatives or other CONSULTANTS (e.g. architects, landscape architects, etc.) after either design or preparation of the construction drawings has commenced.
6. Determination of quantities for payment application review / processing.
7. Maintenance of Traffic Plan review, or CITY's safety program / adherence.
8. Other Permits - This proposal does not include permitting services for any permits not previously listed.
9. Costs for advertising the Project are to be paid by the CITY.
10. Obtaining easements on property for construction of the project is not included in this scope.
11. Coordination with homeowners is not included in this scope and no time has been budgeted for attendance at any meetings not previously listed. For private water service relocation and reconnection, the Contractor will coordinate with property owners to obtain signed Right-of-Entry forms consenting to allow contractors to perform the necessary work within the private property.
12. All construction related layout and record drawing survey work and geotechnical services, including materials testing and other services are to be provided by the Contractor. This pertains only to such work that is completed during the construction phase.

13. Services related to permitting pipeline construction through wetlands or environmentally sensitive areas are not anticipated and are not included in this scope.
14. Hydraulic modeling.
15. All permitting fees are to be paid by the CITY.
16. Services related to any stormwater and/or wastewater improvements design, permitting, bidding and construction administration.
17. Preparation of record drawings.
18. Additional reviews, beyond the single review in this proposal, of project submittals, such as shop drawings, asbuilts, and other submittals.

## VI. PROJECT FUNDING

Performance of this project is at the CITY's discretion and may be contingent upon the CITY receiving funding and work shall not begin until the CITY notifies the CONSULTANT that funding sources for this project are in place.

## VI. COMPENSATION SUMMARY

CONSULTANT will provide the above described services on a Time and Material Not-to-Exceed basis for a fee of \$183,854 (one hundred eighty three thousand eight hundred fifty four dollars) and will be invoiced monthly. The table below summarizes the fee by task. Attachment B contains a fee table showing hourly rates payable by the CITY for each of CONSULTANT's employee categories, and sub-consultant fees. Two (2) subconsultants are included in this work order, which includes MBE participation of over 25 percent. The two (2) subconsultants' proposals can be found in Attachment B.

Task	Description	Not-to Exceed Amount
A	Surveying	\$41,084
B	Utility Verification/Subsurface Utility Excavation	\$20,590
C	Geotechnical	\$9,270
D	60 Percent Design Plans and Specifications	\$31,245
E	Permitting	\$10,200
F	100 Percent Design Plans and Specifications	\$24,670
G	Bidding and Award	\$11,190
H	Construction Administration	\$35,605
<b>Total</b>		<b>\$183,854</b>

## J. SCHEDULE

CONSULTANT shall commence services immediately after the written Notice to Proceed. The anticipated duration of each task is shown in the table below:

Task	Description	Duration, Calendar Days
A	Surveying	30
B	Utility Verification/Subsurface Utility Excavation	60
C	Geotechnical	7
D	60 Percent Design Plans and Specifications	60
E	Permitting	44
F	100 Percent Design Plans and Specifications	30
G	Bidding and Award	60
H	Construction Administration	240

## **CITY CONTACTS**

Requests for payments should be directed to City of Fort Lauderdale Accounts Payable via e-mail to [AcctsPayable@FortLauderdale.gov](mailto:AcctsPayable@FortLauderdale.gov). All other correspondence and submittals should be directed to the attention of Jill Prizlee, P.E., Project Manager II, at the address shown below. Please be sure that all correspondence refers to the City project number and title as stated above.

Jill Prizlee, P.E.  
Project Manager II  
City of Fort Lauderdale  
City Hall, 4<sup>th</sup> Floor Utilities Engineering  
100 North Andrews Avenue Fort Lauderdale, FL 33301  
954-828-5982  
[jprizlee@fortlauderdale.gov](mailto:jprizlee@fortlauderdale.gov)

## **CONSULTANT CONTACTS**

Tetra Tech, Inc  
Ken Caban, P.E., BCEE  
Senior Project Managing Principal  
1401 East Broward Blvd., Suite 302  
Fort Lauderdale, FL 33301  
Phone: 305-849-3404  
Email: [ken.caban@tetrattech.com](mailto:ken.caban@tetrattech.com)

Diana Santander, P.E.  
Senior Project Manager  
1401 East Broward Blvd., Suite 302  
Fort Lauderdale, FL 33301  
Phone: 305-849-3404  
Email: [ken.caban@tetrattech.com](mailto:ken.caban@tetrattech.com)

**DEPARTMENT SIGNATURES**

Approved by:

\_\_\_\_\_  
Jill Prizlee, P.E.  
Project Manager II

\_\_\_\_\_  
Date

Approved by:

\_\_\_\_\_  
Paul A. Berg, ICMA-CM  
Acting Public Works Director

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

CLOSURE

IN WITNESS OF THE FOREGOING, the parties have set their hands and seals the day and year first above written.

CITY OF FORT LAUDERDALE, a municipal  
corporation of the State of Florida

By: \_\_\_\_\_  
Lee R. Feldman, City Manager

ATTEST:

(CORPORATE SEAL)

\_\_\_\_\_  
Jeffrey A. Modarelli, City Clerk

Approved as to form:

\_\_\_\_\_  
Rhonda Montoya Hasan  
Assistant City Attorney



CONSULTANT

WITNESSES:

Scott Ullman

Scott Ullman

Print Name

Karen Miller

Karen Miller

Print Name

(CORPORATE SEAL)

TETRA TECH, INC., a Delaware corporation  
authorized to transact business in Florida

By: William R. Brownlie

Name: William R. Brownlie

Title: Senior Vice President

ATTEST:

By: Janis B. Salin

Name: Janis B. Salin

Title: Secretary

STATE OF FLORIDA  
COUNTY OF \_\_\_\_\_

The foregoing instrument was acknowledged before me this \_\_\_\_\_ day of \_\_\_\_\_, 2016, by \_\_\_\_\_ as \_\_\_\_\_ of \_\_\_\_\_, a \_\_\_\_\_ corporation, who is \_\_\_\_\_ personally known to me or \_\_\_\_\_ has produced \_\_\_\_\_ as identification.

(SEAL)

Notary Public, State of Florida  
Signature of Notary taking Acknowledgement

Printed Name

My Commission Expires

Commission No.

See attached certificate

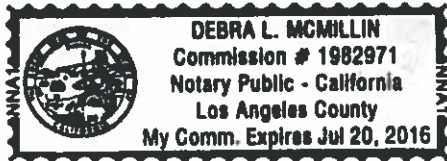
**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT**

**CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )  
 County of Los Angeles )  
 On January 11, 2016 before me, Debra L. McMillin, Notary Public  
 Date Here Insert Name and Title of the Officer  
 personally appeared William R. Brownlie  
 Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Debra L. McMillin  
 Signature of Notary Public

Place Notary Seal Above

**OPTIONAL**

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

**Description of Attached Document**

Title or Type of Document: \_\_\_\_\_

Document Date: \_\_\_\_\_ Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: \_\_\_\_\_

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: \_\_\_\_\_

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

Signer's Name: \_\_\_\_\_

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

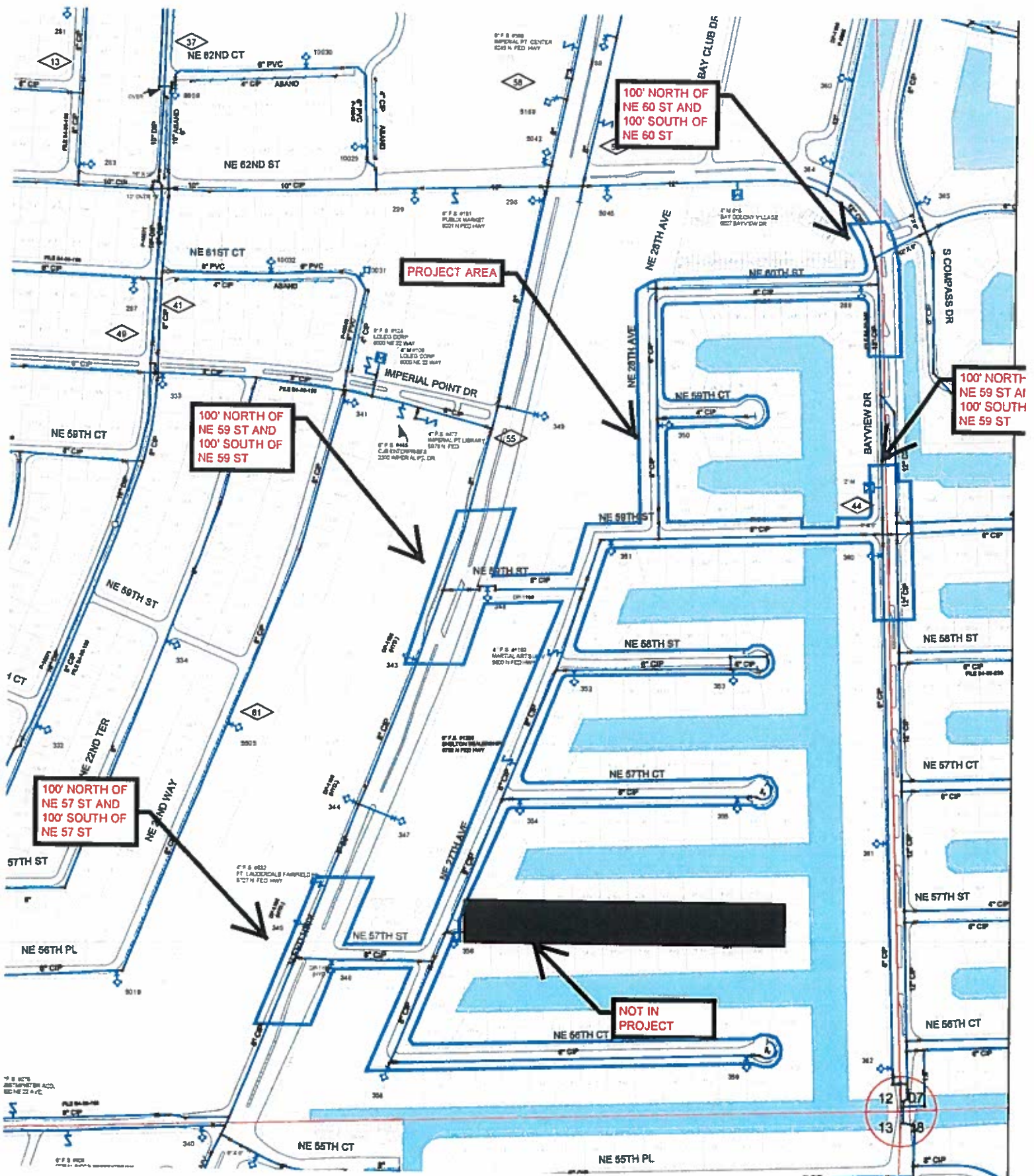
☐ Individual ☐ Attorney in Fact

☐ Trustee ☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: \_\_\_\_\_

**ATTACHMENT A**  
**PROJECT AREA FIGURE**



**PROJECT AREA**

**ATTACHMENT B**  
**FEE BREAKDOWN**  
**AND**  
**SUBCONSULTANT PROPOSALS**



Tetra Tech Price Proposal		Labor Plan					183,854	
		5 Resource					0	
		Bill Rate	\$ 205.00	\$ 175.00	\$ 125.00	\$ 85.00	\$ 90.00	
Lake Estates Small WM Improvements								
Replacement of approx 11,000 LF of existing potable water main pipes within Lake Estates in City of Fort Lauderdale								
Submitted to: City of Fort Lauderdale (Attn: Jill Prizlee)								
Contract Type: T&M								
Project Phases / Tasks		Total Labor Hrs	Sr. Project Managing	Sr Project Manager	Engineer III	Engineer I	CAD Designer II	Task Pricing Totals
Task A. Surveying		1,146	34	132	287	411	282	183,854
Task B. Utilities Verification		6	-	-	2	4	-	41,084
Task C. Geotechnical Investigation		122	2	10	22	48	40	20,590
TASK D 60 Percent Design Plans		280	-	-	-	2	-	9,270
TASK E PERMITTING		108	12	35	57	61	115	31,245
TASK F 100 PERCENT DESIGN PLANS AND SPECS.		221	-	2	18	64	24	10,200
Task G. Bidding and Award		94	9	33	34	50	95	24,670
Task H. Construction Administration		313	8	8	38	40	-	11,190
Totals		1,146	34	132	287	411	282	183,854





& Associates, Inc.

10305 NW 41 Street, Suite 200  
Miami, Florida 33178  
TEL: (305) 591-8777  
FAX: (305) 599-8749

CONSULTING ENGINEERS & SURVEYORS  
[www.FR-Aleman.com](http://www.FR-Aleman.com)

November 3, 2015

Alicia M. Vereas-Feria, EI, CFM | Project Manager  
Main: 786-507-3898 Fax: 786-439-0400 Cell: 305-632-8321  
E z e z e [alicia.verea-feria@tetrattech.com](mailto:alicia.verea-feria@tetrattech.com) Group  
150 West Flagler Street | Suite 1625 | Miami, Florida 33130

**RE: Design (Topographic) Survey for Lake Estates, City of Fort Lauderdale, Florida**

Dear Mr. Caban:

This is our estimate for the Design (Topographic) Survey for the Lakes Estate Neighborhood.

**Complete Topographic survey for the project streets to be affected by the proposed Watermain (as per PDF Sketch received). Topographic Survey will include the following.**

- Full topographic survey for roads shown on attached sketch which will include but not limited to asphalt pavement, sidewalks, trees, above ground evidence of underground utilities, drainage structures with invert information, driveways, roadway signs, etc. Survey at the intersections (side streets) will extend to point of radius returns with elevations along center of cross streets and curb returns.
- Cross sections will be performed at 100 foot intervals.
- Right of Way Monumentation recovery and/or re-establishment in order to provide Right of Way Lines throughout limits of project. This will require field recovery of centerline control, and property corners through each listed street.
- Horizontal control will be referenced to the State Plane Coordinate System, Florida East Zone North American Datum NAD83/90. Vertical control will be referenced to **North American Vertical Datum 1988 (NAVD88)**
- Trees with 3-inch diameter trunk or larger will be located.
- Rim, top and invert elevations of all existing sanitary sewers' manholes, drainage culverts, manholes and catch basins will be provided.
- Cross Section will include elevation at the centerline, edge of pavement, top of curb, back of sidewalk, low and high points, lane line, drainage ditches (when applicable).
- FR-Aleman will deliver the CIVIL3D file; showing with existing Topographic features, and the drainage information, including Inverts, pipe size, material and direction of each pipe as well as the location of the test holes performed by FRA SUE Department.

- This estimate includes the Survey effort to collect and plot the Test Holes performed for FRA SUE Department.

The Baselines of Survey will be set on the field at 100 feet intervals and elevation value for every Baseline Point will be provided and shown on the Topographic Survey.

**Topographic (Design Survey) Survey:**

This estimate is based on 1.45 Miles of Survey ( $\pm 7,700$  LF).

CATEGORY	UNITS		RATE	
Field Crew 3 men	224	HOURS	\$140.00	\$31,360.00
CADD Technician	80	HOURS	\$65.50	\$5,240.00
Survey Technician	10	HOURS	\$84.00	\$840.00
Surveyor and Mapper	25	HOURS	\$105.36	\$2,634.00
Sr. Surveyor and Mapper	3	HOURS	\$140.00	\$420.00
<b>TOTAL for Survey Services</b>				<b>\$40,494.00</b>

**Subsurface Utility Engineering (SUE)**

CATEGORY	UNITS		UNIT RATE	
Test Holes	20	EACH	\$360.00	\$7,200.00
Field Crew 3 Man/ Preparation of Reports and CADD files.	20	HOURS	\$40.00	\$800.00
<b>TOTAL for SUE Services</b>				<b>\$8,000.00</b>

Test Hole Unit Rates were obtained from existing FRA Contract with City of Fort Lauderdale.

The Total combined Survey and SUE fee for the services described above is Forty Eight Thousand, Four Hundred and Ninety Four with (00/100). **(\$48,494.00)**

All survey work will comply at all times with the Standards and Practice for Surveying and Mapping, according to Chapter 5J-17.052 of Florida Administrative Code, as adopted by the Board of Professional Surveyors, Chapter 472, Florida Statutes.

Survey work will comply with City of Fort Lauderdale Standards.

**Delivery**

FRA will submit a CD with the electronic copies of the Topographic Survey on **CIVILD3D** format. Additionally FRA will two signed and sealed originals of the Topographic Survey.

Topographic Survey will include the location of the Test Holes performed. FRA will also prepare a report for every Test Hole performed and a Table (Summary) of Verified Utility detailing the test hole information, including the top and bottom of pipe elevations of the utilities in conflict with the proposed water-main.

Topographic Survey, including the Test Holes will be completed between six to eight weeks from Notice to Proceed.

If you have any questions, please do not hesitate to contact our office.

Very truly yours,

Frank Paruas PSM  
Project Surveyor



**Ardaman & Associates, Inc.**

Geotechnical, Environmental and  
Materials Consultants

AAI Proposal No. 15-P-3009

October 6, 2015

Revised October 22, 2015

Tetra Tech | Water, Environment & Infrastructure Group  
150 West Flagler Street, Suite 1625  
Miami, Florida 33130

Attention: Alicia M. Vereas-Feria, EI, CFM

**PROPOSAL FOR GEOTECHNICAL ENGINEERING SERVICES  
LAKE ETSTATES SMALL WATER MAIN IMPROVEMENTS PROJECT  
FORT LAUDERDALE, FLORIDA**

In accordance with your request, we are pleased to submit our proposal to perform subsurface explorations and a geotechnical engineering evaluation for the above referenced project. The purpose of our work is to obtain general subsurface soil information so that recommendations can be provided for the geotechnical aspects of the project.

We understand that the project will consist of the replacement of approximately 10,850 LF of water main in the Lake Estates development in Fort Lauderdale, Florida. Based on our experience with subsurface conditions in the general site vicinity and our understanding of the proposed construction, we propose to perform sixteen (16) Standard Penetration Test (SPT) borings to depths of 10 feet below the ground surface. We propose to use a truck-mounted drill rig in addition to a support truck to perform the field work. The borings will be performed in general accordance with the procedures recommended in ASTM D-1586.

It is our understanding that a right-of-way construction permit will not be required. It is likely that a Maintenance of Traffic (MOT) plan will need to be prepared and implemented. Prior to the mobilization of our drilling equipment, we will notify Sunshine State One-Call of Florida, Inc. (SSOCOF) of our planned exploration to allow affected utility companies the opportunity to mark the location of buried utility lines in the proposed exploration areas. The locating process will require a lead time of 3 to 5 business days. We cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the client prior to commencement of the field work.

**LABORATORY TESTING**

We preliminarily estimate that only routine laboratory visual classification of the recovered samples will be required for this project. However, gradation tests and organic content tests on select samples will be performed if deemed necessary. The number of laboratory tests will be determined upon completion of the soil borings and will depend on the nature of the encountered soils. All laboratory tests will be performed in accordance with applicable ASTM standards.

## ENGINEERING ANALYSIS AND REPORT

Upon completion of our field exploration and laboratory testing program, an engineering report will be issued presenting the findings of our explorations and tests, and our preliminary recommendations for the geotechnical aspects of the project.

## SCHEDULE

Weather conditions permitting, we will start the field exploration program within 2 to 3 weeks after receiving your authorization to proceed. We preliminarily estimate that our field work will have a duration of 3 to 4 days. Our laboratory testing and report preparation will require an additional week to complete, however, verbal recommendations can be provided shortly after the completion of the field exploration program.

## FEE ESTIMATE

Based on our knowledge of the project to-date, the estimated cost of our geotechnical services for this project is **\$9,100.00**, itemized as follows:

1. Initial site visit, layout of boring locations, coordination of underground utility locating, permit submittals, etc.:
  - Staff Engineer - 20 hours @ \$95.00/hour ..... \$1,900.00
  - MOT Plan (estimated)..... \$750.00
2. MOT Plan Implementation (estimated, not including flaggers) ..... \$1,500.00
3. Mobilization/Demobilization of drilling equipment..... \$350.00
4. Standard Penetration Test borings (16 borings to 10'):
  - 160 feet of borehole of depths less than 25 feet @ \$13.00/foot ..... \$2,080.00
  - Standby due to MOT: 8 crew hours @ \$120.00/crew-hour ..... \$960.00
5. Laboratory testing:
  - Visual classification by Staff Engineer - 3 hours @ \$95.00/hour..... \$285.00
  - Only visual classification by Geotechnical Engineer is anticipated.
  - However, moisture, organic and fines content determinations will be performed if deemed necessary to aid in the classification of the soils ..... No charge
6. Engineering Services & Report Preparation
  - Project Engineer – 9 hours @ \$125.00/hour..... \$1,125.00
  - Senior Project Engineer – 1 hour @ \$150.00/hour ..... \$150.00

Should we encounter conditions on the site that warrant more investigative effort than anticipated, we will inform you immediately. Additional work or meetings in response to review of the report will incur an additional charge.

This proposal is subject to the applicable General Conditions, and to the following: (1) access to boring locations is to be readily available to our truck-mounted drilling equipment, (2) the provided scope of work will be adequate, (3) if deemed necessary, Ardaman & Associates, Inc. will coordinate the location of underground utility lines through SSOCOF. We cannot take responsibility for damages to private underground lines or structures and/or underground services which do not subscribe to SSOCOF; their locations should be provided by the client prior to commencement of the field work.

Please sign and return the enclosed Proposal/Project Acceptance (PPA) form as an indication of your acceptance of our proposal terms and authorization to proceed with the work. Please complete the PPA form in its entirety to help us set up your file correctly and please provide us with the names and addresses of all parties who should receive copies of our reports for this project.

Please do not hesitate to contact our office should you have any questions concerning this proposal or whenever we may be of assistance to you.

**ARDAMAN & ASSOCIATES, INC.**



Andrew Nixon, P.E.  
Branch Manager