



February 5, 2018

**Via FedEx**

Ms. Begona Krane  
**City of Delray Beach**  
434 South Swinton Ave.  
Delray Beach, FL 33444

**Subject:**        *City of Delray Beach*  
                      *SW 4<sup>th</sup> St / SW 6<sup>th</sup> St / SW 7<sup>th</sup> Ave*  
                      *Reclaimed Watermain Proposal*

Dear Begona,

Please find enclosed three (3) executed copies of the Proposal to the above referenced project in order to add the design of reclaimed watermain to the project.

If you have any questions regarding the information presented, please contact us at 561-655-6175.

Sincerely,

**MATHEWS CONSULTING,  
A BAXTER & WOODMAN COMPANY**

A handwritten signature in blue ink, appearing to read "Rebecca Travis".

Rebecca Travis, P.E.  
Vice President

*Enclosures*

cc:        MC File No. 170148.00/Delray Beach corresp

**CITY OF DELRAY BEACH**  
**CONSULTING SERVICE AUTHORIZATION**

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

SERVICE AUTHORIZATION NO. \_\_\_\_\_ FOR CONSULTING SERVICES

CITY P.O. NO. \_\_\_\_\_ CITY EXPENSE CODE: \_\_\_\_\_

CITY PROJECT NO. 16-500 MATHEWS CONSULT. PROJECT NO. 170148.00

TITLE: SW 4<sup>th</sup> St, SW 6<sup>th</sup> St and SW 7<sup>th</sup> Ave Reclaimed Watermain – Reclaimed Watermain

This Service Authorization, when executed, shall be incorporated in and shall become an integral part of the Contract.

TITLE: Agreement for General Consulting Services

**I. PROJECT DESCRIPTION**

This scope of work includes, but is not limited to, providing engineering design, surveying, geotechnical investigations, utility locates and bidding services to include reclaimed water main within the SW 4<sup>th</sup> Street, SW 6<sup>th</sup> Street and 7<sup>th</sup> Avenue project (refer to **Figure 1** for project location map).

This scope of work will include combining the base survey drawing file information from various projects currently under contract, plus the addition of surveyed alignment for new reclaimed watermain. The following alignment survey drawings will be combined and coordinated to create a continuous base drawing for the design of approximately 7,275 LF of proposed reclaimed watermain.

- a. Base drawing survey file information will be utilized from the Osceola Neighborhood project for the proposed reclaimed watermain alignment along SE 4<sup>th</sup> Street between SE 1<sup>st</sup> Avenue and Swinton Avenue (175 LF).
- b. Base drawing survey file information will be utilized from the SW 4<sup>th</sup> Street/SW 6<sup>th</sup> St/SW 7<sup>th</sup> Avenue project for the proposed reclaimed watermain alignment along SE 4<sup>th</sup> Street between Swinton Avenue and SW 10<sup>th</sup> Avenue (3,320 LF). Also for the reclaimed watermain along SW 7<sup>th</sup> Avenue between SW 4<sup>th</sup> Street and SW 6<sup>th</sup> Street and for the alignment along SW 6<sup>th</sup> Street between SW 7<sup>th</sup> Avenue and SW 8<sup>th</sup> Avenue (1,025 LF).
- c. Mathews Consulting previously prepared design plans for roadway and drainage improvements in 2011 for the SW 12<sup>th</sup>/Auburn Avenue/SW 14<sup>th</sup> Avenue project. This project includes survey information in the area of the current, proposed reclaimed watermain. This existing survey information will be used for the base drawings of the proposed reclaimed watermain along SE 4<sup>th</sup> Street between SW 10<sup>th</sup> Avenue to SW 12<sup>th</sup> Avenue and for the alignment along SW 12<sup>th</sup> Avenue between Se 4<sup>th</sup> Street and Auburn Drive (1,350 LF). The information will need to be “ground truthed” to confirm the survey information on the plans match the current conditions in the field.

- d. New survey information must be obtained for the proposed reclaimed watermain alignment along SW 6<sup>th</sup> Street between Auburn Avenue and the park entrance at SW 15<sup>th</sup> Avenue and south along the park entrance drive (1,400 LF).

It is anticipated that the reclaimed watermain will be 12-inch diameter along SE 4<sup>th</sup> Street, east of SE 3<sup>rd</sup> Avenue, and the remainder of the project will be an 8-inch diameter main.

## II. SCOPE OF SERVICES

### **Phase I – Study and Report Phase**

Not Applicable.

### **Phase II – Preliminary Design Phase**

Not Applicable

### **Phase III – Final Design Phase**

1. **Field Investigation:** Field reconnaissance of the proposed reclaimed water main alignment shall be performed. Photograph log walk-through will be included. In addition, potential underground existing utilities will be identified.
2. **Utility Coordination:** Coordination with utility agencies (electric, phone, gas, cable TV, and City facilities) shall be performed to collect record information. This Subtask includes reconciling apparent discrepancies between record information and existing photographic and field-verification information.
4. **Design Drawings:** Consultant shall prepare construction drawings which shall include: cover sheet, general notes, civil plan/profile drawings, and detail sheets conforming to the requirements of the current City of Delray Beach Minimum Construction Standards. The drawing scale shall be 1" = 20' for plan and 1" = 2' for profile. Consultant shall prepare the engineering design elements on topographic survey information prepared by Consultant's surveyor using AutoCAD Release 2016 format and available As-Built Drawings. Consultant shall coordinate with the City in order to design the infrastructure improvements in accordance with the requirements and design standards of the City. Drawings (four copies & pdf copy) shall be submitted for City review at 30% (plan view only), 60% and 100% Stages (plan/profile).
5. **Specifications:** Contract documents consisting of "front-end" documents and technical specifications shall be prepared and shall conform to City of Delray Beach Standards and the Florida Department of Transportation (FDOT) Standard Specifications for road and bridge work. Specifications (four copies & pdf copy) shall be submitted for City review at the 30%, 60% and 100% stages.

6. **Cost Estimate:** At the 30%, 60% and 100% stages, Consultant shall prepare a detailed opinion of probable construction cost based upon the level of design drawings and specifications approved by the City. The cost opinion shall reflect changes in general scope, extent or character of design requirements incorporated during the various design review stages. Opinion of probable construction cost (four copies & pdf copy) shall be submitted for City review at the 30%, 60% and 100% stages.
8. **QA/QC:** Consultant shall provide internal QA/QC reviews on the 30%, 60% and 100% Design Documents (e.g. drawings and specifications).

#### **Phase IIIA – Public Outreach**

Not Applicable

#### **Phase IV – Bidding/Negotiation Phase**

1. **Prepare Schedule of Bid Items:** Consultant shall prepare the schedule of bid items that will be used in the City's Front-End Document.
5. **Final Deliverable:** After Contract Award, Consultant shall furnish the As-Bid design drawings, one (1) set of AutoCAD (Version 2016) files and one (1) set of pdf files in electronic format on Compact Disk (CD). Consultant shall also provide one hard copy only of the Contract Documents (i.e. front-ends and technical specifications).

#### **Phase V – Construction Administration Phase**

Not Applicable

#### **Other – Survey**

Consultant shall furnish the services of a professional surveyor to provide survey services consisting of field topography and horizontal locations referenced by baseline stationing. All existing facilities and utilities within the established project limits will be referenced by baseline station with an offset distance (left or right) from baseline for the project and will include the following:

1. Topography survey at 50-foot intervals and at major ground elevation changes to depict existing ground profile at proposed project area. This shall be accomplished by creating a baseline in the field to collect pertinent data which shall include the following:
  - a. Location of all visible fixed improvements within the project limits, including physical objects, roadway pavement, railway tracks, canals, driveways, sidewalks, curb, trees, signs, fences, power poles, buildings, and other encumbrances, including point of curvature and point of tangency.

- b. Location of all known above and below ground existing utilities: Florida power & Light (FP&L), BellSouth, Cable TV, Natural Gas, Potable Water (pipe diameter, top of pipe (TOP), valves, fire hydrants, and meters), Reclaimed Water Mains (pipe diameter, TOP and valves), Force Mains (pipe diameter, TOP, and valves), Sanitary Sewer (pipe diameter, manhole inverts and direction, rim elevations, laterals, and clean-outs), Storm Sewers (pipe diameter, manhole inverts and direction, catch basins, and rim/grate elevations), and **all** other accessible structures. This will include coordination with Sunshine and City of Delray Beach. Underground piping shall be pot-holed by City in a timely fashion.
- c. Identify platted rights-of-way (including bearing and distances for centerline), lot numbers, house address, ownership lines, block numbers and dedicated easements.
- d. Elevations shall be indicated every 50 feet, at a minimum, to indicate centerline grades, edge of pavement grades, and shoulder grades, low points, railway ditch bottoms, and all right-of-way lines. Intermediate grades shall be indicated at all grade breaks, driveways and sidewalks. Sufficient grades shall be indicated on the driveways and parking areas to indicate direction of grade.
- e. Provide and reference benchmarks at **maximum 600-foot intervals**. Elevations to be referenced to an existing established City or County Benchmark.
  - The above topographical survey data will be prepared in AutoCAD (Version 2016) format at a scale of 1"=20', as one continuous file. The City of Delray Beach standard layering system shall be followed.

#### **Other – Geotechnical**

Consultant shall furnish the services of a professional geotechnical engineer to provide subsurface investigations of the project area that will include:

- Perform standard penetration test (SPT) borings to an average depth of ten (10) feet to determine soil characteristics and ground water depths.
- Evaluate field data collected and provide geotechnical engineering evaluation report.

#### **Other – Field Verification – Soft Digs**

Consultant shall furnish the services of a professional underground services company to provide underground field locations of affected existing utilities. The work shall consist of measuring and recording the approximate horizontal location of affected utilities within the project limits. It is anticipated that approximately fifteen (15) utility locations will need to be pot-holed.

## ASSUMPTIONS

Work described herein is based upon the assumptions listed below. If conditions differ from those assumed in a manner that will affect schedule of Scope of Work, Consultant shall advise City in writing of the magnitude of the required adjustments. Changes in completion schedule or compensation to Consultant will be negotiated with City.

1. City will provide Consultant record drawings of all available existing facilities and proposed facilities, which shall serve as the basis of design in this project. The information will be provided to Consultant within 5 calendar days of Notice-to-Proceed (NTP).
2. City personnel will assist in field verification of affected existing City facilities. This includes marking in field (in a timely manner) existing water mains, sanitary sewers & laterals, force mains, and drainage in the field for the Surveyor.
3. Consultant can assume that all existing and proposed infrastructure improvements are within City of Delray Beach rights-of-way.
4. Construction duration of 12-months is assumed.
5. City is responsible for all permitting fees, including costs of public notification in local newspapers.
6. The Contract Documents will be prepared as a single contract. No pre-purchase of materials and/or equipment is presumed.
7. A single bidding effort for the project is assumed. Re-bidding of the project is considered Additional Services.
8. City will be responsible for preparation of any descriptions, sketches and acquisition of easements (including temporary construction easements) that may be required. Consultant will identify the location and dimensions of any easements or temporary construction easements required for use of the City to prepare the easement descriptions and deeds.
9. The design is to be based on the federal, state and local codes and standards in effect at the beginning of the project. Revisions required for compliance with any subsequent changes to those regulations is considered an Additional Services Item not currently included in this Scope of Work.
10. Contractor will be responsible for preparing Record Drawings.
11. Consultant assumes that there are no contaminated soils or groundwater in the project area.
12. Assisting the City in the settlement of construction claims is considered Additional Services.

## ADDITIONAL SERVICES

Consultant shall provide additional engineering services relating to the provision of surveying, geotechnical, sanitary, water, drainage improvements and lighting to the project area that are not covered under this Service Authorization. These additional services may be required due to uncertainties discovered during survey, soils, investigations, field verification of existing facilities and conditions, and potential property or easement acquisitions.

Services performed under this task will be on as-directed basis in accordance with a written Notice-to-Proceed from the City Manager. The Notice-to-Proceed issued shall contain the following information and requirements:

- A detailed description of the work to be undertaken.
- A budget establishing the amount of the fee to be paid in accordance with the Agreement.
- A time established for completion of the work.

## III. TIME OF PERFORMANCE

The agreed upon project schedule between the City and Consultant shall be followed for this scope of work. Refer to attached project schedule for the overall project.

## VI. COMPENSATION

The compensation for the services provided shall be billed on a Lump Sum basis including reimbursable expenses for each phase of work up to the following not to exceed cost for each phase.

<u>Engineering Services</u>	<u>Estimated Fees</u>
Phase III – Final Design Phase	\$ 23,267.00
Phase IV – Bidding Phase	\$ 1,276.00
Surveying	\$ 7,020.00
Geotechnical	\$ 4,765.00
Field Verification – Utility Targeting	\$ 5,855.00
Field Verification – Soft-Digs	\$ 5,855.00
Out-of-Pocket Expenses	\$ 950.00 <sup>(1)</sup>
<b>TOTAL PROJECT COST (LUMP SUM)</b>	<b>\$ 48,988.00</b>

Notes:

<sup>(1)</sup> Out-of-Pocket Expenses include the following: printing/reproduction and postage.



This reclaimed watermain scope of work refers to the AGREEMENT FOR PROFESSIONAL SERVICES RFQ 2017-032, ENGINEERING DESIGN SERVICES: SW 4TH STREET, SW 6th STREET, AND SW 7TH AVENUE, PROJECT NO. 16-500, and is approved contingent upon the City's acceptance of and satisfaction of the completion of the services rendered in the previous phase whereas encompassed by the previous Service Authorization. If the City in its sole discretion is unsatisfied with the services provided in the previous phase or Service Authorization, the City may terminate the contract without incurring any further liability. The Consultant shall commence work upon City Commission approval and this Service Authorization to be included as part of the contract without any further notice to proceed.

Approved by:

CITY OF DELRAY BEACH:

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

\_\_\_\_\_  
Mark Lauzier, City Manager

MATHEWS CONSULTING, A BAXTER  
& WOODMAN COMPANY

Date: 2/5/18 \_\_\_\_\_

\_\_\_\_\_  
Rebecca Travis, P.E., Vice President

\_\_\_\_\_  
Witness

Attest:

\_\_\_\_\_  
R. Max Lohman, City Attorney

\_\_\_\_\_  
City Clerk

STATE OF FLORIDA  
COUNTY OF PALM BEACH

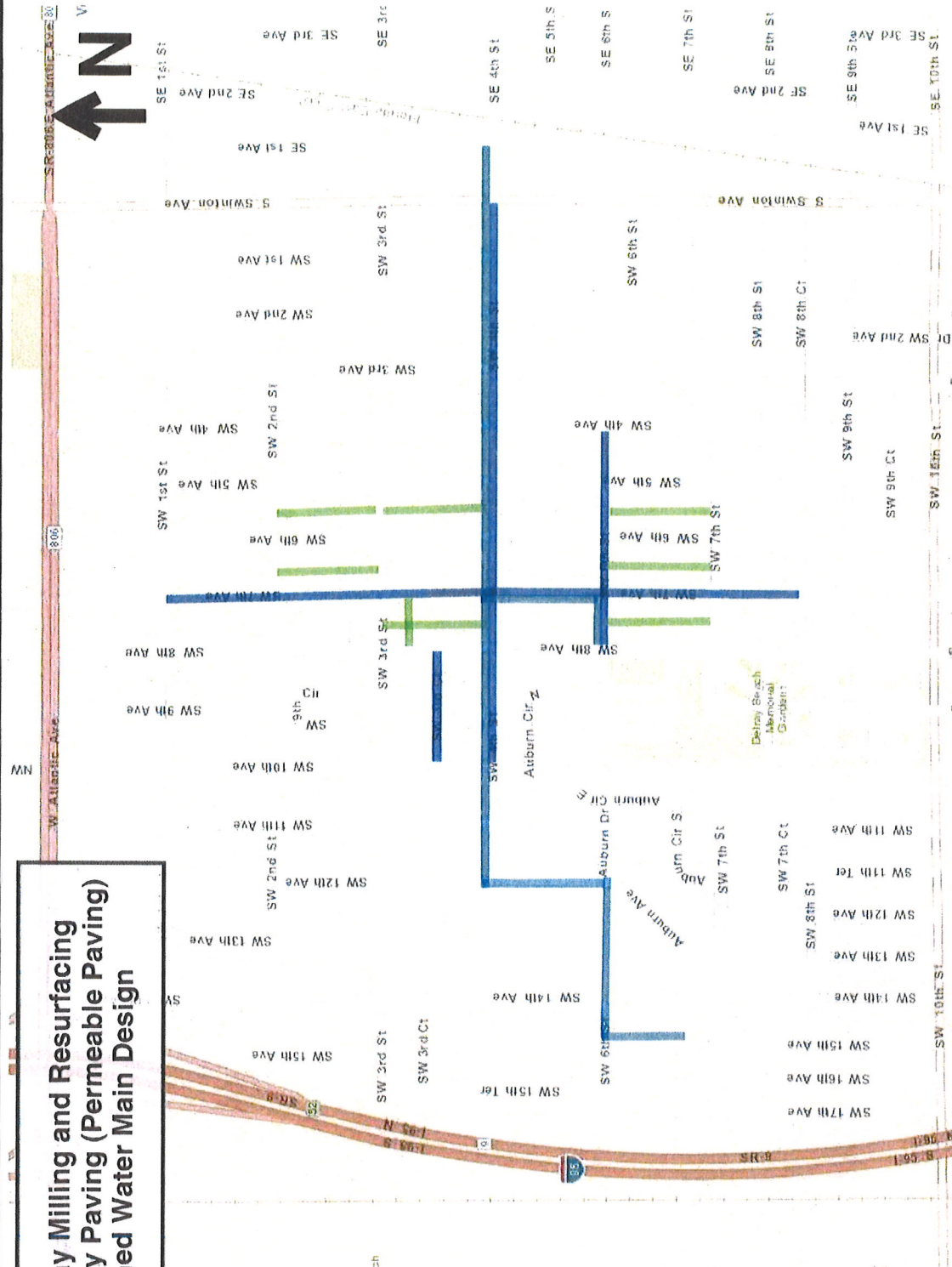
The foregoing instrument was acknowledged before me this 5 day of February, 2018 by Rebecca Travis, Vice President of Mathews Consulting, a Baxter & Woodman Company, an Illinois corporation, on behalf of the corporation. He/She is (personally known to me) or (has produced identification), Florida Driver's License \_\_\_\_\_ and (did/did not) take an oath.

Courtney Marshall  
\_\_\_\_\_  
Signature of person taking  
Acknowledgement





Roadway Milling and Resurfacing  
 Alleyway Paving (Permeable Paving)  
 Reclaimed Water Main Design



# SW 4th Street, SW 6th Street & SW 7th Avenue Improvements - Project Schedule (11-16-17)

