



## URS CORPORATION SOUTHERN

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### WORK ORDER INITIATION FORM

#### for the CITY OF CLEARWATER

Date: July 31, 2014

Project Number: \_\_\_\_\_

City Project Number: 13-0052-UT

**1. PROJECT TITLE:**

Reclaimed Water Expansion per 2014 Resident Requests (13-0052-UT)

**2. SCOPE OF SERVICES:**

The project provides for the design and bidding services for six (6) reclaimed water distribution systems and their associated extensions of the reclaimed water transmission system as follows:

- 11 Residential Properties along Jasmine Way between S. Prospect Ave. & Ewing Ave.
- 24 Residential Properties along Parkwood St. between Barbara Ave. & Carlos Ave. including 1607, 1601, 1513, & 1507 Carlos Ave.
- 17 Residential Properties along Druid Rd. between S. San Remo Ave. & S. Highland Ave.
- 4 Residential Properties along Drew St. between N. Fredrica Ave. & Stevenson Creek.
- 94 properties including all of Forest Wood Estates Subdivision to include 3001 Sunset Point Rd. & 3062 Prestige Dr.
- Project Area includes 9 lawns in Imperial Cove Condos located at 19209 U.S. Hwy. 19 N.

This work order is based upon the understanding that approximately 15,500 feet of reclaimed water distribution main (4- and 6-inch) and 4,500 feet of transmission main (up to 12-inch diameter) will be designed and constructed for the various reclaimed water service areas within the CITY. This work order provides for: data collection, the development of the 60 percent plans and technical specifications, the development of the 90 percent plans and technical specifications, the development of the 100 percent plans

and technical specifications, the development of final plans and technical specifications, one (1) public involvement meeting (including preparation), bidding assistance and the development of addenda required. The design plans shall be compiled using the City of Clearwater CAD standards, as attached.

## I - PRE-DESIGN PHASE

### Task 1- Kick Off Meeting

URS will convene a Kick Off Meeting with the CITY within one (1) week after the Notice to Proceed. URS will develop the agenda for the Kick Off Meeting with input from the CITY. The Kick Off Meeting will discuss and document the points of contacts within the CITY and URS, communication protocol, data requirements, the scope of work, project schedule, milestones and submittals, and other miscellaneous issues.

URS will prepare minutes of the Kick Off Meeting and will distribute them to the meeting attendees.

### Task 2- Data Collection

URS will work with the CITY of collect existing data that will benefit the project. Examples of data required are water and sewer atlases, record drawings of existing reclaimed water facilities associated with the design of the project.

## II - DESIGN PHASE

### Task 3- Survey

URS will perform the survey work required to develop the base information and the horizontal/vertical control for the design and construction plans. The approach involves the development of planimetrics from aerial photogrammetry followed by field surveying of the full right-of-way.

#### A. Topographic, Tree, Utility & Jurisdiction Survey

1. Topographic Survey (20,400 L.F.)
  - a) Prepared in accordance with the minimum technical standards as set forth in chapter 5j-17 Florida Administrative Code.
  - b) Elevations within jurisdictional areas (if any) are not included.
  - c) Spot elevations over the entire site on a 100-foot grid (approx) and in FDOT/county section 50 foot grid.

- d) Mapping to extend full right-way except for McMullen booth road and US Highway 19 which will be edge of pavement to right-of-way one side only.
- e) Vertical datum will be **NAVD 1988**.
- f) Right-of-way lines depicted as per tax maps, existing plats and property corners as found in the field.
- g) No title reports will be reviewed.
- h) Right-of-way takings not shown on tax maps will need to be supplied by the client.

2. Tree Survey

- a) Trees 4 inches in diameter breast high and larger will be located showing common name and diameter.
- b) The location of trees smaller than 4 inches or species not protected (including ornamentals) is not included.
- c) The location of trees within jurisdictional areas (if any) is not included.
- d) Any tree with a canopy (dripline) that extends over the proposed work zone must be included on project survey and construction plans. In addition, the type, size and dripline of all trees and palms will be included. All of this information must be shown on the site survey and plan documents.

3. Utility Survey

- a. Locate surface evidence of utilities i.e. water valves, manholes, storm structures, etc.
- b. Inverts, pipe sizes and pipe material of accessible structures will be obtained.
- c. Utility provider atlases (if available) will be obtained and utilized to depict the approximate location of underground utility services.
- d. This utility location methodology meets the requirements of a quality level c as defined by the federal highway administration. Utilizing this method it is not unusual to find that 15 to 30 percent of the underground utilities are either omitted or are plotted two feet or more in error.

- 4. URS will provide 2 copies 24x36 of the survey once the survey is complete.

#### Task 4- Geotechnical

The purpose of the geotechnical services is to provide subsurface soil conditions and relevant geotechnical engineering properties as well as to provide geotechnical recommendations to guide project design and construction. The objective of the geotechnical study will be to obtain information concerning subsurface conditions at within the project area in order to obtain data to base engineering estimates and recommendations in each of the following areas:

Suitability of materials on-site for use as backfill. Recommendations for placement and compaction of approved fill materials.

General location and description of potentially deleterious materials discovered in the borings, which may interfere with construction progress including existing fills or surficial organics. Identification of groundwater levels and estimation of Seasonal High Groundwater Table (SHGWT) levels.

URS will 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), and the Soil Survey for Pinellas County, published by the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS).

URS will execute a program of subsurface exploration consisting of borings, subsurface sampling and field testing. We plan to perform up to thirty one (31) Standard Penetration Test (SPT) borings to a depth of 10 feet below existing grade along the proposed pipeline alignments. The borings will be completed at an average spacing of one boring per 500 to 1,000 linear feet of pipeline. In each SPT boring, samples will be collected and SPT resistances will be measured virtually continuously to the boring termination depth. In areas where access is limited or utilities are present that limit the use of mechanized equipment, auger borings may need to be substituted for the SPT borings.

URS will visually classify the samples in the laboratory using the American Association of State Highway and Transportation Officials (AASHTO) soil classification system. Identify soil conditions at each boring location

URS will prepare a formal engineering report in accordance with this proposal, which summarizes the course of study pursued, the field data generated, subsurface conditions encountered and our engineering recommendations in each of the pertinent topic areas.

URS will provide 1 copy of the final geotechnical report.

#### Task 5- Subsurface Utility Engineering

The location of potential utility conflicts is not known at this time. It is assumed that up to **twenty (20) utility conflicts** will be encountered which will require field verification by subsurface utility evaluation.

#### Task 6- Development of 60 Percent Plans and Technical Specifications

URS will develop the 60 percent completion level plans and technical specifications. The plans will be plan view with detail bubbles for identified areas of potential conflict or full profiles in areas that will require additional profile information (e.g. Pinellas County ROW and/or FDOT ROW). The 60 percent plans will contain: a cover sheet, general notes and index, survey data sheet, geotechnical information and typical details. The 60 percent technical specifications will include those specialty sections required for the project that are not within the CITY's standard specification sections. Also the 60 percent submittal will include a preliminary bid form, measurement and payment section, and opinion of probable construction cost.

URS will submit six (6) 24x36 sets and three (3) 11x17 sets of the 60 percent plans, technical specification sections and opinion of probable construction cost to the CITY for review and comment. URS will convene a 60 percent review meeting with the CITY to receive review comments approximately three (3) weeks after the submission of the 60 percent documents to the CITY. URS will prepare and distribute minutes (comments and responses) of the 60 percent review meeting to the attendees.

#### Task 7- Development of 90 Percent Plans and Technical Specifications

From the review of the 60 percent plans, technical specifications and opinion of probable construction cost, URS will develop the 90 percent completion level plans and technical specifications. The plans will be plan view with profile details for identified areas of potential conflict or in areas that will require additional profile information (e.g. Pinellas County ROW and/or FDOT ROW). The 90 percent plans will contain: a cover sheet, general notes and index, survey data sheet, geotechnical information and typical details. The 90 percent technical specifications will include those specialty sections required for the project that are not within the CITY's standard specification sections. Also the 90 percent submittal will include the bid form, measurement and payment section, and opinion of probable construction cost.

URS will submit six (6) 24x36 sets and three (3) 11x17 sets of the 90 percent plans, technical specification sections and opinion of probable construction cost to the

CITY for review and comment. URS will convene a 90 percent review meeting with the CITY to receive review comments approximately two (2) weeks after the submission of the 90 percent documents to the CITY. URS will prepare and distribute minutes (comments and responses) of the 90 percent review meeting to the attendees.

### III - FINAL DESIGN PHASE

#### Task 8- Development of 100 Percent Plans and Technical Specifications

From the review of the 90 percent plans, technical specifications and opinion of probable construction cost, URS will develop the 100 percent completion level plans and technical specifications. The plans will be plan view with profile details for identified areas of potential conflict or in areas that will require additional profile information (e.g. Pinellas County ROW and/or FDOT ROW). The 90 percent plans will contain: a cover sheet, general notes and index, survey data sheet, geotechnical information and typical details. The 100 percent technical specifications will include those specialty sections required for the project that are not within the CITY's standard specification sections. Also the 100 percent submittal will include the bid form, measurement and payment section, and opinion of probable construction cost.

The 100 percent submittal will be used as supporting information for FDOT and Pinellas County permit applications.

URS will submit six (6) 24x36 sets and three (3) 11x17 sets of the 100 percent plans, technical specification sections and opinion of probable construction cost to the CITY for review and comment. URS will convene a 100 percent review meeting with the CITY to receive review comments approximately two (2) weeks after the submission of the 100 percent documents to the CITY. URS will prepare and distribute minutes (comments and responses) of the 100 percent review meeting to the attendees.

#### Task 9- Development of Final Plans and Technical Specifications

From the review of the 100 percent plans, technical specifications and opinion of probable construction cost, URS will develop the final plans and technical specifications. The plans will be plan view with profile details for identified areas of potential conflict or in areas that will require additional profile information (e.g. Pinellas County ROW and/or FDOT ROW). The final plans and technical specifications will be ready for advertisement by the CITY for bidding by general utility contractors.

URS will submit two (2) sets of the final plans, and specifications and opinion of probable construction cost to the CITY for review and comment. URS will also submit the final plans and specifications in electronic form (AutoCAD for the final plans and Word for the final specifications) and one signed and sealed original set of plans. It is anticipated that the final plans and specifications will be used by the CITY for bidding and construction of the project.

#### IV - BIDDING PHASE

##### Task 10- Attendance at Pre-Bid Conference

URS will attend the pre-bid conference. The purpose of URS attendance is to answer technical questions with respect to the design. URS will not be responsible for questions or providing information involving the contract between the CITY and the contractor.

##### Task 11- Preparation of Addenda

URS will prepare up to two (2) addenda during the bid phase to formally answer bidder's technical questions, clarify issues or adjust the bid documents prior to the bid opening.

From the final issued for bid plans and technical specifications, URS will prepare a Conformed Set of plans and technical specifications.

##### Task 12- Recommendation of Award

Following bid advertisement by the CITY, URS will review the bids submitted by the contractors and provide an award recommendation to the CITY.

#### V – PUBLIC INVOLVEMENT

Task 13- It is anticipated that one (1) public involvement meeting will be convened during the design of the project. URS will attend the meeting and will prepare presentation boards for each meeting. It is anticipated that the URS presentation will include project design and configuration information, anticipated schedule of design and construction activities, and other pertinent information for the public.

The intention of having the public meeting is that the project engineer is available at the meeting to provide answers to residence's concerns.

It is also anticipated that the CITY will conduct reclaimed water user interest surveys within the reclaimed water distribution areas to gauge potential customer connections. URS will assist the CITY with the surveys as required.

**3. PROJECT GOALS:**

The project goals are to design and construct new reclaimed water distribution systems for the CITY to continue to expand its reclaimed water customer base and to increase the amount of reclaimed used to offset potable water demand for nonpotable uses. Additionally the increased use of reclaimed water within the CITY will also help to reduce the amount of treated effluent that is discharge to surface waters for disposal.

The work products developed will include the 60-, 90-, 100-percent plans and technical specifications, a final bidding set of plans and specifications, opinions of probable construction cost, survey electronic files, geotechnical report, regulatory permit applications, bimonthly project status reports. The plans will be drafted in AutoCAD and the text documents will be MS Word documents. Any public information presentations will be in MS PowerPoint.

**4. BUDGET:**

Attachment “B” provides the fee estimate detail. This price includes all labor and expenses anticipated to be incurred by URS Corporation Southern for the completion of these tasks in accordance with Professional Services Method “A” – Cost Times Multiplier Basis, **for a fee not to exceed One Hundred and Ninety Nine Thousand Eight Hundred and Seventy-Six Dollars (\$199,876.00).**

Permit application fees will be paid by the CITY.

**5. SCHEDULE:**

The design portion of the project is to be completed 250 days from issuance of notice-to-proceed. The schedule is based upon the assumption of the CITY reviews of the project work products will be completed in three (3) weeks from the date of submission. The project deliverables are to be phased as follows:

<b>60% Plans and Technical Specifications</b>	<b>140 calendar days</b>
<b>90% Plans and Technical Specifications</b>	<b>177 calendar days</b>
<b>100% Plans and Technical Specifications</b>	<b>207 calendar days</b>
<b>Final Construction Documents</b>	<b>237 calendar days</b>
<b>Bidding Assistance</b>	<b>TBD</b>

**6. STAFF ASSIGNMENT (Consultant):**

**Officer-in-Charge:** Dana K. Tallman, P.E.  
**Project Manager:** Bozhidar Handjiev, P.E.  
**Engineer III:** Laurel Rowse, E.I.  
**Senior Designer:** Terry Sonnenberg  
**Admin Assistant:** Lisa Woodard

**7. CORRESPONDENCE/REPORTING PROCEDURES:**

ENGINEER's project correspondence shall be directed to Bozhidar Handjiev, P.E. All City project correspondence shall be directed to Khang Nguyen, E.I. with copies to others as may be appropriate.

**8. 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.

City Invoicing Code: 0315-96739-561300-533-000-0000

**9. INVOICING PROCEEDURES**

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 Cost Times Multiplier, hours, hourly rates, names of individuals being billed, amount due, previous amount earned, total earned to date for each task and other direct costs (receipts

will be required for any single item with a cost of \$50 or greater or cumulative monthly expenses greater than \$100).

- G. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

**10. SPECIAL CONSIDERATIONS:**

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

**PREPARED BY:**

\_\_\_\_\_  
**Dana K. Tallman, PE, BCEE**  
**Vice President**  
**URS Corporation Southern**

\_\_\_\_\_  
**Date**

**APPROVED BY:**

\_\_\_\_\_  
**Michael D. Quillen, PE**  
**City Engineer**  
**City of Clearwater**

\_\_\_\_\_  
**Date**



**CITY OF CLEARWATER  
ENGINEERING DEPARTMENT**

**WORK ORDER INITIATION FORM**

**Attachment "A" - CITY DELIVERABLES**

**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 used 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](mailto:tom.mahony@myclearwater.com)

# URS

## URS CORPORATION SOUTHERN

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### WORK ORDER INITIATION FORM PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
<b>I.</b>	<b>Pre- Design</b>			
1	Kick-Off Meeting		\$1,716	\$1,716
2	Data Collection		\$1,573	\$1,573
<b>Subtotal Phase I</b>			<b>\$3,289</b>	<b>\$3,289</b>
<b>II.</b>	<b>Design</b>			
3	Survey	\$70,000	\$1,650	\$71,650
4	Geotechnical	\$12,500	\$1,650	\$14,150
5	Subsurface Utility Engineering	\$8,500	\$1,650	\$10,150
6	Development of 60 Percent Plans & Specs		\$29,513	\$29,513
7	Development of 90 Percent Plans & Specs		\$27,478	\$27,478
<b>Subtotal Phase II</b>		<b>\$91,000</b>	<b>\$61,941</b>	<b>\$152,941</b>
<b>III.</b>	<b>Final Design Plans and Specifications</b>			
8	Development of 100 Percent Plans & Specs		\$18,370	\$18,370
9	Development of Final Plans & Specs		\$10,978	\$10,978
<b>Subtotal Phase III</b>			<b>\$29,348</b>	<b>\$29,348</b>

<b>IV.</b>	<b>Bidding Phase</b>			
10	Pre-Bid Conference		\$506	\$506
11	Preparation of Addenda		\$2,893	\$2,893
12	Recommendation of Award		\$748	\$748
<b>Subtotal Phase IV</b>			<b>\$4,147</b>	<b>\$4,147</b>
<b>V.</b>	<b>Public Involvement</b>			
13	Public Involvement		\$8,151	\$8,151
<b>Subtotal Phase V</b>			<b>\$8,151</b>	<b>\$8,151</b>
<b>Subtotal, Labor and Subcontractors</b>		<b>\$91,000</b>	<b>\$106,876</b>	<b>\$197,876</b>
<b>Other Direct Costs (prints, photocopies, postage, etc.)</b>				<b>\$2,000</b>
<b>Grand Total</b>				<b>\$199,876</b>