



## King Engineering Associates, Inc.

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### **SUPPLEMENTAL WORK ORDER INITIATION FORM for the CITY OF CLEARWATER**

<b>Date:</b>	<b>August 8, 2017</b>
<b>Consultant Project Number:</b>	<b>2110-215-001</b>
<b>City Project Number:</b>	<b>14-0041-UT</b>
<b>City Plan Set Number:</b>	<b>2014053</b>

**1. PROJECT TITLE:**

Clearwater Memorial Causeway Subaqueous Pipelines Engineering Services During Construction

**2. SCOPE OF SERVICES:**

In December 2014, the City of Clearwater (City) authorized King Engineering Associates, Inc. (King) to provide planning, design, permitting and bidding services for the construction of a 2,500 LF replacement force main across Clearwater Harbor from Bayway Blvd. to State Road (S.R.) 60 and a new 2,400 LF 20-inch water main across the Intracoastal Waterway from the Memorial Causeway to Drew Street. The project design and permitting phases have been completed.

This Supplemental Work Order authorizes King to provide construction management and limited field representative services during construction of the pipelines as described above.

**V. CONSTRUCTION PHASE**

King will provide construction management during a 13-month construction contract period, which includes:

- 5.1 Attendance at the preconstruction meeting by King's Project Manager and Project Engineer. King will prepare the meeting agenda, invite outside utilities and

permitting agencies, attend and conduct the meeting and prepare and distribute meeting minutes.

- 5.2 Logging, distributing, reviewing and responding to thirty-five (3) shop drawings from the Contractor including construction progress schedule, Shop Drawings and other miscellaneous submittals. Of these shop drawings, it is assumed that up to 10 will require a second review (total of 45 shop drawing reviews).
- 5.3 Attendance at up to 13 construction progress meetings and site visits by King's Project Manager and Project Engineer. King will prepare the meeting agenda, attend and conduct the meetings and prepare and distribute meeting minutes by email.
- 5.4 Twelve (12) periodic site visits by either King's Project Manager or Project Engineer to observe the progress of the work or to assist with conflict resolution. This effort will be coordinated with the City Project Manager.
- 5.5 Reviewing and signing the Contractor's pay applications. This includes reviewing and approving the Contractor's initial schedule of values. Verification of installed quantities will be conducted by the City's Field Representative.
- 5.6 King will address the Contractor's Requests for Information (RFIs), which will include:
  - Logging, reviewing and responding to the Contractor's Requests for Information (RFIs). For the purposes of this Work Order, a total of 20 RFIs is assumed.
  - Miscellaneous phone calls and emails with the Contractor's staff required to respond to minor questions not requiring formal RFIs.
- 5.7 Developing and issuing Requests for Proposal (RFPs) to the Contractor for additional work, reviewing and negotiating pricing and issuing Work Change Directives (WCDs) to authorize the Contractor to proceed with additional work. This includes development of supplemental drawings and tracking the contract's Contingency Allowance. For the purposes of this Work Order, a total of 3 RFPs and 3 WCDs is assumed.
- 5.8 The City is responsible for Change Orders; however, King will assist the City with negotiating and preparing Change Orders to the contract. For the purposes of this Work Order, up to 2 Change Orders are assumed.
- 5.9 Reviewing and logging compaction and materials test reports as well as pressure tests/disinfection reports.
- 5.10 The water main and the force main will be placed into service in two (2) separate events. For each event, King will:

- Attend a walkthrough;
- Develop a partial punchlist;
- Reviewing the Contractor survey As-Builts;
- Prepare Record Drawings based on redlines and survey As-Builts provided by the Contractor;
- Prepare and submit water and wastewater clearance packages to the FDEP.

5.11 Developing and submitting certification packages for the following remaining permits:

- FDOT Right-of-Way Use Permit(s)
- U.S. Army Corps of Engineers (USACE) Nationwide Permit
- FDEP Environmental Resource Permit

5.12 Providing assistance with final closeout including:

- Maintaining a punchlist throughout the project based on our site visits/field observations and reports/field observations conducted by the City.
- In addition to the partial walkthrough in Section 5.10, King will attend a substantial and a final walkthrough and confirming that punchlist items have been completed;
- Reviewing the Contractor's combined survey as-built;
- Preparing combined Record Drawings and providing the City with signed and sealed copies;
- Providing the City with Record Drawings in PDF and AutoCAD formats;
- Reviewing and computing adjustments to Contract Price and Contract Time and assisting with preparation of the final Change Order.

5.13 Providing general Program Management including:

- Maintaining routine contact and discussing construction progress and project developments with the City's Project Manager and designated Field Representative;
- Miscellaneous phone calls and emails and coordination with the City's Project Manager and other City staff, including assisting the City's Project Manager with miscellaneous minor project related questions and general consultation with respect to the Contractor's contractual obligations;
- Document control including maintaining files of correspondence, meeting minutes, Contract Documents, Change Orders, Field Orders, RFIs, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Contract, progress reports, Shop Drawing and Progress submittals, regulatory correspondence and other Project-related documents. At the conclusion of the project, King will combine this information into a project dossier and submit to the City for review and comment. The project dossier will be submitted electronically on CD/DVDROM. We have budgeted for up to one round of City review and comment.

5.14 It is assumed that the City will provide a qualified full time inspector for daily observation of the construction efforts. However, in order to certify to the FDEP and the U.S. Army Corps of Engineers that the project has been constructed in accordance with the FDEP and USACE permits and engineering plans and specifications, King will provide the services of a Field Representative to observe that the work is proceeding in general accordance with the Contract Documents during critical stages of the work. The budget for Field Observation budgeted level of effort is:

- No hours during the first two (2) months of the construction contract.
- An average of 8 hours per week for a period of two (2) months during HDD of the water main and force main.
- An average of 20 hours per month for remaining eight (8) months of the construction contract.
- No hours during the last month of the construction contract

Total Field Observation Hours: 232 hours

It is assumed that the City will provide a qualified inspector to observe the Contractor's work when King's Field Representative is not on site. King will be provided with the City inspector's daily observation reports for review on a weekly basis and inclusion with the project dossier submitted at the end of the project.

#### **Additional Services**

King will provide additional "out-of-scope" services on an "as-needed basis", such as additional field observation services due to the Contractor working extended hours, at the request of the City, after development of a scope and fee and issuance of written authorization by the City Project Manager.

### **3. PROJECT GOALS:**

Project deliverables will include the following and those referenced in Attachment A:

- Meeting minutes in PDF format via email.
- Field Observation Reports in PDF format via email.
- Responses to Contractor RFI's in PDF format via email.
- Hardcopies of Shop Drawing Review comments.
- One copy of each submitted certification package.
- Five (5) 24"x36" signed/seal final Record Drawings.
- Two (2) 11"x17" signed/seal final Record Drawings.
- Record Drawings in AutoCAD and PDF formats on CDROM.
- One (1) Draft and One (1) Final Project Dossier on CD/DVDROM

**4. BUDGET:**

See attachment B. This price includes all labor and expenses anticipated to be incurred by King Engineering Associations, Inc. 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 Eighty-Seven Thousand Seventy-Four Dollars and Zero Cents (\$187,074.00).**

**5. SCHEDULE:**

All Tasks will be completed in accordance with the Contractor's construction schedule over the course of a 395-day construction contract duration (Notice to Proceed to Final Completion).

**6. STAFF ASSIGNMENT:**

**Consultant Staff:**

Principal:	Christopher F. Kuzler, P.E.
Project Manager:	Loc P. Truong, P.E.
Project Engineers:	Christopher B. High, E.I.
Clerical:	Paula Eldon

**City's Staff:**

Lan-Anh Nguyen, PE	Project Manager
Mike Vacca	Public Utilities Liaison and Site Representative
Jeremy J. Brown, PE	Utilities Engineering Manager
Richard G. Gardner, PE	Public Utilities Assistant Director

**7. CORRESPONDENCE/REPORTING/COMMUNICATION PROCEDURES:**

ENGINEER's project correspondence shall be directed to Loc P. Truong, P.E.

All City project correspondence shall be directed to the Project Manager and Public Utilities Liaison with copies to Utilities Engineering Manager and Public Utilities Assistant Director. All City directives must come from the Project Manager.

The City requests 48 hours notice prior to conducting fieldwork/site visits. If assistance from Public Utilities employees is needed, the City requests 7 days notice. Fieldwork/site visits must be approved by the Project Manager prior to mobilization.

A health and safety plan must be submitted and approved by the Project Manager prior to conducting any fieldwork/site visits.

In addition to the original copies delivered as stated in the scope of work, all project deliverables will be submitted in electronic format on CD or other City approved device prior to approval of final invoice.

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

City Invoicing Code: **327-96665-561300-535-000-0000**

## 9. **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. Project Number, 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:**

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**Christopher F. Kuzler, P.E.**  
**Executive Vice President**  
**King Engineering Associates, Inc.**

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**Date**

### **APPROVED BY:**

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

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**Date**



# CITY OF CLEARWATER ENGINEERING DEPARTMENT

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## WORK ORDER INITIATION FORM CITY DELIVERABLES

### 1. FORMAT

The design plans shall be compiled utilizing the following methods:

1. City of Clearwater CAD standards.
2. 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.

### 2. DELIVERABLES

The design plans shall be produced on bond material, 24" x 36" at a scale of 1" = 20' unless approved otherwise. Upon completion the consultant shall deliver all drawing files in digital format with all project data in Autodesk Civil 3D file format. If not available Land Desktop files are still acceptable, however the City or Clearwater is currently phasing out Land Desktop.

NOTE: If approved deviation from Clearwater CAD standards are used the Consultant shall include all necessary information to aid in manipulating the drawings including either PCP, CTB file or pen schedule for plotting. The drawing file shall include only authorized fonts, shapes, line types or other attributes contained in the standard release of Autodesk, Inc. software. All block references and references contained within the drawing file shall be included. Please address any questions regarding format to Mr. Tom Mahony, at (727) 562 4762 or email address [Tom.Mahony@myClearwater.com](mailto:Tom.Mahony@myClearwater.com).

All electronic files (CAD and Specification files) must be delivered upon completion of project or with 100% plan submittal to City of Clearwater.

# Clearwater Memorial Causeway Subaqueous Pipelines Engineering Services During Construction King Engineering Associates, Inc.

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## WORK ORDER INITIATION FORM PROJECT BUDGET

Task	Description	Subconsultant Services	Labor	Total
<b>5.0</b>	<b>Construction Phase Services</b>			
5.1	Pre-construction Meeting		\$ 1,780	\$ 1,780
5.2	Submittals		\$ 18,217	\$ 18,217
5.3	Progress Meetings		\$ 17,705	\$ 17,705
5.4	Periodic Site Visits		\$ 7,100	\$ 7,100
5.5	Pay Applications		\$ 5,460	\$ 5,460
5.6	Request for Information (RFI)		\$ 16,930	\$ 16,930
5.7	RFP/Work Change Directives		\$ 9,540	\$ 9,540
5.8	Change Orders		\$ 4,220	\$ 4,220
5.9	Test Reports		\$ 6,120	\$ 6,120
5.0	FDEP Certifications for Sanitary Sewer		\$ 13,728	\$ 13,728
5.11	Other Certifications		\$ 5,037	\$ 5,037
5.12	Closeout Assistance		\$ 9,178	\$ 9,178
5.13	Program Management		\$ 29,300	\$ 29,300
5.14	Field Observation		\$ 25,752	\$ 25,752
<b>Subtotal, Labor and Subcontractors</b>				<b>\$170,067</b>
<b>Contingency Allowance (10%)</b>				<b>\$ 17,007</b>
<b>Grand Total</b>				<b>\$187,074</b>