

CONSULTANT WORK ORDER

Supplemental 1

Date:	10/07/2021
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1. PROJECT INFORMATION:

Project Title:	Marshall Street WRF Sand Filters Rehabilitation
City Project Number:	<u>20-0011-UT</u>
City Plan Set Number:	<u>2021005</u>
Consultant Project Number:	<u>200-41125-21003</u>

2. SCOPE OF SERVICES:

The City of Clearwater (City) has requested assistance from Tetra Tech in rehabilitating the sand filters at the City’s Marshall Street Water Reclamation Facility (WRF). The filters are Hydro Clear® pulsed-bed sand filters which were originally placed in service in June 1990 and have 12 poured-in-place concrete filter cells. An upgrade of the filters was completed in 2012 with the filter routines of Air Mix, Pulse Mix, Backwash and Chemical Clean. A subcontractor will complete the construction of the project as part of a Construction-Manager-At-Risk (CMAR) delivery. The rehabilitation of the sand filters will incorporate the following (as determined necessary):

- Removal of the media and debris from all 12 cells.
- Disposal of spent media and debris.
- Cleaning of the filter cells.
- Installation of new media.
- Replacement of Level Switches.
- Remove abandoned airlines and route temporary exterior ones through existing (or new) conduit.
- Replacement of wire mesh support screens.
- Replacement of Hold-Down beams, clips angles and anchors, diffusers, diffusers pipes, drop pipes and other components and mounting hardware in each cell as necessary.
- Leveling of v-notch weirs in each cell.

- Replacement of each cell's inlet valve.
- Replacement of each cell's trough valve.
- Evaluation and repair of Chemical Clean System to restore it to automatic operation.
- Concrete repair of walls in each cell.

Tetra Tech's scope of services during this phase will include the following general tasks:

- Construction phase services.

The detailed project tasks are outlined below:

IV. CONSTRUCTION PHASE Services:

For this Work Order, Tetra Tech will provide the following construction administration, observation and project close-out services for the filter rehabilitation. These services are based on a construction duration of 259 calendar days (49 days for submittals and 210 days for construction). This is based on the schedule submitted by the CMAR.

Task 4.1: Construction Administration

Tetra Tech will perform the following construction administration services:

- Prepare for and attend one (1) preconstruction meeting. Tetra Tech will prepare the meeting agenda and record and distribute the meeting minutes.
- Attend, in person, up to seven (7) progress meetings for the contracted construction period. It is expected that the CMAR will prepare each meeting's agenda and Tetra Tech will record and distribute the meeting minutes.
- Provide interpretation or clarification of the design documents when requested including responding to CMAR's RFIs and claims. Consultant anticipates 6 RFIs and clarifications of the contract documents.
- Review up to 20 shop drawings and other submittals up to two (2) times per submittal for general conformance with the Contract Documents.
- Review applications for payment, quantities and the accompanying data and schedule, determine the amounts owed to the Contractor and advise the City of the recommended payments.
- CMAR shall create and maintain submittal log including shop drawings, substitution requests, requests for information, and change order requests. Consultant shall work with the CMAR to maintain the log.

- Attend six (6) substantial completion site visits to determine if the project has been completed in accordance with the Contract Documents. Tetra Tech will coordinate with Evoqua to develop a punch list of items to be corrected by the Contractor. Each substantial completion visit is assumed to be prior to media placement within the rehabilitated filter bed.
- Conduct one (1) final completion inspection to determine if the punch list items have been completed.

Task 4.2: Construction Observation

To better ensure that the Project is constructed in accordance with the Contract Documents, the Tetra Tech will provide the construction observation services throughout the duration of construction. Based on the schedule submitted by the CMAR, the construction duration is 30 weeks. Therefore, total on-site construction observation hours are estimated to be 24 hours per week for a 30-week period. An additional 32 hours of buffer is also included in this estimate for a total of 752 hours.

The role, limitations and responsibilities of the Tetra Tech are set forth below:

- Provide onsite observation to verify compliance with the Contract Documents and inform the City of progress and any observed deficiencies.
- Prepare field reports for the portion of the day on site, documenting construction activities and submit them to the City for review on a weekly basis.
- Review the Contractor's red-line as-builts on site on a monthly basis.
- Observation inspections as Tetra Tech deems necessary.

Task 4.1: Project Closeout

Tetra Tech will perform the following Project Closeout services:

- Prepare record drawings, incorporating changes made to original design during construction based on record information furnished by the CMAR and provide one (1) flash drive with an electronic version of the record documents to the City in PDF-format and ACAD format.
- Prepare a project catalog that includes all of the construction documentation, including files of correspondence, meeting minutes, Contract Documents, change orders, field orders, RFI's, work change directives, addenda, additional drawings issued subsequent to the Contract, progress reports, shop drawing and progress submittals, regulatory correspondence and other project related documents. At the conclusion of the project, Tetra Tech will combine the

information into a project catalog and submit to the City for review and comment. The project catalog will be submitted electronically. One round of City review and comment is budgeted. Upon receipt and inclusion of City comments, Tetra Tech will provide a final project catalog in electronic format.

V. CONTINGENCY:

A Time and Materials Not-to-Exceed (T&M, NTE) CEI contingency of 10% is included to support the implementation of this project.

3. PROJECT GOALS:

Tetra Tech will prepare the following deliverables:

- Record Drawings
- Project Catalog

4. FEES:

See Attachment "A".

This price includes all labor and expenses anticipated to be incurred by Tetra Tech for the completion of these tasks in accordance with Professional Services Method "A" – Hourly Rate (Cost Times Multiplier Basis), **for a fee not to exceed one hundred eighteen thousand six hundred eighty one dollars (\$118,681).**

5. SCHEDULE:

It is anticipated that the project schedule will be as follows from notice to proceed (NTP):

	Calendar Days Per Task	Total Calendar Days from NTP
Shop Drawings Review	49	49
Construction Duration	210	210

6. STAFF ASSIGNMENT:

City's staff assignments include:

Project Manager	Kaylynn Price
Utilities Engineering Manager	Jeremy Brown, PE
Public Utilities Director	Richard Gardner, PE
Public Utilities W.E.T. Manager	Jason Jennings
Public Utilities Assistant Manager	Mike Flanigan
Public Utilities Chief Operator (MS WRF)	Ryan Alexander

Tetra Tech's staff assignments include:

Senior Project Manager	Michael Saxton, PE
Senior Engineer	Kevin Friedman, PE
Engineer of Record	Tyler Achotegui, PE

7. CORRESPONDENCE/REPORTING PROCEDURES:

Tetra Tech's project correspondence shall be directed to the Project Manager with copies to Senior Engineer. All City project correspondence shall be directed to the Project Manager, with copies to the Utilities Engineering Manager and Public Utilities Assistant Director.

A health and safety plan will be prepared by Tetra Tech and submitted to the City Project Manager prior to mobilizing to each site.

Tetra Tech shall provide a minimum of forty-eight (48) hours' notice prior to conducting fieldwork/site visits. Tetra Tech shall provide a minimum of seven (7) days notification for site visits requiring the assistance of City Operations and Maintenance personnel. Notification will be provided by Tetra Tech for employees of Tetra Tech.

Tetra Tech acknowledges that all City directives shall be provided by the City Project Manager.

In addition to the original copies delivered as stated in the scope of work, all deliverables will be submitted in electronic format 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
Att. Brooke Freeman, Accountant
PO Box 4748
Clearwater, Florida 33758-4748.

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

City Invoicing Code: 3217321-530100-96213

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:

1. Purchase Order, Project and Invoice Numbers and Contract Amount.
2. The time period (begin and end date) covered by the invoice.
3. A short narrative summary of activities completed in the time period.
4. Contract billing method – Lump Sum or Cost Times Multiplier.
5. 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).
6. 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).
7. If the Work Order is funded by multiple funding codes, an itemization of tasks and invoice amounts by funding code.

10. CONSIDERATIONS:

Consultant acknowledges the following:

1. The Consultant named above is required to comply with Section 119.0701, Florida Statutes, where applicable.
2. All City directives shall be provided by the City Project Manager.

3. "Alternate equals" shall not be approved until City Project Manager agrees.
4. All submittals must be accompanied by evidence each has been internally checked for QA/QC before providing to City.
5. Consultants/Contractors are not permitted to use City-owned equipment (i.e. sampling equipment, etc.).
6. Documents posted on City website must ADA accessible.

11. ADDITIONAL CONSIDERATIONS:

All work orders should include considerations for the following:

1. Sea Level Rise and Flood Resilience, as applicable.
2. Submittal of a Critical Path Method (CPM) Schedule(s).
3. Submittal of a Project Catalog with the following items, as appropriate:
 - a. Data requests, assumptions, critical correspondence, meeting agenda, sign-in sheets, meeting minutes, document comment-response log(s), technical memorandum/reports, addenda, progress reports, regulatory correspondence, and other project-related documents.
 - b. If construction project, also include design plans, conformed plans, change orders, field orders, RFIs, work change directives, addenda, progress reports, shop drawing and progress submittals, as-builts, record drawings, and other project-related documents such as O&M manuals and warranty information.
 - c. At the conclusion of the project, ENGINEER will combine this information into a Project Catalog and submit to the City for review and comment.
4. Arc Flash labeling requirements:
 - a. All electrical designs and construction shall adhere to NFPA 70 E "Standard for Electrical Safety in the Workplace".
 - b. Updated calculations of Fault and Arc Flash, and provisions for new or updated Arc Flash equipment labeling shall be included in the contract documents.

12. SPECIAL CONSIDERATIONS:

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

13. SIGNATURES:

PREPARED BY:

APPROVED BY:



Michael Saxton, P.E.
Senior Project Manager
Tetra Tech

10/07/2021

Date

Tara Kivett, P.E.
City Engineer
City of Clearwater

Date

ATTACHMENT "A"

CONSULTANT WORK ORDER – PROJECT FEES TABLE

Marshall Street WRF Sand Filters Rehabilitation

Tetra Tech, Inc.

20-0011-UT

City of Clearwater

**CONSULTANT WORK ORDER
PROJECT FEES TABLE**

Task	Description	Subconsultant Services	Labor	Total
4.0	Construction Phase Services			
4.1	Construction Administration	-	\$23,563	\$23,563
4.2	Construction Observation	-	\$78,260	\$78,260
4.3	Project Closeout	-	\$6,070	\$6,070
Construction Phase Services Total:				\$107,893
SUBTOTAL, LABOR AND SUB-CONTRACTORS:				\$107,893
5.0	Contingency (10%)			\$10,789
GRAND TOTAL:				\$118,682

ATTACHMENT "B"

CONSULTANT WORK ORDER – CITY DELIVERABLES
Marshall Street WRF Sand Filters Rehabilitation
20-0011-UT

Tetra Tech, Inc.

City of Clearwater

CONSULTANT WORK ORDER

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.

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.

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