



SCOPE AND FEES

Work Authorization No. 3 Hurricane Hardening Design and Construction Administration Services for the Water Treatment Plant Chemical Feed Building

I. PROJECT DESCRIPTION

Tetra Tech, Inc. (Tetra Tech) is pleased to present this proposal for engineering design and construction administration services for the identified hurricane hardening elements at the Pompano Beach Water Treatment Plant (WTP) for the Chemical Feed Building. Refer to the attached Site Plan which provides an aerial view of the plant with building labels. Based on the study and our discussions at the WTP on January 11, 2018, our understanding of the project is to provide design documents and other engineering services as described in Part II for the building improvements identified in the study in addition to addressing life safety items.

The services rendered pursuant to this Work Authorization No. 3 are in accordance with the terms and conditions of the Agreement for Consulting / Professional Services between the City of Pompano Beach and Tetra Tech, Inc., dated January 19, 2016 and approved by City Ordinance No. 2016-26.

II. SCOPE OF WORK

Task 1 - Data Collection, Review, and Preparation

Tetra Tech will collect and review available drawing data for the Chemical Feed Building. Tetra Tech staff will operate lighting branch circuit breakers to review operation of egress lighting, with the anticipation that no plant or equipment outages occur during the process. Existing backgrounds for the new construction documents will be developed based on historical construction drawings and site visits. Tetra Tech assumes that copies of all existing drawing documents will be provided, if not already obtained, from the recently completed study.

Task 2 - Design

Once base site and building drawings are established or created in Task 1, Tetra Tech will proceed with preparation of design drawings and specifications, which will provide the general scope, extent, and character of the proposed work to be furnished and performed by the Contractor. Drawings and specifications will be prepared and submitted at the 60 percent complete stage. Comments received from the City will be addressed and a final submittal of the drawings and specifications will be provided. It is our understanding that the City will be responsible for the bidding and contract documents. The following drawings and specifications are anticipated to be prepared:

- Cover sheet, index and key map;
- Site plan sheets for plant improvements;
- Structural, Mechanical, Electrical, and Architectural sheets with associated details;

- Technical Specifications associated with the structural improvements;
- Life safety plan to include:
 - the floor plan with each room labeled,
 - information regarding the construction type and fire rating of the walls,
 - occupancy,
 - exit locations and travel distances,
 - emergency lighting*,
 - exit signs*, and
 - fire extinguisher locations;

* Includes identifying the power source.

- Electrical plans for egress lighting and power for motorized doors; and
- Single line diagram and wiring details.
- Tetra Tech's Subconsultant, Revay Coating Consultants, Inc. (RCCI), will review the design drawings, identify and confirm what areas are to be prepared and coated, calculate the square footage of the identified surfaces, and assist the City in locating qualified and reputable paint contractors. Site visits are included, as needed. Project specifications will be prepared, custom to the Chemical Feed Building's unique site-specific details / characteristics, referencing the industry standards for surface preparation and coating; the specifications will provide instructions / guidelines for the paint contractor to adhere to, including: identification of areas to be prepared and coated, industry standards (SSPC / NACE / ASTM) for proper surface preparation, coating application, a list of recommended products / materials, color specifics, and a detailed list of QA hold point inspections and testing.

Deliverables for this task include the following and will be invoiced by the subtask number listed:

- 60 percent drawings, specifications, and cost estimate - Subtask 2.1
- Final drawings, specifications, and cost estimate - Subtask 2.2

The specific scope of work required for this work authorization will include specifications for the following items for the Chemical Feed Building which are outlined in the attached study or discussed during the January 11th site visit:

- Clean corroded steel framing and add fire protection,
- Retrofit metal deck attachment over shop area and 2nd floor,
- Roof replacement (out of necessity due to structural repairs),
- Replace ten (10) operable windows with HVHZ windows louvered for ventilation where required,
- Replace three (3) manually operated overhead coil doors with new steel overhead coil doors each with motorized operator and controls,
- Replace three (3) single passage doors and two (2) double doors with HVHZ rated doors,
- Repair or replace the freight elevator second floor exterior double doors,
- Replace seventeen (17) louvers and eight (8) skylights,
- Replace in kind all exterior-mounted exhaust fans,
- Replace existing parapet wall above the loading dock with hand railing, mounting the existing lightning arrestors to the top of the railing, and
- Prepare a life safety plan including electrical source location of power to emergency lights and signage, egress paths and door location identification, occupancy classification and permitted loads and information regarding construction type.

Task 3 - Permitting

Tetra Tech will prepare an electronic drawing set, prior to the final drawings, to be uploaded to the City's Electronic Plan Review (EPR) website for Building Department review. Comments received from the Building Department will be addressed by Tetra Tech and the revised drawing set will be uploaded for review until permit approval. Please note that the permit may not be able to be secured fully until a contractor is selected.

Task 4 - Bidding Assistance

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

1. Tetra Tech will work with the City staff to provide a master copy of the Bid Set construction drawings and specifications in electronic format (PDF) and uploaded to the EPR website. It is our understanding that the City will be responsible for the bidding and contract documents and project advertisement and distribution of bid packages to potential bidders.
2. Support with addenda. Tetra Tech will respond to technical questions forwarded by the City for addenda as part of this scope of work. Tetra Tech will respond to questions using the Addendum Form for expedited response time and will generate necessary supporting documents, as applicable, and submit them to the City for distribution to registered plan holders.
3. Tetra Tech will attend and conduct the pre-bid meeting at the City. A meeting agenda will be prepared and distributed by Tetra Tech. Responses to questions provided in writing at the meeting will be provided through an addendum.
4. Tetra Tech will tabulate and evaluate the bids' unit and total prices and provide support by checking references for the three lowest bidders and evaluation of the apparent low bidder's contractor's qualifications for undertaking the utility work on the project. Tetra Tech will provide a recommendation of award, once completed.

Task 5 - Construction Administration

Tetra Tech will provide construction administration services based on a 365-day construction period. If construction extends beyond this duration, then additional services may be required. Tetra Tech will consult with and advise the City related to the improvements issued in the contract plans and specifications completed under this Work Authorization. During the construction phase, Tetra Tech will provide the following services:

1. Shop Drawing and Pay Application Review
 - a. Review shop drawings and other required Contractor submittals up to two (2) times per submittal for general conformance with the Contract Documents.
 - b. Review Contractor's testing plan for general conformance with the Contract Documents.
 - c. Review the Contractor's application for payment and the accompanying data and schedules, determine the amounts owed to the Contractor based on field observation occurring after each monthly progress meeting (item 3 below), and advise the City of the recommended payments to the Contractor.
2. Interpretations and Clarifications
 - a. Provide interpretation or clarification of the design documents when requested, and prepare change orders required for clarification or minor modification of the Contract Documents.
3. Construction Meetings
 - a. Attend and conduct a preconstruction conference with the selected Contractor, and subcontractors. An agenda will be prepared and meeting minutes distributed.

- b. Attend up to twelve (12) monthly progress meetings, prepare agenda and meeting minutes. Construction of this project is anticipated to take 365 days from notice-to-proceed until substantial completion. Progress meetings are anticipated monthly and will be followed by a progress report noting findings and deficiencies.
4. Painting Inspections - The building contains unique features, such as stairs, piping/conduit, fireproofing, expansion joints, etc. as well as auxiliary 15 feet x 30 feet sheds. Tetra Tech's Subconsultant, Revay Coating Consultants, Inc. (RCCI), will perform QA Hold-Point Inspections, Testing, and Documentation of the painting contractor's surface preparation and coating application work in accordance with the specifications, and based on the Contractor's schedule, including:
 - a. Pre-Surface Preparation Conditions,
 - b. Required Protective Coverings Locations,
 - c. Ambient Conditions and Surface Temps,
 - d. Compressed Air Cleanliness,
 - e. Post-Surface Preparation and Cleanliness,
 - f. Materials' Data (Batch #s, Amounts, and Colors),
 - g. Application Info (Method, Mix, Dates, and Times),
 - h. Material Storage Location and Conditions,
 - i. Wet and/or Dry Film Thicknesses,
 - j. Inter-Coat Cleanliness,
 - k. Recoat Times, and
 - l. Final Inspections of the coating system, after the finish coat cures, will include an overall visual inspection for defects such as pinholes, voids, holidays, runs/sags, cracking, etc.

Detailed inspection reports will include annotated photos. For a complete list of proposed inspections during construction, refer to page 4 of RCCI's proposal.

5. Substantial and final completion inspections:
 - a. Conduct a substantial completion site inspection and develop a punch list of items to be corrected by the Contractor.
 - b. Conduct two (2) final completion site inspections to determine if the punch list items have been completed in accordance with the Contract Documents and if the Contractor's obligations are fulfilled thereunder, and recommend final payment to the Contractor. One additional final completion site inspection is included, if needed.
6. Record Drawings:
 - a. Prepare three (3) certified hardcopies and one electronic file of the record drawings for the City incorporating those changes made during construction based on record information furnished by the Contractor.

III. ASSUMPTIONS AND EXCLUSIONS

We have determined the following assumptions and exclusions as being critical to our proposed scope and compensation:

- The City will provide Tetra Tech copies of all available existing construction plans and specifications and access to the site when required for field observations and measurements.

- The scope of work required for this work authorization follows the recommendations from Tetra Tech's Hurricane Hardening Study dated June 30, 2016 attached with this proposal and those items discussed at our January 11th site visit.
- Design services are limited to architectural, electrical, mechanical, and structural engineering. Geotechnical services, if required, will be an additional service.
- One iteration of design-related comments from the permit reviewer is anticipated.
- Building commissioning and plumbing services are excluded from Tetra Tech's scope of work.
- All painting of the buildings will match the existing tan color; City to confirm prior to 100 percent Submittal.
- Pipe labeling may be provided by the City.
- The City will state in writing whether any existing pipes should be identified for removal.
- One life safety plan will be prepared for each of the buildings mentioned above.
- Louvers will be proposed only where required and with attention to maintaining the existing natural light.
- Specifications for the replacement of staircases with handrails will be cross-coordinated with the Transfer Station Rehabilitation project.
- Special Building Inspector services are not included.
- The estimated fees shown below assume the complete Scopes of Work described in Section II of this proposal and in our proposal for Work Authorization No. 4 will be approved simultaneously as two (2) work authorizations. The fees per each task do not stand alone. Each task along with the corresponding submittals will be provided together as one.

IV. COMPENSATION

The total compensation for the Scope of Work described in Section II is \$124,940 and will be invoiced monthly on a percentage complete for Task Nos. 1 - 5 with exception to Subtask No. 5.4 which will be invoiced monthly on a time and materials basis. The compensation for the Scope of Work by task is summarized below.

Task	Description	Fee
1	Data Collection, Review, and Preparation	\$6,745
2.1	Design - 60 percent	\$50,210
2.2	Design - Final	\$22,320
3	Permitting	\$3,345
4	Bidding Assistance	\$3,370
5	Construction Administration	\$25,320
	Lump Sum Total	\$111,310
5.4	Painting Inspections ¹	\$13,630
	Combined Total	\$124,940

1. Refer to page 4 of RCC's proposal for a complete list of proposed hold-point inspections, estimated times, and fees.

V. SCHEDULE

The project will commence within 2 weeks of Notice to Proceed. Submittal of the 60 percent deliverables are anticipated to take 12 weeks. Review time is anticipated to be 2 weeks. Permitting and final deliverables will be submitted 6 weeks after receipt of all City comments. Construction phase services for the above improvements will be provided during construction under a separate work authorization and is anticipated to extend through 12 months.

"CITY":

Witnesses:

CITY OF POMPANO BEACH

By: _____
LAMAR FISHER, MAYOR

By: _____
GREGORY P. HARRISON, CITY MANAGER

Attest:

ASCELETA HAMMOND, CITY CLERK

(SEAL)

Approved As To Form:

MARK E. BERMAN, CITY ATTORNEY

STATE OF FLORIDA
COUNTY OF BROWARD

The foregoing instrument was acknowledged before me this ____ day of _____, 2018 by **LAMAR FISHER** as Mayor, **GREGORY P. HARRISON** as City Manager and **ASCELETA HAMMOND** as City Clerk of the City of Pompano Beach, Florida, a municipal corporation, on behalf of the municipal corporation, who are personally known to me.

NOTARY'S SEAL:

NOTARY PUBLIC, STATE OF FLORIDA

(Name of Acknowledger Typed, Printed or Stamped)

Commission Number

"CONTRACTOR":

TETRA TECH, INC.

(Print name of company)

Witnesses:

[Signature]
[Signature]

By: Charles W. Drake

Print Name: CHARLES W. DRAKE

Title: Vice - President

ACKNOWLEDGMENT OF CONTRACTOR, IF A CORPORATION

STATE OF _____ }
COUNTY OF _____ } ss:

On this _____ day of _____, _____, before me personally came and appeared _____, to me known, who, being by me duly sworn, did depose and say that he resides at _____, that he is the _____ of Tetra Tech, Inc., the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the impressions affixed to said instrument is an impression of such seal; that he is the proper official of said corporation designated to execute such contract, that he has authority so to do, that he executed same for and in behalf of said corporation, and this his act is the act and deed of said corporation.

Witness my hand and official notarial seal at _____
_____ the day and year above written.

My Commission Expires: _____

Notary Public