

Exhibit A
Hernando County
Killian Water Treatment Plant Upgrade
CONTRACT No. 18-R00020/PH - Continuing Engineering Services for Water, Wastewater
and Reclaimed Water Projects – Task Order No. 11

Scope of Services
March 21, 2022

PROJECT DESCRIPTION

The West Hernando Water System includes multiple interconnected water treatment plants (WTPs), of which the Killian WTP is one. The existing Killian WTP (also referred to as the Mariner-Killian WTP) includes two (2) raw water supply wells (KI-3 and KI-4), a 2 million gallon ground storage tank, a High Service Pump Station equipped with three (3) high service pumps, and a sodium hypochlorite feed system for disinfection. A third raw water supply well (KI-5) was constructed in 2012, however it has not been put into service. As part of the County's long-range plan, upgrades to the Killian WTP were identified. These upgrades include installation of a well pump in well KI-5 and associated yard piping to connect this well to the ground storage tank, construction of a new High Service Pump Station and a new chemical feed system to replace the existing facility which has reached the end of its useful life, replacement of the standby power generator, demolition of the existing facilities, and civil site work.

SCOPE OF SERVICES

McKim & Creed (Consultant) shall perform the following tasks under this scope of services.

TASK 1. PROJECT MANAGEMENT, ADMINISTRATION AND MEETINGS

This task includes project setup and project management plan, client and internal team project kickoff meetings, general communication and coordination with the County and team members, monthly progress reports and invoicing, and project close-out including delivery of electronic data and records obtained and produced during the project. This task also includes monthly project Teams (virtual) meetings with the County to discuss project status, schedule and upcoming issues and needs and in-person design review meetings with the County staff to review progress on the project, discuss the work being performed, and address assumptions and decisions made by the project team. The design review meetings will follow the County's review of the Basis of Design Report and the 60% and 90% design submittals.

TASK 2. DATA COLLECTION AND REVIEW

Consultant will coordinate with the County to obtain information that will be used to assist with the design of the improvements. Data requested from the County may include, but not be

limited to: record drawings applicable to the project, prior site investigations including surveys and geotechnical investigations, well log for KI-05 and well sampling data, well data for existing wells KI-3 and KI-4, utility power billing history, maintenance and operation data for existing equipment.

TASK 3. SURVEY

The County has provided a signed and sealed topographic survey of the Killian WTP site prepared by James Kirk, Jr., PSM, and dated March 28, 2020. Consultant will use this survey for the design of the upgrades to the Killian WTP. It is understood that the Consultant will be entitled to rely on the accuracy of the survey provided by the County without any requirement for the Consultant to verify such accuracy.

TASK 4. GEOTECHNICAL INVESTIGATION

Perform geotechnical investigation at the WTP site to obtain information regarding subsurface conditions for the design of the foundation of the proposed high service pump station and for the design of the storm water retention pond.

For budgeting purposes, we have assumed a total of one (1) soil boring at the WTP site. One (1) hand auger boring and double ring infiltration test will be performed for storm water retention pond design.

TASK 5. SUBSURFACE UTILITY ENGINEERING SERVICES

Consultant will utilize existing record drawings, pipe and cable locators, along with SUE to identify potential underground conflicts associated with the project. Consultant will perform SUE Quality Level B (QLB) designation and ground penetrating radar (GPR) to assist with identifying potential underground conflicts. For budgeting purposes, we have assumed one (1) field day to perform the QLB investigation. Consultant will also perform SUE Quality Level A (QLA) locates to verify vertical and horizontal (vVH) locations of the conflicts to assist with the final civil/site, yard piping, electrical distribution system design and locates to stake borings for the geotechnical investigation. For budgeting purposes, we have assumed no more than 6 vVH locates will be required.

TASK 6. WELL KI-5 RE-DEVELOPMENT

It is the Consultant's understanding that existing potable water well KI-5, a 16-inch diameter well (well casing) was constructed in 2012. This well has never been put into service. Well KI-5 is permitted for 600,000 gpd (annual average) and 738,000 gpd (peak month). The well construction report indicates that the well is cased to a depth of 158 feet below land surface and a total depth of 368 feet. The well depth was limited by a loose limestone dredge zone from 376 to 396 feet. The report referenced that due to a relatively low specific capacity, the well is limited to a production rate of 1,000 gallons per minute (gpm). Since the well has not been used

since it was constructed, it will be evaluated to verify that the borehole is clear to the total drilled depth, re-test the specific capacity, and confirm that the turbidity and sand content meet County requirements. The scope of work under this task includes utilizing the services of WSP to coordinate and oversee the well evaluation activities performed by Citrus Well Drilling (CWD). CWD will sound the well to verify the total well depth. They will set a test pump capable of pumping up to 1,200 gpm, a flow meter, sand tester and discharge line to direct the discharge to the existing swale at the NE corner of the site which in turn discharges to a nearby DRA. The well will be pumped for up to eight hours at rates of 700 and 900 gpm for one hour each, and 1,000 gpm for at least two hours with short durations of 1,100 gpm and 1,200 gpm to test for specific capacity and sand content. A WSP Hydrogeologist will be on site to measure water levels and monitor pumping rate, turbidity and sand content during the test. WSP will prepare a Technical Memorandum documenting the test activities and providing the data collected during the test. An operational pumping rate and pump set depth will be recommended. The Technical Memorandum will be submitted as an appendix to the Basis of Design Report prepared under Task 7.

TASK 7. BASIS OF DESIGN REPORT

Prepare a Basis of Design Report to summarize design criteria for the proposed WTP upgrades. The Basis of Design Report will address high service pump capacity, well pump capacity, site planning and constraints, primary power requirements, standby power requirements, building construction, equipment selection, permitting requirements, facility operating protocol, and sequence of construction. The Basis of Design Report will include a preliminary site plan for the WTP site, a preliminary layout drawing for the high service pump station, a preliminary process and instrumentation diagram (P&ID), a preliminary opinion of construction cost and a list of construction drawings and technical specifications anticipated.

TASK 8. DESIGN PHASE SERVICES

The following design phase services will be provided for the proposed Killian WTP Upgrade:

- A. Design modifications to the existing yard piping that feeds the on-site 2 MG prestressed concrete ground storage tank (GST) to accommodate the new raw water supply from well KI-5. Design modifications to the existing yard piping leaving the GST to direct this flow to the proposed high service pump station. At this time, it is assumed modifications to the GST will not be required under this scope of services.
- B. Design of one high service pump station (HSPS) similar to the HSPS's previously constructed at the Gretna and Eldridge WTP's. The HSPS shall house horizontal split case pumps (two duty and one standby, assumed) with variable frequency drives, new disinfection equipment (in a separate room), pump controls and electrical switchgear. It is anticipated that the high service pump station building will be of concrete masonry unit construction with stucco finish and a wood truss and standing seam metal roof.

- C. Design of instrumentation and controls (I&C) for the WTP. It is understood that the pump controls will incorporate the County standard pump controller as manufactured by Data Flow Systems. I&C design will follow the previously constructed Gretna and Eldridge WTP's.
- D. Design of a new emergency generator system for the WTP, with the generator sized for three well pumps, the high service pumps and ancillary equipment. The generator and fuel storage tank will be located on a concrete pad near the high service pump station. The generator will specified to include a weatherproof sound attenuating enclosure similar to that previously constructed at the Hexam WTP.
- E. Design of primary electrical system upgrades for the increased electrical service demand, including coordination with the local electrical service provider.
- F. Design of a ventilation system (intake louvers and exhaust fans) for the pump and chemical feed rooms, and HVAC system for the electrical room.
- G. Design performance level sprinkler system for chemical feed storage room.
- H. Design of a new sodium hypochlorite disinfection system. Design will include a triplex pump skid with two above grade feed points, one into the GST influent pipe and the other into the HSPS discharge header.
- I. Design of one vertical turbine well pump, well head piping, and pump controls for KI-5.
- J. Design of one well house building to house well KI-5, well pump, pump controls and electrical switchgear. It is understood that the County will provide a recent well house design as the preferred design that the Consultant should use for well KI-5.
- K. Design of yard piping improvements to route water from the GST to the HSPS, route finished water from the HSPS to the existing transmission main at Killian Road, and route the chemical feed pipe from the HSPS to the chlorine feed points.
- L. Design of site improvements including the design of a storm water retention basin, asphalt paved access drive, site lighting, limited landscaping, and site security (e.g. chain link) fence.
- M. Prepare construction drawings and technical specifications for use by the County in obtaining bids for the construction of WTP. Technical specifications shall be prepared in CSI format and incorporate Hernando County Utility Department standards where applicable. Plans and specifications will be submitted at 60%, 90% and Issue for Bid stages.
- N. Prepare opinions of construction costs with each submittal.

- O. Front end bidding documents (i.e., Information for Bidders, Bid Form, Contract Document, General Conditions, etc.) shall be provided by the County and reviewed by the Consultant.
- P. Perform a quality control/quality assurance review of the 60%, 90% and Issue for Bid construction plans and technical specifications.

TASK 9. PERMIT ASSISTANCE

The following permit assistance will be provided for the construction of the proposed Killian WTP Upgrade:

- A. Assist the County in obtaining approval from the FDEP for the construction of the WTP by preparing the *Application for a Specific Permit to Construct PWS Components* for the WTP. Respond to RAI's received from the FDEP. Permit fees will be paid for by the County.
- B. Assist the County in obtaining approval from the FDEP for the storm water improvements required for WTP by preparing the Environmental Resource Permit (ERP) application. Respond to RAI's received from the FDEP. Permit fees will be paid for by the County.
- C. Assist the County in obtaining approval from the County Building Department for the WTP by preparing the Building Department submittal package for the WTP. Respond to RAI's received from the County Building Department. Permit fees will be paid for by the County.

TASK 10. BIDDING AND CONSTRUCTION ADMINISTRATION SERVICES

The Consultant shall perform the following services during the bidding and construction phases. Note that for the purposes of establishing fees for these services, we have assumed that construction will be completed within twelve (12) months from Contractor's notice to proceed.

- A. Attend and conduct the Pre-Bid conference.
- B. Prepare clarifications and addenda in response to questions received from prospective bidders.
- C. Evaluate bids received, prepare bid summary, and issue recommendation of award.
- D. Attend and conduct Pre-Construction conference with the selected Contractor and County staff to review project requirements, coordination, and scheduling issues.

- E. Provide technical review of shop drawings and other Contractor submittals for compliance with the Contract Documents. The Consultant's Construction Administrator will coordinate the review process.
- F. Provide general contract administration including interpretations of the Contract Documents, general correspondence with the Contractor, respond to Contractor's request for information (RFI), review of changed conditions and changes in the work required, and maintain reports of construction activities for the project record.
- G. Review Contractors' requests for payment, compare request with work completed, and recommend appropriate action by the County.
- H. Provide a part-time project representative to observe the WTP construction work performed by the Contractor relating to the design requirements. For budgeting purposes, we have assumed two 8 hour days per week for a construction period of 12 months.
- I. Make periodic site visits by the design engineers and project manager to observe the work in progress and the quality of the various systems and facilities with the respect to their intended function and Contract requirements. Forty (40) hours have been allocated for this purpose.
- J. Attend and conduct monthly project status meeting. Prepare and distribute minutes of each meeting. For budgeting purposes, we have assumed a construction period of twelve (12) months.
- K. Attend the equipment start-up for the high service pumps, well pump, the disinfection equipment and plant SCADA systems. Provide assistance in the startup of the pumping equipment by reviewing and commenting on the Contractor's procedures for placing the facility into operation and providing troubleshooting assistance during the startup procedures.
- L. Review change requests submitted by the Contractor and make recommendations to the County.
- M. Prepare intermediate and final punch lists for the Contractor to complete and/or correct items that are required by the Contract Documents. Follow-up to ascertain that the Contractor has satisfactorily completed items and perform the final inspection of completed work.
- N. Prepare record drawings of the improvements based on data furnished by the Contractor, including red-line mark ups of the Issue for Bid drawings and signed and sealed As-built Survey. Provide the County two sets of signed and sealed Record Drawings.

O. Prepare Certifications of Completion for the FDEP.

DELIVERABLES

Project deliverables shall include:

- Draft Basis of Design Report (one pdf and one MS Word copy).
- Final Basis of Design Report (one pdf copy, electronically signed and sealed).
- 60%, 90% and Issue for Bid construction documents (plans and technical specifications). For the 60% and 90% documents one pdf copy and one paper copy (11" x 17") will be submitted. For the Issue for Bid documents; one pdf copy, electronically signed and sealed; and one bound signed and sealed paper copy (22" x 34") will be provided.
- Engineer's opinion of construction cost at each submittal stage.
- FDEP and Hernando County Building permit application packages. The County will pay all fees relating to filing of all permits.
- Record drawings (2 bound signed and sealed copies; one pdf copy, electronically signed and sealed; and an electronic copy in AutoCad 2020).

SCHEDULE

A preliminary schedule for the design services is attached. The Consultant will provide a final schedule for the project within 2 weeks of the actual Notice to Proceed date.

COMPENSATION

Compensation for the scope of work provided herein for Task Nos. 1 through 10 is based on a lump sum fee of \$457,618.17 in accordance with Exhibit B – Task Fee Quotation Proposal attached.