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Title: AMENDMENT NO. THREE TO CONTRACT K-1011-148: BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND GARVER, L.L.C., INCREASING THE CONTRACT AMOUNT BY \$839,100 FOR A REVISED CONTRACT AMOUNT OF \$10,271,800 TO PROVIDE ADDITIONAL CONSTRUCTION ADMINISTRATION, CONSTRUCTION OBSERVATION, AND SCADA APPLICATION ENGINEERING SERVICES FOR THE PHASE 2 WATER RECLAMATION FACILITY EXPANSION PROJECT.

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AMENDMENT NO. THREE TO CONTRACT K-1011-148: BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND GARVER, L.L.C., INCREASING THE CONTRACT AMOUNT BY \$839,100 FOR A REVISED CONTRACT AMOUNT OF \$10,271,800 TO PROVIDE ADDITIONAL CONSTRUCTION ADMINISTRATION, CONSTRUCTION OBSERVATION, AND SCADA APPLICATION ENGINEERING SERVICES FOR THE PHASE 2 WATER RECLAMATION FACILITY EXPANSION PROJECT.

BACKGROUND: The Wastewater Master Plan (WWMP), adopted by the Norman Utilities Authority (NUA) in 2001, recommended that additional facilities treating an average daily design flow (ADF) of 21.5 million gallons per day (MGD) would ultimately be needed to serve the area approved for urban development under the 2025 Land Use and Transportation Plan. The WWMP recommended expansion of the South Water Reclamation Facility (WRF) from 12 to 17 MGD and construction of a new North WRF with an ultimate ADF of 4.5 MGD.

In 2001, the voters approved establishment and funding of three new wastewater funds to address existing and future wastewater system needs. The existing Water Reclamation Fund 032 (WRF) was supplemented by the Sewer Maintenance Fund 321 (SMF), the Sewer Excise Tax Fund 322 (SET), and the Sewer Sales Tax Fund 323 (SST). Revenues are generated by usage fees (WRF), by the \$5 per month maintenance fee for collection system rehabilitation (SMF), by a temporary 5-year 1/2 percent sales tax (SST; expired in 2006) to fund existing and obligated wastewater system needs and a sewer excise tax (SET) to fund future wastewater system needs resulting from new development.

More recently, staff recommended and the NUA agreed that the South WRF would be rehabilitated and expanded first and the North WRF would be designed and constructed in the future when the capacity of the recently expanded Lift Station D was consumed. Based on this premise, Norman voters approved a rate increase in October 2013, in part for expanded treatment capacity at the South WRF.

Regulatory Requirements: Our Oklahoma Pollutant Discharge Elimination System (OPDES) permit for the South WRF issued by Oklahoma Department of Environmental Quality (DEQ), required construction of new disinfection facilities and compliance with final discharge limits by July 1, 2013. On September 12, 2014, the NUA and DEQ agreed to Consent Order 13-077 which includes the following schedule:

1. Complete construction of disinfection facilities by January 1, 2016;

2. Attain compliance with final limits for Fecal Coliform by July 1, 2016;
3. Complete construction of all facilities by January 1, 2017;
4. Attain compliance with final limits for Total Suspended Solids by July 1, 2017.

The NUA completed items 1 and 2 prior to the deadlines imposed by the DEQ and has already attained compliance with discharge parameters specified in item 4. Compliance with item 3 will be dependent upon the DEQ interpretation of "complete construction". All process treatment units are now operational; however, ancillary items such as paving, yard lighting, fencing, landscaping and final cleanup are not expected to complete until March 30, 2017.

Engineering Services: On March 8, 2011, the NUA approved Contract K-1011-148 authorizing Garver Engineering, LLC (Garver), to proceed with the Engineering Report (ER) for the WRF Phase 2 Improvements. The ER was finalized and submitted to the DEQ on November 18, 2011 and the DEQ approved the ER on June 27, 2013. On June 12, 2012, the NUA approved Amendment No. 1 authorizing Garver to proceed with the final design and bidding phases. The plans and specifications for the WRF Phase 2 Improvements were submitted to the DEQ on August 1, 2013 and they were approved on November 26, 2013.

On April 22, 2014, the NUA approved Amendment No. 2 authorizing Garver to proceed with construction phase services including construction administration, full-time construction observation, preparation of operation and maintenance manuals, equipment start-up and training, and implementation of the supervisory control and data acquisition (SCADA) system. The construction administration and construction observation costs were based on a 30-month construction duration through November 2016. As detailed below, the duration for constructing the WRF Phase 2 Improvements was extended from November 18, 2016 through March 30, 2017 via Change Orders 1, 2 and 3.

Construction: Bids for the WRF Phase 2 Improvements (WW0065) were received from three pre-qualified contractors on March 27, 2014. Archer Western Construction, LLC (Archer Western), with regional offices in Irving, Texas, was the low bidder. On April 22, 2014, the NUA awarded the bid and approved Contract K-1314-136 with Archer Western in the amount of \$48,822,550; the next lowest bid was \$49,978,000 or 2.4% higher. NUA approved funding for the WRF Phase 2 Improvements is 40.7% from the Sewer Excise Tax (SET) Fund 322 and 59.3% from the Water Reclamation Fund 032. The project funding is augmented by a State Revolving Fund (SRF) loan from the Oklahoma Water Resources Board (OWRB) for up to \$50,300,000. Future revenues from the Water Reclamation Fund and the Sewer Excise Tax Fund are dedicated to pay back the SRF loan.

The WRF Phase 2 Improvements will add Disinfection Facilities, expand the average daily design flow from 12 to 17 MGD and rehabilitate many existing processes. Archer Western began construction of the improvements on June 2, 2014. The work was broken into two phases with the Disinfection Facilities to be completed by November 24, 2015 and all work to be completed by November 18, 2016. The Disinfection Facilities were complete and placed into operation on October 29, 2015 prior to the DEQ consent order deadline of January 1, 2016; these facilities currently meet discharge requirements.

The NUA approved Change Order No. 1 (CO#1) on September 8, 2015 which included a time extension of 47 calendar days through January 4, 2017. The NUA approved CO#2 on May 10, 2016 increasing the contract amount by \$98,546.78 to \$48,921,096.78 and approved a time extension of 32 calendar days through February 5, 2017. The NUA approved CO#3 on December 13, 2016 increasing the contract amount by \$152,808.92 to \$49,073,905.70 and approved a time extension of 53 days through March 30, 2017; to date, change orders have increased the contract price by 0.52%.

The most recent construction payment for the WRF Phase 2 Improvements (through December 31, 2016) was for a total amount of \$44,435,322.27 or 91% of the contract amount while 95% of the work is complete; 91% of the contract time had been consumed. At this time, the FYE17 budget for the WRF Phase 2 Improvements includes contingency funds of approximately \$2,090,000.

DISCUSSION: Proposed Amendment No. 3 to Contract K-1011-148 authorizes Garver to perform additional engineering services for the WRF Phase 2 Improvements as well as the WRF Phase 2 Maintenance Improvements. The work scope, detailed in Appendix A.3 of the amendment, is divided into three sections; a price of \$839,100 has been negotiated with Garver. Section 1 is for additional engineering work required for the WRF Phase 2 Improvements through the scheduled completion date of March 30, 2017. Sections 2 and 3 are for additional engineering work required for the WRF Phase 2 Maintenance Improvements.

Section 1 fees total \$259,200 and are generally due to the extended duration of the original construction contract (**the WRF Phase 2 Improvements**). The proposed engineering services are briefly described below:

1. Construction Administration services are extended for approximately 4 months at a monthly cost of about \$25,000 for a total of \$98,500; this compares to a monthly cost of about \$72,000 for the original 30 months. The reduced scope includes weekly meetings with the contractor and other entities as required, meeting minutes, evaluation of the proposed site lighting modifications, review and approval of contractor construction estimates, review of labor payrolls for compliance, etc.
2. Construction Observation services are extended for approximately 4 months at a monthly cost of about \$35,000 per month for a total of \$141,500; this compares to a monthly cost of about \$79,000 for the original 30 months. The reduced scope includes provision of two full-time on-site representatives for the first two months and one for the last two months. Representatives will document construction activities, work completed to date, construction materials testing, weather, and other occurrences effecting project completion on a daily basis, attend weekly meetings and report issues to the Engineer and the NUA that may affect the project cost or time of completion.
3. Lastly, additional SCADA application engineering costs totaling \$19,200 are required to correct problems discovered with the existing system.

Section 2 fees total \$554,900 and are for design of the **WRF Phase 2 Maintenance Improvements** and for construction phase services during the duration of the project. The Maintenance Improvements work is included in Change Order #4 to our construction contract and is being considered as a separate agenda item. The proposed engineering services in Section 2 are briefly described below:

1. The cost of engineering services to prepare design documents, and plans and specifications suitable for bidding is \$198,000. These documents are required to define the scope of work included in the Request for Proposal for the Maintenance Improvements and allow the construction contractor to prepare his proposal for the new work defined in Change Order No. 4.
2. Construction Administration services are extended through November 2017 at a cost of \$140,400 or about \$20,000 per month as compared to about \$72,000 per month for the original work. This task includes work items such as review and processing of material and equipment submittals/shop drawings, weekly meetings with the contractor, and other entities as required, substantial completion and final completion inspections, meeting minutes, response to contractor requests for information (RFI), evaluation of any proposed project scope changes, review and approval of contractor construction estimates, review of labor payrolls for compliance, preparation of record drawings, etc.
3. Construction Observation services are extended through November 2017 at a cost of \$203,700 or about \$30,000 per month as compared to about \$79,000 per month for the original work. This task includes one full-time on-site representative to document construction activities, work completed to date, construction materials testing, weather, and other occurrences effecting project completion on a daily basis, attendance at weekly meetings and reporting of issues to the Engineer and the NUA that may affect the project cost or time of completion.
4. Start-up Training and Operation and Maintenance (O&M) Manuals for the Maintenance Improvements at a cost of \$12,800. This task includes training of all WRF staff on the new equipment and documentation of equipment performance at initial startup, as well of video documentation of said training for future use. It also includes written standard and emergency operating procedures for each major piece of equipment or process, process control methodology, instructions for periodic maintenance of equipment, as well as incorporating these O&M procedures into the WRF SCADA system to allow easy access by WRF staff.

Section 3 includes an allowance of up to \$25,000 to be used on an hourly basis to perform SCADA Application Engineering for the Maintenance Improvements. This task provides remote process control through PLC programming and graphic screens for new equipment, interface with external devices and conformance testing.

At this time, the FYE17 construction budget for the WRF Phase 2 Improvements (WW0065) includes contingency funds totaling \$2,093,608 including \$1,307,788 in the Water Reclamation Fund (WRF) and \$785,820 in the Sewer Excise Tax (SET). This funding is adequate to fund proposed design Amendment No. 3 in the amount of \$839,100. As per the funding split for the project, 40.7% or \$341,500 will be funded by SET Design (account 322-9048-432.62-01) and 59.3% or \$497,600 will be funded by WRF Design (account 032-9048-432.62-01). With approval of Amendment No. 3, the remaining contingency amount for the project is approximately \$1,250,000.

Staff expects the project to proceed on the following schedule:

- Start Construction of Phase 2 Maintenance Improvements -February 15, 2017
- Complete original Phase 2 Improvements -March 30, 2017

- Complete Phase 2 Maintenance Improvements (270 days) - November 18, 2017

RECOMMENDATION: Staff recommends that the NUA approve Amendment No. 3 to Contract K-1011-148 with Garver, LLC of Norman, Oklahoma in the amount of \$839,100.