



City of Norman, OK

Municipal Building
Council Chambers
201 West Gray
Norman, OK 73069

Master

File Number: K-1920-87

File ID: K-1920-87	Type: Contract	Status: Consent Item
Version: 1	Reference: Item 32	In Control: City Council
Department: Utilities Department	Cost: \$81,500.00	File Created: 10/25/2019
File Name: Water Lines for 2015 Water Wells and Lines Project	Final Action:	

Title: CONTRACT K-1920-87: A CONTRACT BY AND BETWEEN THE NORMAN UTILITIES AUTHORITY AND CARDINAL ENGINEERING, L.L.C., IN THE AMOUNT OF \$81,500 TO PROVIDE PROFESSIONAL ENGINEERING SERVICES RELATED TO FINAL DESIGN, BIDDING, AND CONSTRUCTION MANAGEMENT FOR THE WATER TRANSMISSION LINES ASSOCIATED WITH THE FISCAL YEAR ENDING 2015 WATER WELLS AND SUPPLY LINES PROJECT GENERALLY LOCATED IN NORTHEAST NORMAN BETWEEN 48TH AVENUE N.E., AND 108TH AVENUE N.E., NEAR TECUMSEH ROAD.

Notes: ACTION NEEDED: Acting as the Norman Utilities Authority, motion to approve or reject Contract K-1920-87 with Cardinal Engineering, L.L.C., in the amount of \$81,500; and, if approved, authorize the execution thereof.

ACTION TAKEN: _____

Agenda Date: 11/12/2019

Agenda Number: 32

Attachments: Cardinal Signed Contract

Project Manager: Chris Mattingly, Capital Projects Engineer

Entered by: chris.mattingly@normanok.gov

Effective Date:

History of Legislative File

Ver- sion:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
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Text of Legislative File K-1920-87

Body

BACKGROUND: In March 2012, the Norman Utilities Authority (NUA) approved a contract with Carollo Engineers, Inc. for preparation of the 2060 Strategic Water Supply Plan (the 2060 SWSP). The plan update was needed because the NUA was unable to supply sufficient potable water to meet peak demands during summer months and was concerned about probable regulatory changes affecting both our surface water and groundwater supplies.

The goal of the 2060 SWSP was to strengthen our knowledge of potential short and long-term water supply source(s) for our community and begin implementation of a robust, water supply solution acceptable to the citizens of Norman. The 2060 SWSP Ad-Hoc Committee was appointed to ensure open and two-way dialogue with the community, to ensure the suggestions of the public are addressed, and to be able to communicate the objectives and conclusions of the 2060 SWSP to the public.

Eight meetings were held with the 2060 SWSP Ad-hoc Committee and five public meetings were held for public participation and input. Fourteen different potential water supply portfolios were developed, investigated and evaluated at these meetings. Each portfolio was developed to provide an annual average supply of 29 million gallons per day (MGD) in 2060 and a peak daily supply of 55.4 MGD in 2060. Ultimately, Resolution R-1314-146 was approved by the NUA on June 24, 2014 recommending Portfolio 14 for implementation; this portfolio included the following recommendations:

- Continued use of Lake Thunderbird as a raw water supply source (allocation reduced from 8.4 to 6.1 MGD) with treatment at an improved water treatment facility at the existing site;
- Expanded water conservation practices ultimately resulting in additional annual average water supply savings of 1 MGD in 2060 through reduced water consumption;
- Additional non-potable reuse ultimately resulting in additional annual average potable water supply savings of 0.8 MGD in 2060 (and reduced peak summertime demand of about 4.6 MGD by 2060);
- Continued use of our current groundwater supply system of 36 wells and expanding the groundwater supply system by 2 MGD in the short term for a total of 8 MGD annual average supply capability;
- Constructing a centralized ground water treatment facility allowing inactive wells to be brought back on-line and increasing the groundwater annual average supply capacity from 8.0 to 10.1 MGD; and
- Implementation of indirect potable reuse (IPR) over time by adding additional treatment at the Water Reclamation Facility (WRF) and discharging the highly treated effluent into Lake Thunderbird; raw water conveyance and water treatment expansions would be required.

The Fiscal Year Ending 2015 (FYE15) budget created a capital improvement project known as the FYE15 Water Wells and Supply Lines (project WA/WB0212). As noted in Item 4 above, this project is a part of the NUA approved 2060 SWSP and a rate structure to fund the project was approved by Norman voters in 2015 as the first phase of system capacity improvements to increase the City of Norman water supply.

On June 14, 2016, the NUA approved Contract K-1516-139 with Carollo Engineers to work with Association of Central Oklahoma Governments (ACOG) and the Oklahoma Water Resources Board to locate new well sites that will produce high quality ground water in sufficient quantities to achieve the 2 MGD goal from the 2060 SWSP. Carollo and staff worked closely with ACOG to map water bearing sand zones and identified 45 potential test well sites to pursue. The test

well sites were prioritized and landowners were contacted in an attempt to negotiate agreements for drilling test wells in hopes of later installing a production well.

Carollo prepared a prequalification process for well drillers and on November 27, 2018, the NUA approved Contract K-1819-44 in the amount of \$4,714,421.72 with Layne Christensen Company for the construction of up to twelve (12) test wells and six (6) production wells. Eleven test wells were completed and all eleven are potential production well sites.

On June 12, 2018, Request for Proposal (RFP) 1819-05 was distributed to numerous engineering consultants. On August 19, 2018, the review team selected Cardinal Engineering, LLC (Cardinal) of Norman, Oklahoma as one of the most qualified consultants to design the water transmission lines for the project. Approval of the water transmission line design contract has been delayed until the production well locations were finalized.

DISCUSSION: Production well construction will be prioritized beginning with those wells providing the highest potential water pumping capacity and the best water quality. Six water transmission line segments in northeast Norman are necessary to connect eight (8) of the eleven (11) potential water wells being drilled. The remaining three potential wells are located adjacent to existing water lines and will be connected directly to those existing lines. Staff has separated the water transmission line segments into two separate projects. The proposed water transmission line projects are illustrated on Exhibit A - Project Location Map.

The proposed water lines will be at least 12 inches in diameter and are expected to be installed about 5 feet off the edge of the statutory right-of-way (ROW) along each section line road. The first design project will include four segments of water line totaling approximately 12,600 lineal feet (LF) as shown on the Project Location Map and described below.

- Extending north 5,200 LF from Falls Lakeview Park along 108th Avenue NE to an existing water line south of Franklin Road.
- Extending east 1,600 LF from 108th Ave NE and Tecumseh Road to a new well.
- Extending north 3,200 LF from 84th Ave NE and Tecumseh Road to an existing water line south of Franklin Road.
- Extending south 2,600 LF from 48th Ave NE and Tecumseh Road to a new well.

Proposed lump sum Contract K-1920-87 will authorize Cardinal to provide design, bidding and construction management services for a total fee of \$81,500. As shown in Attachment A to the contract, the project design is to be complete within 3 months to allow construction bidding in March 2020. The work scope tasks are detailed in Attachment B and the contract amount is broken out by task in Attachment C.

To fund the design of this project, staff recommends utilizing State Revolving Fund loan funding set aside for the water well project, (i.e., Norman Utilities Authority Series 2018). An appropriation in the amount of \$100,000 into 2015 Water Wells and Lines, Design (Account Org 31993345, Object 46201, Project WB0212) is sufficient to fund the design contract as well as other miscellaneous costs such as advertising and permitting. These funds have been encumbered in Requisition No. 20200467.

RECOMMENDATION: Staff recommends that the NUA approve Contract K-1920-87 with Cardinal Engineering, LLC. In the amount of \$81,500. Staff also recommends appropriation of \$100,000 from the Water Fund NUA, Series Bond 2018 Fund Balance (Account Org 31, Object 29000) to 2015 Water Wells and Lines, Design (Account Org 31993345, Object 46201, Project WB0212).