

## **MEMORANDUM**

**TO:** Donna Barron, City Manager

**VIA:** Keith Marvin, P.E., Director of Public Services

**FROM:** Kelly Rouse, Utilities Manager

**DATE:** July 1, 2021

**SUBJECT:** **Approval of a Professional Services Agreement with HDR Engineering, Inc., Dallas, TX, in the Amount of \$450,984 for Professional Engineering Services for the Prairie Creek WWTP Electrical Improvements Project; and Authorization for the City Manager to Execute the Agreement.**

### **BACKGROUND**

The City of Lewisville's Wastewater Treatment Plant was originally constructed in the 1950's, with major expansions and improvements completed over the last sixty years to meet State and Federal biological and regulatory permit requirements.

In 2018, the annual average flow at the Prairie Creek Wastewater Treatment Plant exceeded 75% of its permitted discharge capacity. The Texas Commission on Environmental Quality requires that when this limit is reached, publicly owned treatment works (POTW) must begin planning for expansion. This rule also requires that when the annual average flow exceeds 90% of the plant's permitted capacity, the POTW then needs to be in construction for expansion.

In October 2018, the City issued a Request for Qualifications (RFQ) 18-63-1, for a Master Plan Study of the Wastewater Treatment Plant, in order to plan for expansion and identify areas needing improvement. The six Engineering firms that submitted a statement of qualifications were; Alan Plummer Associates, Black and Veatch, Carollo, Freese and Nichols, HDR and Kimley-Horn. Based on review of the proposals and interviews, HDR was ultimately selected as the most qualified firm to conduct the study and in May 2019, Council authorized the City Manager to execute an agreement to perform the master planning efforts.

### **ANALYSIS**

HDR completed the Prairie Creek Wastewater Plant Master Plan in October 2020. Various alternatives were evaluated for treatment process and site improvements. An ultimate site layout and process schematic was developed for anticipated build-out flows along with a capital improvements plan (CIP) to address phasing these improvements and sequencing for each plant project.

Condition assessments indicated improvements were needed in the electrical systems of the plant before expansion could occur and were identified to be the first project in the Master Plan project schedule list. This project will include replacement of electrical components like transformers and motor control centers in the areas around the Prairie Creek Lift Station, Headworks, Plant I Blowers, Tertiary Filters, Chlorine Storage and Feed Facility, Sludge Pump Station, Blower Building, and include power distribution improvements. Because of the significant changes to the system an Arc Flash Study will be required as part of the project. See the attached exhibit indicating the location of work on the plant property.

Based upon the project sequencing that HDR developed in the Master Plan Study along with the condition assessments they performed, staff has elected to continue utilizing their services for this project. HDR Engineering, Inc. has submitted a Professional Services Agreement in the amount of \$450,984 for the design, bidding, and construction services for the improvements needed to extend the life of identified electrical equipment until expansion efforts can be implemented at the plant.

Completion of detailed design is estimated to take 6 months. This project is fully funded and is available in the Electrical Improvements Capital Project Fund.

### **RECOMMENDATION**

It is City staff's recommendation that the City Council approve the Professional Services Agreement and authorize the City Manager to execute the agreement as set forth in the caption above.