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## CITY COUNCIL CONSIDERATION ITEM

### CITY OF FAIR OAKS RANCH, TEXAS

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AGENDA TOPIC: Consideration and possible action approving a resolution authorizing the execution of a work authorization with Kimley-Horn and Associates, Inc. for engineering services for the WWTP Phase 1 Expansion Project

DATE: December 5, 2024

DEPARTMENT: Public Works

PRESENTED BY: Grant Watanabe, P.E., CFM, Director of Public Works & Engineering Services

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#### **INTRODUCTION/BACKGROUND:**

The City requires engineering services for the Wastewater Treatment Plant (WWTP) Phase 1 Expansion Project, the largest wastewater project in the adopted Capital Improvement Plan. The project will address immediate plant needs: (1) Effluent Pump Station and conveyance system upgrades, (2) Bottom of the Hill lift station upgrades, and (3) odor control improvements at the headworks.

In September 2023, the City executed a work authorization with Kimley-Horn and Associates, Inc. for 30% design phase services. This included hydraulic analysis to determine effluent conveyance system sizing, pump sizing, wet well and pump vault capacity, evaluation of potential options for rag removal at the lift station, and evaluation options for odor control at the headworks. Below are highlights from the 30% design phase:

- Effluent Pump Station requires upgrade from two 15 HP end-suction pumps to three 30 HP VFD submersible pumps with modifications to the pump vault and wet well to accommodate new discharge piping.
- Conveyance system between the WWTP and Blackjack effluent storage pond requires an upgrade of 10,400 linear feet of pipe from six-inch and eight-inch pipe to 12-inch pipe.
- Conveyance system between the WWTP and Live Oak effluent storage pond is eight-inch pipe and determined adequate.
- Bottom of the Hill Lift station requires an upgrade from two 10 HP submersible pumps to two 15 HP submersible solids-handling pumps. To remove rags and debris, solids-handling pumps are a less expensive solution than installing an auger screen system or wastewater grinder system.
- Headworks requires installation of a carbon adsorption system with vapor phase treatment to remove hydrogen sulfide and other odor causing compounds.
- Water balance study showed the need to amend the City's TCEQ Texas Land Application Permit to increase golf course irrigation rates from 2.0 up to 4.0 acre-ft per acre as the City approaches buildout capacity.
- Opinion of Probable Construction Cost: \$4.1 million (includes 30% contingency)

Upon completion of the 30% design phase, City staff requested an engineering services proposal from Kimley-Horn and Associates, Inc. to advance the project to final design and construction completion. This includes project management, surveying, preparation of construction drawings, specifications and construction cost estimate, utility coordination, permitting, bid and construction phase services. It also includes supplemental services for utility easement acquisition support, subsurface utility exploration, TCEQ permit amendment support, and general engineering support, if needed.

Following extensive negotiation, the consultant's revised proposal (**Exhibit A**) was determined to be fair and reasonable. The draft work authorization (**Exhibit B**) is also attached.

Should this agenda item be approved, bid documents will be available by the end of the fiscal year. Bid advertisement is planned for the fall of 2025, shortly after adoption of the FY 2025-26 budget.

**POLICY ANALYSIS/BENEFIT(S) TO CITIZENS:**

- Supports Priority 3.2 of the Strategic Action Plan to Enhance and Ensure Continuity of Reliable Wastewater Treatment in Accordance with CCN Obligations.
- Expansion of the existing WWTP will improve operations and system resiliency and is the most cost-effective solution to meet build-out treatment requirements.
- Complies with procurement requirements for professional services.

**LONGTERM FINANCIAL & BUDGETARY IMPACT:**

A total of \$766,098 is available for this project from prior fiscal years. This amount is adequate to cover the cost to engineering services through construction completion, which includes \$498,501 for basic services, and \$106,405 for supplemental services.

**LEGAL ANALYSIS:**

Legal has reviewed the resolution and approved it as to form.

The work authorization will be issued pursuant to the Standard Professional Services Agreement with Kimley-Horn and Associates, Inc., executed on February 24, 2022.

**RECOMMENDATION/PROPOSED MOTION:**

I move to approve the resolution authorizing the execution of a work authorization with Kimley-Horn and Associates, Inc. for engineering services for the WWTP Phase 1 Expansion Project, expenditure of the required funds up to \$604,906, and execution of all applicable documents by the City Manager.