



# City of Pflugerville

## Legislation Text

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**File #:** 2021-0669, **Version:** 1

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Discuss and consider action to approve a professional services supplemental agreement with Ardurra Group, Inc. in the amount of \$5,203,529.00 for professional engineering services associated with the Water Treatment Plant Facility Expansion Project and authorizing the City Manager to execute the same.

The City of Pflugerville (City) operates a nominal 17 million gallon per day (MGD) Water Treatment Plant (WTP). This project is to provide a comprehensive expansion of the WTP to 30 MGD, incorporating other active CIP projects currently underway, to meet current and future water demands. This project will also construct improvements required by the WTP facility to meet and maintain regulatory compliance, safety, technology improvements, process innovation and renew aging infrastructure. The expanded WTP facilities are scheduled to be placed into operation by April 2023 to meet projected water demands.

Development of a Preliminary Engineering Design & Report was completed under the original authorization. The following scope of work clarifies and describes the project tasks to be performed and completed by the Engineer to include final design and bidding phase services.

During the development of the preliminary engineering design & report, the following components were defined for the plant expansion. The final design will be based on the scope describe below:

A. Expansion of existing Lake Raw Water Pump Station will include: Two new vertical turbine pumps; A copper ion generator system for zebra mussel control; Expanding the existing Lake Raw Water Pump Station Pre-Engineered Metal Building (PEMB); Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements.

B. The Pretreatment System (i.e. Rapid Mix, Flocculation Basins, Plate Settlers) will include: Aluminum chlorohydrate (ACH) coagulation with static mixers, three-stage flocculation basins, and sedimentation basins with plate settlers; Four trains with one static mixer to serve two trains for chemical coagulation. Sludge produced from each train will be collected via chain and flight sludge collectors and discharge into a raw sludge splitter box; A new PEMB canopy structure over the plate settler basins; A new standalone precast concrete or pre-engineered metal Pretreatment Electrical Building; Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements.

C. Membrane Filtration retrofit will include: New membrane feed pumps & strainers, submersible membrane filtration units, permeate pumps; New chemical clean-in-place (CIP)/neutralization system with CIP tank, CIP feed pumps, CIP chemical storage and feed equipment, CIP waste neutralization tank and pumps, and associate piping; New backwash system with backwash pumps, air scour blowers and associated piping; A new standalone precast concrete or pre-engineered metal Membrane Electrical Building; Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements/

D. Chlorine Contact Basin will include baffled channels and a control weir. Primary disinfection will be achieved through free chlorine. Liquid ammonium sulfate (LAS) will then be added to form chloramine for secondary disinfection prior to storage.

E. High Service Pump Station will include: Converting the existing high service pump discharge header WYE connections to TEE connections; A new PEMB High Service Pump Station (HSPS No. 2) with two vertical turbine pumps and VFDs; Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements.

F. Chemical Storage and Feed Facility will include: Demolishing existing chemical system; Demolishing abandoned PAC equipment inside the PAC room; A new chemical bulk storage and feed facility; Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements.

G. The Solids and Residual Liquid Handling System will include: A new Raw Sludge Splitter Box, two new sludge Gravity Thickeners and Thickened Sludge Pump Station; A new Backwash Waste Clarifier and Recycle Pump Station; A new standalone precast concrete or pre-engineered metal Solids Handling Electrical Building; Associated architectural, structural, building mechanical, electrical, instrumentation and control and SCADA integration improvements.

H. Miscellaneous Improvements include: Yard piping; Site civil including plant roads, sidewalks, site grading, drainage, and stormwater detention; A new 24-inch water line to connect the proposed elevated storage tank (by others); New electrical distribution switchgear inside the proposed Main Electrical Building (via an ongoing Generator project by others); A second 2250 kW generator to support the plant expansion.

I. No improvements are proposed for the following areas as part of this expansion phase: Plant Entrance Gate; On-site Sanitary Lift Station; Control Room/Offices; Maintenance Building; Plant Security System; Plant Electrical Service.

Construction phase engineering services, development of O&M manual, commissioning and startup services will be included in future contract amendments and performed upon completion of the final design and bidding phase services.

### **Prior City Council Action**

On March 10, 2020, City Council approved a professional services agreement with Garver in the amount of \$199,820 for owner's representative services associated with the Surface Water Treatment Plant Expansion Project. The services included an initial planning phase, in which Garver engaged with City Engineering and Operations staff to assess the suitability of the current treatment process technology, and performed a comparative analysis to determine the best path forward for the future expansion.

On October 27, 2020, City Council approved the selection of Ardurra for professional engineering services associated with the Water Treatment Plant Facility Expansion Project.

On December 16, 2020, City Council approved a Professional Services Agreement with Ardurra in the amount of \$1,947,512.00 for professional engineering services associated with the for the City of Pflugerville Water Treatment Plant Expansion Project. The services included Preliminary Design and 30% PS&E.

On August 25, 2020, City Council approved a professional services agreement with Garver in the amount of \$1,220,657.00 for owner's representative services associated with the Surface Water

Treatment Plant Expansion Project. The Supplemental Agreement is for the design phase of the WTP Expansions project including consultant procurement and acting as the City's OR for preliminary engineering through 100% design and bid phase services.

On January 26, 2021, City Council approved the engagement of McCarthy & McCarthy LLP as Special Counsel for the City for the purpose of assisting staff with permits, contracts and negotiations related to obtaining additional water rights to support the future growth of Pflugerville.

On April 27, 2021, City Council approved a professional services supplemental agreement with Garver in the amount of \$311,132 for owner's representative services associated with the Surface Water Treatment Plant Expansion Project. The services included an initial planning phase, in which Garver engaged with City Engineering and Operations staff to assess the suitability of the current treatment process technology, and performed a comparative analysis to determine the best path forward for the future expansion.

**Deadline for City Council Action**

Action is requested on July 13, 2021.

**Funding Expected:** Revenue  Expenditure  N/A

**Budgeted Item:** Yes  No  N/A

\*FY21 Water Capital Projects (found on adopted budget documents posted on City website, Fiscal Year 2021 Approved Budget page 200). This portion of the project will be funded through 2020 Certificate of Obligation Bond program.

**Amount:** \$4,404,632 total FY21 approved funding, 75% FY21 funds remaining. Although the contract amount is above the FY21 budget amount, the total amount billed to the contract through September 30, 2021 is not anticipated to go over the FY21 budget.

**1295 Form Required?** Yes  No

**Legal Review Required:** N/A  Required  Date Completed: 07/08/2021

**Supporting documents attached:**

Professional Services Supplemental Agreement  
Draft Presentation

**Recommended Action**

Authorize the City Manager to approve a professional services supplemental agreement with Ardurra Group, Inc. in the amount of \$5,203,529.00 for professional engineering services associated with the Water Treatment Plant Facility Expansion Project.