PROFESSIONAL SERVICES
SUPPLEMENTAL AGREEMENT # 7
FOR
CITY OF PFLUGERVILLE WATER TREATMENT PLANT
OWNER'S REPRESENTATIVE SERVICES

STATE OF TEXAS §
§
COUNTY OF TRAVIS §

This Supplemental Agreement No. 7 to a contract for Professional Services is made by and between the City of Pflugerville, Texas ("City") and Garver, LLC ("Consultant"). City and Consultant may be referred to herein singularly as "Party" or collectively as the "Parties."

WHEREAS, the City and Consultant executed an Agreement for Professional Services ("Agreement") on the 24th day of March, 2020 for the City of Pflugerville Water Treatment Plant (WTP) Owner's Representative Services project ("Project") in the amount of One Hundred Ninety Nine Thousand, Eight Hundred and Twenty ($199,820) Dollars and Zero Cents; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #1 for Professional Services for the Project in the amount of Forty Nine Thousand, Nine Hundred and Forty ($49,940) Dollars and Zero Cents, to add WTP Site Buildout Planning and Cost Estimating Services to the Agreement; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #2 for Professional Services for the Project in the amount of One Million, Two Hundred Twenty Thousand, Six Hundred Fifty-Seven ($1,220,657) Dollars and Zero Cents, to add Design Oversight, Project Management and Water Rights Acquisition Support to the Agreement; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #3 for Professional Services for the Project in the amount of Twenty Six Thousand, Six Hundred Ninety-Seven ($26,697) Dollars and Zero Cents, to add Jar Testing Laboratory Services to the Agreement; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #4 for Professional Services for the Project in the amount of Three Hundred Eleven Thousand, One Hundred Thirty Two ($311,132) Dollars and Zero Cents, to add Preliminary Engineering Services for the Expansion of the Colorado River Raw Water Intake System; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #5 for Professional Services for the Project in the amount of Thirty-Eight Thousand, Sixteen ($38,016) Dollars and Zero Cents, to add Texas Water Development Board Funding Services; and

WHEREAS, the City and Consultant executed a Supplemental Agreement #6 for Professional Services for the Project in the amount of Three Hundred Eighty-Two Thousand, Four Hundred Forty-Eight ($382,448) Dollars and Zero Cents, to add a Reuse Feasibility Study to the Agreement; and

WHEREAS, the City and Consultant desire to enter into a Supplemental Agreement #7 for Professional Services for the Project in the amount of Three Million, Nine Hundred Eighty Thousand, Five Hundred Seventeen ($3,980,517) Dollars and Zero Cents, to add Construction Management, Construction Inspection, and Commissioning and Startup Support; and

WHEREAS, it has become necessary to amend the Agreement to modify the provisions for the Scope of Services and Compensation; and

WHEREAS, it is necessary for the City to amend its agreements from time to time to comply with changes in state law relating to contracts of municipalities.

NOW, THEREFORE, premises considered, the City and the Consultant agree that said Agreement is amended as follows:

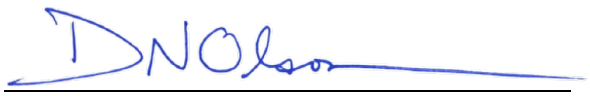
I.

Article III. Scope of Services and Attachment A, shall be amended as set forth in the attached Addendum to Attachment A.

Article IV. Compensation to Consultant and Attachment B (Fee Schedule), shall be amended by increasing by $3,980,517 the amount payable under the Agreement for a total of $6,209,227 as described in the attached Addendum to Attachment B.

Except as amended hereby, and as previously amended as indicated above, the terms of the Agreement shall remain unchanged and in full force and effect.

EXECUTED and **AGREED** to as of the dates indicated below.

CITY OF PFLUGERVILLE		**CONSULTANT**	
			
(Signature)		*(Signature)*	
Printed Name:	Sereniah Breland	Printed Name:	Dan Olson, P.E.
Title:	City Manager	Title:	Vice President
Date:		Date:	05/13/2022

APPROVED AS TO FORM:

Charles E. Zech
City Attorney
DENTON NAVARRO ROCHA BERNAL & ZECH, P.C.

CITY OF PFLUGERVILLE

WATER TREATMENT PLANT OWNER'S REPRESENTATIVE – SUPPLEMENTAL AGREEMENT NO. 7

ADDENDUM TO ATTACHMENT A – SCOPE OF SERVICES

Background

The City of Pflugerville retained Garver to provide Owner's Representative services as the Owner's agent and liaison between the Design Consultant, Construction Contractor, Texas Commission on Environmental Quality, Texas Water Development Board, and other stakeholders for the Pflugerville Water Treatment Plant Facility Expansion Project.

This Supplemental Agreement No. 7 is for the construction phase of the Pflugerville Water Treatment Plant Expansion project. In its ongoing role as Owner's Representative, Garver during this construction phase will be primarily providing Construction Management, Inspection and Startup & Commissioning services. This is distinct from the Engineer of Record, Ardurra, which will be providing Construction Administration from a designer's perspective, including submittal review, responses to requests for information, and addressing potential change orders, should any occur. We have reviewed this Scope of Work with the City in relation to Ardurra's scope of work to eliminate redundancy and ensure the two are complementary.

The tasks itemized below describe Garver's role in this project as Owner's Representative, Construction Management, and Startup & Commissioning Oversight.

1. Project Management and Administration

In its supporting role as Owner's Representative, Garver will perform the following basic project management and administrative functions to facilitate the delivery and implementation of the Water Treatment Plant Expansion project included in this Scope:

1.1 Project Meetings and Workshops

Garver will initiate, facilitate and manage meetings and workshops with the Owner, Design Consultant, and Contractor for the Water Treatment Plant Expansion Project to receive updates, provide feedback, and discuss progress with the project stakeholders.

1.2 Document Management

Garver will utilize the Owner's preferred project management software (Virtual Project Manager) to track and organize documents and transmittals to the Owner, Design Consultant, and Contractor for the duration of this contract. This software will allow transmission of information without a requirement for external users to purchase any additional software. Upon completion of the project, Garver will provide the Owner an electronic storage device with digital copies of files (e.g. submittals, Requests for Information, logs, start-up plans, etc.).

1.3 Subconsultant Management

Garver intends to procure subconsultant services from JH Engineering (commissioning/start-up assistance) to complete the Owner's Representative scope of services. Scope and fee estimates from the subconsultant are included with Appendix B. Garver will be responsible for managing and coordinating with its subconsultants. Subconsultant fees will be invoiced to the Owner at cost.

1.4 Provide monthly Owner's Representative invoices and a monthly invoice report that will include work completed during the invoice period, updated weather tracking log, current information needs, deliverables, and anticipated activities for the next monthly period.

1.5 Risk Register

Garver has developed a risk register for this project, which includes identification of potential schedule and budget risks to the project along with mitigation strategies for each identified risk. The Risk Register will be updated as necessary throughout the duration of this contract, and discussions about specific risks will be presented during progress meetings as needed.

Estimated Task 1 Fee: $64,420

2. Construction Coordination and Management

2.1 Serve as liaison for Owner, Designer Consultants, and Contractors during construction. Assist with collection, coordination, and transfer of information.

2.1.1. Monitor, review, evaluate, and comment on changes in project costs or schedule reported by Design Consultant or Contractor.

2.1.2. Construction Controls Reviews

2.1.2.1. Review potential impacts to project schedule as submitted by the Contractor and coordinate with Design Consultant to provide support to the Owner in evaluation of claims.

2.1.2.2. Review the progress schedule, schedule of submittals, schedule of values, and Program Critical Path Method Schedules prepared by Contractor and consult with Owner concerning acceptability.

2.1.2.3. Review and provide comment on Contractor quality control protocols and procedures.

2.1.2.4. Review and provide comment on Contractor's process performance testing and integration plans.

2.1.2.5. Review and provide comment on Contractor's start-up and commissioning plans.

2.1.3. Review and adhere to no less than the Contractor's Safety Plan.

2.2 Facilitate and manage monthly progress/coordination meetings with the Owner, Design Consultant and Contractor. Contractor will produce meeting minutes.

2.3 Coordinate and track progress on submittal reviews using Virtual Project Manager. The Owner's Representative may provide comments on key submittals primarily related to schedule, regulatory compliance, funding agency compliance, etc. These comments will be made to the Engineer of Record, who will have the ultimate responsibility for approval or rejection of submittals.

2.4 Provide reviews of weekly construction payrolls with a monthly summary of compliance with Davis-Bacon labor wages up to a forty-two (42) month period and conduct quarterly wage-rate interviews during the construction period with hourly employees of the Contractor and their subs to verify reported wages are in compliance with Federal funding requirements for both the Texas Water Development Board's Drinking Water State Revolving Fund and United States Environmental Protection Agency's Water Infrastructure Finance and Innovation Act.

2.5 Review up to forty-two (42) monthly progress payment requests. Owner's Representative's recommendation for payment will be based on (1) actual witnessed quantities of contract items completed; (2) observed progress; and (3) verified quantities of the Work. Pay applications will be verified and signed by a licensed Professional Engineer.

2.6 Start-Up and Commissioning Support

2.6.1. Review equipment and process start-up plan submittals.

2.6.2. Monitor final list of items to be completed or corrected prior to substantial completion of construction and prior to completion of the startup and commissioning period.

2.6.3. Verify that tests of equipment and assets, systems startups, operation and maintenance, and training are conducted in the presence of appropriate personnel.

2.6.4. Verify delivery to Owner copies of all tests, inspections, and system startup data.

2.7 Review and evaluate any work change or change order requests, including detailed review of costs, and assist Owner with negotiation of any work change or change order requests, and with preparation of Owner-directed changes. Advise Owner if such changes impact the agreed Owner's Representative level of effort.

2.8 When authorized by the Owner, coordinate change orders with the Owner and Contractor for changes in the work falling outside the scope of work originally provided for in the construction contract documents. If redesign or substantial engineering or surveying is required in the preparation of these change order documents, the Owner's Representative will communicate these needs to the Owner and coordinate those needs when requested by the Owner with the Design Consultant and Contractor.

2.9 Maintain a log of Contractor redlines to ensure continual updates of working as-built drawings during construction to assist with production of record drawings. The Contractor shall provide as-built drawings for their scope of work, and the Design Consultant shall be responsible for producing record drawings. Copies of the Owner's Representative's log of redlines to be provided to Owner when requested in addition to being provided to Owner upon substantial and final completion.

2.10 Assist Owner with punch list reviews, substantial completion inspection and final inspection. It is assumed that there will be two Substantial Completion walkthroughs, one for pretreatment and one for the membrane retrofit, and one Final Completion walkthrough. Review Contractor's final pay request and project closeout documents.

2.11 Support Owner in reviewing and tracking documentation and certification provided by contractor demonstrating compliance with American Iron and Steel requirements as required by the Texas Water Development Board and the United States Environmental Protection Agency as conditions for the loans provided by these entities.

Estimated Task 2 Fee: $1,102,137

3. On-Site Construction Staffing

In performing construction observation services, the Owner's Representative will endeavor to protect the Owner against defects and deficiencies in the work of the Contractors; but the Owner's Representative cannot guarantee the performance of the Contractor; or be responsible for the actual supervision of construction operations; or for the safety measures that the Contractor takes/should take. However, if at any time during construction the Owner's Representative observes that the Contractor's work does not comply with the construction contract documents, the Owner's Representative will notify the Owner and Contractor of such non-compliance. The Owner's Representative will also record the inspection, the discussion, and the actions taken. If the Contractor continues without satisfactory corrective action, the Owner's Representative will submit a defective work order to the Owner as soon as possible, so that appropriate action under the Owner's contract with the Contractor can be taken.

3.1 Provide full-time (40 hours per week) construction inspection services for the full 182-week duration of the project utilizing a Construction Inspector with experience required for State Revolving Fund/Water Infrastructure Finance and Innovation Act funded water treatment plant projects. If the construction period extends beyond the time established in this agreement or if the Owner wishes to increase the time or frequency of the observation, the Owner may request a supplemental agreement from the Owner's Representative and compensate the Owner's

Representative based on rates in Addendum to Attachment B below.

3.2 Provide a full-time (40 hours per week) Construction Manager for the full 182-week duration of the project. The Construction Manager will proactively plan, manage, schedule and report status of inspection hours so Owner and Owner's Representative can adjust and prioritize use of the Owner's Representative staff as necessary to manage budgeted hours.

3.3 Provide a part-time (16 hours per week) Resident Project Engineer for the full 182-week duration of the project. The Resident Project Engineer will provide, in addition to participation in activities identified above, the following:

3.3.1. Provide a weekly status report to the Owner.

3.3.2. Consult with and advise the Owner regarding significant changes/issues during the construction period.

3.3.3. Maintain a file with lists of quantities incorporated into the work, test reports, certifications, shop drawings and submittals, and other appropriate information.

3.3.4. Maintain a project diary, including notations of areas where observation was not possible due to staff and time.

3.3.5. Witness on-site Input/Output loop checks of field element/Programmable Logic Controller integration and Programmable Logic Controller/Human-Machine Interface integration.

3.3.6. Participation in Supervisory Control and Data Acquisition and control strategy workshops during construction.

3.3.7. Participation in startups, particularly Functional Demonstration Testing of control systems, to ensure the systems operate as intended.

3.3.8. Review and maintain punch lists as required for issuance of Substantial Completion and Final Completion.

3.3.9. Oversee project closeout requirements such as occupancy, deliverables, and Owner training.

3.3.10. Furnish periodic reports as may be requested by the Owner for progress of the construction, status of as-built plans, compliance with the progress schedule of submittals, etc.

3.3.11. Verify Contractor and Design Consultant provides Operations and Maintenance manuals and other as-built information in a timely manner that is coordinated with training of Owner staff and operations of the Project assets; and notify Owner of any incompleteness

3.3.12. Review and comment on the draft Operations and Maintenance Manual for the Project Work. The Operations and Maintenance Manual is expected to be in digital format (e.g., as required for integration with plant Supervisory Control and Data Acquisition/Human-Machine Interface and Maintenance Management) and to include a detailed description of the treatment, control, and conveyance equipment; standard operating procedures; necessary maintenance and schedule; a trouble-shooting guide for typical problems; and operator safety procedures. Owner's Representative comments will be submitted to the Owner for review and concurrence and then submitted to the Design Consultant and Contractor.

3.3.13. Report to Owner whenever the Owner's Representative believes that any construction will not produce a completed project that conforms to Owner objectives and/or Contract Documents. Advise the Owner of construction that should be corrected or rejected, or should be uncovered for observation, special testing, inspection or approval. Any such items will be logged throughout the construction duration for tracking purposes.

Estimated Task 3 Fee: $2,746,016

4. Funding and Regulatory Support

4.1 Funding Agency Coordination

Garver will coordinate and manage documentation required by the Environmental Protection Agency's Water Infrastructure Finance and Innovation Act Program and the Texas Water Development Board's Drinking Water State Revolving Fund Program for the construction phase of the project. The Owner's Representative will assist with on-site visits from Environmental Protection Agency and Texas Water Development Board inspectors and provide proper documentation for compliance with all federal and state regulations.

4.2 Regulatory Agency Coordination

Monitor and comment on compliance with applicable Texas Commission on Environmental Quality regulations, other applicable state and federal regulations, and Owner water quality requirements and goals.

Estimated Task 4 Fee: $67,944

5. Payment

For work described in this Amendment to the Scope of Services, the Owner agrees to pay Garver on a lump sum basis in the amount of $3,980,517. Payment invoices will be submitted to the Owner on a monthly basis, accompanied by a detailed progress report and task summary for the billing period, and payment will be made on a percent-complete basis for the lump sum fee.

6. Schedule

The services described in this Scope of Services are based on the latest construction schedule provided by the Engineer of Record for this project, Ardurra. Any changes to the duration or phasing of this construction project may require modifications to this contract.

WTP Owner's Representative: Task Description	Start	Completion	2022				2023				2024				2025			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1: Project Management and Administration	**Q3 2022**	**Q4 2025**																
2: Construction Coordination and Management	**Q3 2022**	**Q4 2025**																
2.1-2.5 Serve as Liason, Monthly Meetings, Coordinate Submittal Reviews, Review Weekly Payrolls and Monthly Progress Payment Requests	Q3 2022	Q4 2025																
2.6 Start-Up and Commissioning Support	Q3 2023	Q4 2025																
2.7-2.9,2.11 Review and Coordinate Change Orders, Maintain Log of Contractor Redlines, Track AIS Compliance	Q3 2022	Q4 2025																
2.10 Punch List Reviews, Substantional and Final Inspections	Q3 2025	Q4 2025																
3: On-Site Construction Staffing	**Q3 2022**	**Q4 2025**																
3.1 Full-Time Construction Inspector	Q3 2022	Q4 2025																
3.2 Full-Time Construction Manager	Q3 2022	Q4 2025																
3.3 Part-Time Resident Project Engineer	Q3 2022	Q4 2025																
4: Funding and Regulatory Support	**Q3 2022**	**Q4 2025**																

7. Additional Services

The services described below are not included in this Scope of Services, and may be added to this Contract at the discretion of the Owner under a separate Supplemental Agreement.

7.1 Environmental Services

7.1.1. Assist the Owner with National Environmental Policy Act and Environmental Permitting as required for Federally-funded project.

7.2 Public Relations

7.2.1. Assist with providing public relations services or support of public relation activities undertaken by the Owner.

7.3 Design Services

7.3.1. Develop alternative process designs or approaches if requested by Owner.

7.4 Manufacturer Test Reports

7.4.1. Review manufacturer test reports for conformance with requirements of the Contract documents and notify the Owner of any discrepancies.

7.5 Warranty Assistance

7.5.1. Provide support for equipment warranty claims and items covered by the Contractor's maintenance bond for a period of two (2) years after substantial completion of the construction project.

7.6 Additional Construction Administration and Observation Services

7.6.1. Witness of Factory Demonstration Testing of Human-Machine Interface/Programmable Logic Controller Supervisory Control and Data Acquisition test beds.

ADDENDUM TO ATTACHMENT B - FEE SCHEDULE

City of Pflugerville

Pflugerville WTP Owner's Rep - Construction Phase Services

All Tasks

	WORK TASK DESCRIPTION	E-6	E-5	E-3	E-2	E-1	P-1	X-2	C-4	C-2	GARVER	SUBCONSULTANT	TOTAL HOURS	TOTAL FEE
		$292.00	$238.00	$167.00	$138.00	$119.00	$143.00	$93.00	$190.00	$130.00	LABOR	*JH Engineering*		
		hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.	hr.		0%		
	Basic Services Section													
1.	**TASK (Project Management and Administration)**													
	1.1 Project Meetings and Workshops	8	8	12	12	16		12	12		$13,200		80	$13,200
	1.2 Document Management	2		4	4	8		40	4	4	$7,756		66	$7,756
	1.3 Subconsultant Management	10	10	10	10	20			20		$14,530		80	$14,530
	1.4 Monthly OR Invoices and Reports	2	10	10	20	40					$12,154		82	$12,154
	1.5 Risk Register	20		10		30			30		$16,780		90	$16,780
	Subtotal - TASK (Project Management and Administration)	**42**	**28**	**46**	**46**	**114**	**0**	**52**	**66**	**4**	**$64,420**	**$0**	**398**	**$64,420**
2.	**TASK (Construction Administration)**													
	2.1 Coordination Between Owner, Design Consultant, and Contractor	20		8					168		$39,096		196	$39,096
	2.2 Monthly Construction Progress Meetings	41	41	82	82						$46,740		246	$46,740
	2.3 Construction Submittal Management	20		40	40			488			$63,424		588	$63,424
	2.4 Review Weekly Construction Payroll	20						358			$39,134		378	$39,134
	2.5 Review Monthly Progress Payment Requests	20			42					42	$17,096		104	$17,096
	2.6 Start-Up and Commissioning Support	24		8							$8,344	$814,279	32	$822,623
	2.7 Review Change Order Requests	20		20							$9,180		40	$9,180
	2.8 Approved Change Order Coordination			20		20				40	$10,920		80	$10,920
	2.9 Review Working As-Built Drawings								21	21	$6,720		42	$6,720
	2.10 Punch List, Substantial Completion Inspection, and Final Inspection	60		20		24					$23,716		104	$23,716
	2.11 Track Documentation for AIS Requirements	4		12			12	200			$23,488		228	$23,488
	Subtotal - TASK (Construction Administration)	**229**	**41**	**210**	**164**	**44**	**12**	**1046**	**189**	**103**	**$287,858**	**$814,279**	**2,038**	**$1,102,137**
3.	**TASK (Construction Observation)**													
	3.1 Full-Time Construction Inspector (40 hours per week for 182 weeks)									7280	$946,400		7,280	$946,400
	3.2 Full-Time Construction Manager (40 hours per week for 182 weeks)								7280		$1,383,200		7,280	$1,383,200
	3.3 Resident Project Representative Services (16 hours per week for 182 weeks)			1456		1456					$416,416		2,912	$416,416
	Subtotal - TASK (Construction Observation)	**0**	**0**	**1456**	**0**	**1456**	**0**	**0**	**7280**	**7280**	**$2,746,016**	**$0**	**17,472**	**$2,746,016**
4.	**TASK (Funding and Regulatory Support)**													
	4.1 Funding Agency Coordination		8	24		40	328				$57,576		400	$57,576
	4.2 Regulatory Agency Coordination	12		12		12	24				$10,368		60	$10,368
	Subtotal - TASK (Funding and Regulatory Support)	**12**	**8**	**36**	**0**	**52**	**352**	**0**	**0**	**0**	**$67,944**	**$0**	**460**	**$67,944**
	Subtotal - Basic Services Section	**283**	**77**	**1748**	**210**	**1666**	**364**	**1098**	**7535**	**7387**	**$3,166,238**	**$814,279**	**20,368**	**$3,980,517**
	Project Totals	**283**	**77**	**1748**	**210**	**1666**	**364**	**1098**	**7535**	**7387**	**$3,166,238**	**$814,279**	**20,368**	**$3,980,517**
	Project Totals (Cost)	**$82,636**	**$18,326**	**$291,916**	**$28,980**	**$198,254**	**$52,052**	**$102,114**	**$1,431,650**	**$960,310**				

Garver Classification Definitions

E-6 Senior Process Engineer and Membrane Technology Specialist
This role is a senior-level, highly experienced membrane technologist with in-depth familiarity with this project and the specific types of membrane technologies used. They will be brought in at key milestones in the project's construction, to verify functionality and quality of equipment as tested and installed. Examples of team members in this rate category include Buddy Boysen, P.E., and Michael Watts, P.E., Ph.D.

E-5 Senior Project Manager
This role is for senior-level project management during the construction period. This category is intended for Ian Toohey, P.E., the official Owner's Representative point of contact for the City since project inception in March of 2020.

E-3 Project Manager and Process Engineer
This role is reserved for local Garver staff who are experienced in process engineering and water treatment plant design, who will be managing day-to-day tasks and participating as the Resident Project Engineer. This rate category is primarily reserved for either Michael Sherer, P.E., or Michelle Lacks, P.E.

E-2 Process Engineer (PE)
This role is for mid-level process engineers, who will be performing primarily routine administrative tasks, including some technical reviews. Employees in this rate category include Trey Stewart, P.E., and other process engineers from Garver's Water Design Center.

E-1 Process Engineer (EIT)
This role is for junior process engineers, who will be delegated routine administrative tasks which can be achieved at an appropriately lower cost rate.

P-1 Funding Coordinator
This role will support the loan administration process for both the Texas Water Development Board Drinking Water State Revolving Fund loan, and the Environmental Protection Agency's Water Infrastructure Financing and Innovation Act loan. This category is reserved for Kirby Young, who has supported the City throughout the loan application process.

X-2 Administrative Assistant
This role will support the project engineers with basic administrative functions, such as document management and monitoring project submittals within the Virtual Project Manager software. This category is reserved for Laurie Loiselle, Administrative Assistant in Garver's Austin office.

C-4 Construction Manager
This role will be primarily responsible for managing the construction site, coordinating with the contractor, and coordinating with the operations team. This role will be filled by James Schmerber, PMP, or his designee.

C-2 Construction Inspector
This role will oversee the quality of day-to-day construction activities on the project site. It will be performed by one of Garver's experienced construction inspectors.

City of Pflugerville
Water Treatment Plant Expansion Project
Owner's Representative Services – Construction Phase
Scope & Fee Proposal

Introduction

Garver has engaged JH Engineering, LLC (JHE) to provide Owner's Representative (OR) services, supporting the City of Pflugerville during the construction phase of the Water Treatment Plant Expansion Project. JHE has developed this cost proposal with the intent of providing Garver with Owner's Representative (OR) services, including developing test plans/procedures and provide commissioning coordination and oversight. The purpose of this document is to provide a short narrative clarifying the intent of each task to ensure our vision and interpretation of the required level of effort meets the Project Team's expectations. If there are any items in question, please bring them to our attention so we can either provide further explanation or resolve the discrepancy. Please see the following narrations below for each of the tasks listed on the attached Level of Effort cost sheet (Attachment B).

Task 1 – Project Management and Administration

1.1 Project Kickoff Meeting – JHE will attend the Project Kickoff Meeting with Garver, Owner, Design Consultant, and Contractor to receive updates and provide an overview of the Commissioning and Start-Up (C&SU) plan development process. [Assumption: One four-hour meeting attended in-person, including travel time]

1.2 Internal Coordination Meetings – JHE will attend routine Internal Coordination Meetings with Garver to receive updates, provide feedback, and discuss progress. JHE's Principal Engineer will also coordinate with internal staff to communicate progress and anticipated project needs. [Assumption: One one-hour meeting/month during 38-month construction phase attended virtually]

1.3 Client Progress Meetings – JHE will attend routine Client Progress Meetings with Garver, Owner, Design Consultant, and Contractor to receive updates, provide feedback, and discuss progress with the project stakeholders. JHE's Principal Engineer will also coordinate with internal staff to communicate progress and anticipated project needs. [Assumption: One four-hour meeting/month during 38-month construction phase attended in-person, including travel time]

1.4 Monthly Reporting and Project Administration – JHE will prepare monthly status reports of expenditures to date, cost-to-budget information, and submit in conjunction with monthly services invoices. [Assumption: One monthly status report and invoice per month during 38-month construction phase]

Task 2 – Pre-Commissioning

2.1 Develop Commissioning and Start-Up (C&SU) Plan

- **2.1.1 Establish Systems & System Boundaries** - JHE will subdivide the project into unit process systems and create system boundaries for establishing manageable Functional and Performance Test Packages.
- **2.1.2 Develop Equipment Lists for All Systems** - JHE will create equipment lists for each system to ensure all equipment included in each system is captured.
- **2.1.3 Detailed Review of Equipment Specifications** - In preparation for and during the development of the Functional and Performance Test Packages, JHE will complete a more detailed review of the specifications to capture all the testing requirements.
- **2.1.4 Generate C&SU and Training Schedule** – JHE will work closely with the Contractor's Project Team to develop, assemble, and distribute an overall Commissioning Schedule. The Commissioning Schedule will identify commissioning and training activities and be developed in a traditional CPM format. JHE will develop the initial proposed schedule and work to optimize and integrate the C&SU and Training Schedule with the Contractor's overall project schedule.
- **2.1.5 Generate C&SU Plan** - JHE will develop a detailed Commissioning and Start-Up Plan for the entire project, including Physical Checkout, Field Testing, Instrumentation Field Testing, Flow Rate Control Testing, Functional Testing, and Instrumentation Functional Testing. The Plan will include a detailed overview of all required testing and training, including the commissioning process for each system, as well as Project-wide commissioning requirements, guidelines, and procedures.

2.2 Develop Functional and Performance Test Packages using Contract Documents and Equipment Submittals - JHE will develop detailed Functional and Performance Test Packages for each system identified during Task 2.1.1. Each Functional and Performance Test Package will include the approach and objectives of testing, start-up sequencing, detailed step-by-step procedures and forms, prerequisite testing requirements, and any other information necessary to complete Physical Checkout, Field Testing, Instrumentation Field Testing, Functional Testing, and Instrumentation Functional Testing and prepare for Start-Up and Acceptance Testing for each system using the Contract Documents, equipment submittals, and manufacturers' Operations & Maintenance (O&M) manuals.

2.3 Develop Acceptance Testing Plan

- **2.3.1 Generate Preliminary Acceptance Testing Plan –** JHE will develop the Preliminary Acceptance Testing Plan, including the approach and objectives of the Start-Up Transition Period and Acceptance Test, detailed step-by-step procedures and forms, prerequisite testing requirements, and any other information necessary to complete the Start-Up Transition Period and Acceptance Test.
- **2.3.2 Generate Final Acceptance Testing Plan –** JHE will update the Acceptance Testing Plan as the Project approaches construction completion to incorporate any modifications to the project scope and/or schedule.

Task 3 – Commissioning Oversight and Coordination

3.1 Commissioning Oversight – JHE will mobilize to the Project site to oversee the Contractor's implementation of the Functional and Performance Test Packages.

3.2 Extended Duration Testing Support

3.2.1 Flow Rate Control Testing – JHE will mobilize to the Project site to oversee Flow Rate Control Testing, which will be completed by the Contractor. [Assumption: 1 day to complete testing]

3.2.2 Start-Up Transition Period – JHE will mobilize to the Project site to oversee the Start-Up Transition Period, which will be completed by the Contractor and Owner. [Assumption: 5 days to complete Start-Up]

3.2.3 Acceptance Testing – JHE will mobilize to the Project site to oversee the Acceptance Test, which will be completed by the Contractor and Owner. [Assumption: Six 7-day Acceptance Test sessions]

3.3 Commissioning Coordination

3.3.1 Commissioning Coordination Meetings – JHE will attend the Contractor's Commissioning Coordination Meetings to receive updates, provide feedback, and discuss progress to date as it pertains to commissioning, start-up, training, and turnover. JHE's Process / Commissioning Engineer II will also coordinate with internal staff to communicate progress and anticipated project needs. [Assumption: One four-hour meeting every other week for four months and one four-hour meeting every week for four months attended in person, including travel time]

3.3.2 Training Coordination – JHE will review the Contractor's training plan submittals to ensure they meet the specification requirements and assist in scheduling training sessions in accordance with Owner preferences and contractual requirements.

3.3.3 Turnover Coordination – JHE will provide coordination and oversight of the turnover process, including ensuring asset management information, warranty information, spare parts, final O&M manuals, and all required training sessions have been provided to the Owner and all required testing has been completed prior to the Owner's acceptance of any portion of the Project.

General Assumptions:

1) Contractor will provide a conditioned office for JHE to work from while on site. JHE will provide computer peripherals. Contractor to provide internet, power, printing supplies, potable water and wastewater facilities, and all other normal day to day business needs.
2) Minimum of 2 weeks' notice required for scheduling of onsite testing services.
3) Manufacturer's Certification of Proper Installation to be provided by Manufacturer for use during testing

Exclusions:

1) Software licenses needed to conduct review of project documents and deliverables
2) Reprographic services
3) Level of Effort required to complete any services not specifically identified above, including:
   a) Assembly of Submittals, Operation & Maintenance Manuals, and Shop/Factory Test Plans
   b) Assembly of Testing, Adjusting, and Balancing (TAB) procedures/reports required to be completed by independent air balance and testing agency for HVAC systems
   c) Assembly of testing procedures to be used by independent third party testing company for electrical testing
   d) Assembly of testing procedures to be used by independent authorized vibration analysis expert
   e) Assembly of testing procedures to be used by Process Control System Supplier (PCSS) for instrumentation and controls testing
   f) Additional manpower, LOE, and site visits due to downtime or delays for any reason other then those borne by JHE.
4) Support of the PCSS's Witnessed Factory Test or 30-day Site Acceptance Test
5) Support of the Warranty Phase of the project
6) Plant operations
7) Professional videography or editing services for recording training sessions
8) All construction, installation, or field repair services
9) All power, water, fuels, oil, grease, chemicals, and auxiliaries
10) Factory startup services and manufacturer's field services
11) Supply, installation, operation, and/or commissioning of temporary systems and piping

ATTACHMENT B
City of Pflugerville
Water Treatment Plant Expansion Project
Owner's Representative Services - Construction Phase
Level of Effort Estimate - Labor Cost

		Principal Engineer / Commissioning & Startup SME	Process / Commissioning Engineer II	Engineering & Construction Inspection Coordinator	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
Task 1 - Project Management and Administration							
1	**Project Kickoff Meeting**	4	4	-	4	12	$ 2,496.72
1.2	**Internal Coordination Meetings**	38	38	-	38	114	$ 23,718.84
1.3	**Client Progress Meetings**	152	152	-	38	342	$ 73,069.44
1.4	**Monthly Reporting and Project Administration**	38	-	-	-	38	$ 9,405.00
	Task 1 Subtotal	**232**	**194**	**-**	**80**	**506**	**$ 108,690.00**
Task 2 - Pre-Commissioning							
2.1	**Develop Commissioning and Start-Up (C&SU) Plan**						**$ 100,270.80**
	2.1.1 Establish Systems & System Boundaries	4	20	-	80	104	$ 20,000.40
	2.1.2 Develop Equipment Lists for all Systems	4	10	-	40	54	$ 10,495.20
	2.1.3 Detailed Review of Equipment Specifications	20	20	-	40	80	$ 16,309.20
	2.1.4 Generate C&SU and Training Schedule	4	10	-	40	54	$ 10,495.20
	2.1.6 Generate C&SU Plan	20	40	-	160	220	$ 42,970.80

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City of Pflugerville
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		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
2.2	**Develop Functional and Performance Test Packages using Contract Documents and Equipment Submittals**						**$ 197,378.70**
	2.2.1 Electrical Distribution	5	10	-	40	55	$ 10,742.70
	2.2.2 HVAC	2	4	-	16	22	$ 4,297.08
	2.2.3 Network Communications	3	6	-	24	33	$ 6,445.62
	2.2.4 Lake Pump Station	2	4	-	16	22	$ 4,297.08
	2.2.5 Copper Ion Generation System	3	6	-	24	33	$ 6,445.62
	2.2.6 Pretreatment Pipe Gallery	1	2	-	8	11	$ 2,148.54
	2.2.7 Pretreatment Train 1	4	8	-	32	44	$ 8,594.16
	2.2.8 Pretreatment Train 2	-	1	-	4	5	$ 950.52
	2.2.9 Pretreatment Train 3	-	1	-	4	5	$ 950.52
	2.2.10 Pretreatment Train 4	-	1	-	4	5	$ 950.52
	2.2.11 Raw Sludge Control Valves and Drain Sump	1	2	-	8	11	$ 2,148.54
	2.2.12 Membrane System - Booster Pumps and Strainers	4	8	-	32	44	$ 8,594.16
	2.2.13 Membrane System - Train 1	5	10	-	40	55	$ 10,742.70
	2.2.14 Membrane System - Train 2	-	2	-	8	10	$ 1,901.04
	2.2.15 Membrane System - Train 3	-	2	-	8	10	$ 1,901.04
	2.2.16 Membrane System - Train 4	-	2	-	8	10	$ 1,901.04
	2.2.17 Membrane System - Train 5	-	2	-	8	10	$ 1,901.04
	2.2.18 Membrane System - Permeate Pumps	5	10	-	40	55	$ 10,742.70
	2.2.19 Membrane System - Backwash Waste Pump Station	2	4	-	16	22	$ 4,297.08

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		Principal Engineer / Commissioning & Startup SME	Process / Commissioning Engineer II	Engineering & Construction Inspection Coordinator	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
	2.2.20 Membrane System - Clean-In-Place System	2	4	-	16	22	$ 4,297.08
	2.2.21 Membrane System - Sodium Hypochlorite Feed	2	4	-	16	22	$ 4,297.08
	2.2.22 Membrane System - Citric Acid Feed	2	4	-	16	22	$ 4,297.08
	2.2.23 Membrane System - Hydrochloric Acid Feed	2	4	-	16	22	$ 4,297.08
	2.2.24 Membrane System - Neutralization System	2	4	-	16	22	$ 4,297.08
	2.2.25 Membrane System - Caustic Feed	2	4	-	16	22	$ 4,297.08
	2.2.26 Membrane System - Sodium Bisulfite Feed	2	4	-	16	22	$ 4,297.08
	2.2.27 Membrane System - Backpulse System	2	4	-	16	22	$ 4,297.08
	2.2.28 Membrane System - Air Scour Blowers	5	10	-	40	55	$ 10,742.70
	2.2.29 Membrane System - Compressed Air System	2	4	-	16	22	$ 4,297.08
	2.2.30 Chlorine Contact Basin	1	2	-	8	11	$ 2,148.54
	2.2.31 High Service Pump Station No. 1	2	4	-	16	22	$ 4,297.08
	2.2.32 High Service Pump Station No. 2	2	4	-	16	22	$ 4,297.08
	2.2.33 Aluminum Chlorohydrate Storage and Feed	5	10	-	40	55	$ 10,742.70
	2.2.34 Liquid Ammonium Sulfate Storage and Feed	3	6	-	24	33	$ 6,445.62
	2.2.35 Sodium Hypochlorite Storage and Feed	4	8	-	32	44	$ 8,594.16
	2.2.36 Raw Sludge Thickeners	2	4	-	16	22	$ 4,297.08
	2.2.37 Thickened Sludge Pump Station	2	4	-	16	22	$ 4,297.08
	2.2.38 Backwash Waste Clarifier	1	2	-	8	11	$ 2,148.54
	2.2.39 Recycle Pump Station	2	4	-	16	22	$ 4,297.08
	2.2.40 Raw Sludge Pump Station	3	6	-	24	33	$ 6,445.62

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City of Pflugerville
Water Treatment Plant Expansion Project
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		Principal Engineer / Commissioning & Startup SME	Process / Commissioning Engineer II	Engineering & Construction Inspection Coordinator	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
2.3	**Develop Acceptance Testing Plan**						**$ 19,087.95**
	2.3.1 Generate Preliminary Acceptance Testing Plan	10	40	-	20	70	$ 13,716.60
	2.3.2 Generate Final Acceptance Testing Plan	3	5	-	20	28	$ 5,371.35
	Task 2 Subtotal	**151.5**	**330.0**	**-**	**1,140.0**	**1,622**	**$ 316,737.45**
Task 3 - Commissioning Oversight and Coordination							
3	**Commissioning Oversight**						**$ 187,185.60**
	3.1.1 Electrical Distribution	2	4	-	16	22	$ 4,297.08
	3.1.2 HVAC	2	4	-	8	14	$ 2,766.84
	3.1.3 Network Communications	2	4	-	8	14	$ 2,766.84
	3.1.4 Lake Pump Station	2	4	-	16	22	$ 4,297.08
	3.1.5 Copper Ion Generation System	2	4	-	24	30	$ 5,827.32
	3.1.6 Pretreatment Pipe Gallery	2	4	-	8	14	$ 2,766.84
	3.1.7 Pretreatment Train 1	2	4	-	16	22	$ 4,297.08
	3.1.8 Pretreatment Train 2	2	4	-	16	22	$ 4,297.08
	3.1.9 Pretreatment Train 3	2	4	-	16	22	$ 4,297.08
	3.1.10 Pretreatment Train 4	2	4	-	16	22	$ 4,297.08
	3.1.11 Raw Sludge Control Valves and Drain Sump	2	4	-	8	14	$ 2,766.84
	3.1.12 Membrane System - Booster Pumps and Strainers	2	4	-	24	30	$ 5,827.32
	3.1.13 Membrane System - Train 1	2	4	-	24	30	$ 5,827.32
	3.1.14 Membrane System - Train 2	2	4	-	24	30	$ 5,827.32
	3.1.15 Membrane System - Train 3	2	4	-	24	30	$ 5,827.32
	3.1.16 Membrane System - Train 4	2	4	-	24	30	$ 5,827.32

ATTACHMENT B
City of Pflugerville
Water Treatment Plant Expansion Project
Owner's Representative Services - Construction Phase
Level of Effort Estimate - Labor Cost

		Principal Engineer / Commissioning & Startup SME	Process / Commissioning Engineer II	Engineering & Construction Inspection Coordinator	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
	3.1.17 Membrane System - Train 5	2	4	-	24	30	$ 5,827.32
	3.1.18 Membrane System - Permeate Pumps	2	4	-	40	46	$ 8,887.80
	3.1.19 Membrane System - Backwash Waste Pump Station	2	4	-	16	22	$ 4,297.08
	3.1.20 Membrane System - Clean-In-Place System	2	4	-	16	22	$ 4,297.08
	3.1.21 Membrane System - Sodium Hypochlorite Feed	2	4	-	16	22	$ 4,297.08
	3.1.22 Membrane System - Citric Acid Feed	2	4	-	16	22	$ 4,297.08
	3.1.23 Membrane System - Hydrochloric Acid Feed	2	4	-	16	22	$ 4,297.08
	3.1.24 Membrane System - Neutralization System	2	4	-	16	22	$ 4,297.08
	3.1.25 Membrane System - Caustic Feed	2	4	-	16	22	$ 4,297.08
	3.1.26 Membrane System - Sodium Bisulfite Feed	2	4	-	16	22	$ 4,297.08
	3.1.27 Membrane System - Backpulse System	2	4	-	16	22	$ 4,297.08
	3.1.28 Membrane System - Air Scour Blowers	2	4	-	32	38	$ 7,357.56
	3.1.29 Membrane System - Compressed Air System	2	4	-	8	14	$ 2,766.84
	3.1.30 Chlorine Contact Basin	2	4	-	8	14	$ 2,766.84
	3.1.31 High Service Pump Station No. 1	2	4	-	8	14	$ 2,766.84
	3.1.32 High Service Pump Station No. 2	2	4	-	16	22	$ 4,297.08
	3.1.33 Aluminum Chlorohydrate Storage and Feed	2	4	-	40	46	$ 8,887.80
	3.1.34 Liquid Ammonium Sulfate Storage and Feed	2	4	-	16	22	$ 4,297.08
	3.1.35 Sodium Hypochlorite Storage and Feed	2	4	-	32	38	$ 7,357.56
	3.1.36 Raw Sludge Thickeners	2	4	-	16	22	$ 4,297.08
	3.1.37 Thickened Sludge Pump Station	2	4	-	16	22	$ 4,297.08
	3.1.38 Backwash Waste Clarifier	2	4	-	8	14	$ 2,766.84

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City of Pflugerville
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Owner's Representative Services - Construction Phase
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		Principal Engineer / Commissioning & Startup SME	Process / Commissioning Engineer II	Engineering & Construction Inspection Coordinator	Commissioning Specialist IV (Electrical)	Total Labor Hours	Subtotal / Task
		Jeff Haasch, PE, PMP	Olivia Beck, PE	Kirkland Fordham	Matt Hladik		
		$ 247.50	$ 185.40	$ 154.50	$ 191.28		
	3.1.39 Recycle Pump Station	2	4	-	16	22	$ 4,297.08
	3.1.40 Raw Sludge Pump Station	2	4	-	24	30	$ 5,827.32
3.2	**Extended Duration Testing Support**						**$ 92,255.04**
	3.2.1 Flow Rate Control Testing	8	8	-	8	24	$ 4,993.44
	3.2.2 Start-Up Transition Period	40	40	-	40	120	$ 24,967.20
	3.2.3 Acceptance Testing	-	336	-	-	336	$ 62,294.40
3.3	**Commissioning Coordination**						**$ 109,410.72**
	3.3.1 Commissioning Coordination Meetings	104	104	-	104	312	$ 64,914.72
	3.3.2 Training Coordination	-	120	-	-	120	$ 22,248.00
	3.3.3 Turnover Coordination	-	120	-	-	120	$ 22,248.00
	Task 3 Subtotal	**232**	**888**	**-**	**872**	**1,992**	**$ 388,851.36**
Labor Cost Subtotal							
	Total Hours / Labor Cost Subtotal	**616**	**1,412**	**-**	**2,092**	**4,120**	**$ 814,278.81**

Billable Labor Cost	$ 814,278.81
Reimbursable Expenses	$ -
Total	**$ 814,278.81**