



**AMENDMENT NO. 4 TO
CONSTRUCTION MANAGEMENT SERVICES AGREEMENT
PECOS SURFACE WATER TREATMENT PLANT SCADA UPGRADE
Project No. WA2103.451**

Council Date: June 13, 2024

THIS AMENDMENT NO. 4 ("Amendment No. 4") to the professional services agreement dated December 5, 2022, (the "Agreement") is made by and between the City of Chandler, an Arizona municipal corporation, ("City") and **Jacobs Engineering Group Inc.**, a Delaware corporation, ("Consultant"), on this ____ day of _____, 2024, ("Effective Date" by Clerk). (City and Consultant may individually be referred to as "Party" and collectively referred to as "Parties").

RECITALS

- A. The Parties entered into the Agreement for: **Construction Management Services** ("Services") for the **Pecos Surface Water Treatment Plant SCADA Upgrade** project.
- B. The Parties have determined that it is necessary and desirable for the Consultant to perform services for the City under the terms and conditions set forth in this Amendment No. 4 and the Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the premises and mutual promises contained in the Agreement and this Amendment No. 4, the Parties agree to amend and modify the Agreement as follows.

SECTION I - CONSULTANT'S SERVICES

The Consultant's Services are modified as described in the Exhibit "A" attached to and made part of this amendment by reference.

SECTION II – PERIOD OF SERVICE

The Period of Service is increased by 551 calendar days for a revised total of 1,184 calendar days.

SECTION III – PAYMENT OF COMPENSATION AND FEES

The Fees are increased by \$1,286,450 and will be payable in accordance with Exhibit "B" attached to and made part of this amendment by reference, for a revised total not to exceed \$1,615,265.

SECTION IV – NOTICES

Parties to whom notice is to be given as set forth in the Agreement are revised as follows:

To City:	City of Chandler - Public Works & Utilities Department Attn: CIP City Engineer: Daniel Haskins, P.E. P.O. Box 4008, Mail Stop 407 Chandler, AZ 85244-4008 Phone: 480-782-3335 Email: daniel.haskins@chandleraz.gov		
With a copy to:	City of Chandler - Public Works & Utilities Department Attn: Russ Slotnick, Project Manager P.O. Box 4008, Mail Stop 407, Chandler, AZ 85244-4008 Phone: 480-782-3411 Email: russ.slotnick@chandleraz.gov		
To Consultant:	LEGAL COMPANY NAME:		Jacobs Engineering Group Inc.
	Mailing Address:	1501 W. Fountainhead Pkwy., Ste. 401, Tempe, AZ 85282	
	Physical Address:	1501 W. Fountainhead Pkwy., Ste. 401, Tempe, AZ 85282	
	Statutory Agent Name:		CT Corporation System
	Statutory Agent Mailing Address:		3800 N. Central Ave., Ste. 460 Phoenix, AZ 85012
	Statutory Agent Physical Address:		3800 N. Central Ave., Ste. 460 Phoenix, AZ 85012
	CONSULTANT'S AUTHORIZED PROJECT REPRESENTATIVE		
	Name:	Fair Yeager, P.E.	
	Title:	AZ Water Market Client Account Manager	
	Phone:	Office: 480-377-6249; Mobile: 480-225-4102	
	Email:	fair.yeager@jacobs.com	

CONSULTANT'S PROJECT MANAGER	
Name:	Teresa Smith-DeHesus, P.E., DBIA
Title:	Project Manager
Phone:	Office: 480-377-6233; Mobile: 480-331-0005
Email:	teresa.smithdehesus@jacobs.com

SECTION V – CONFLICT AMONG DOCUMENTS

The Agreement, this amendment, and any previous amendments constitute the complete agreement between the Parties concerning the subject matter of the Agreement and replace any prior oral or written communications between the Parties. If a conflict or ambiguity arises between the Agreement and this amendment, the instrument in the following order prevails and controls: (1) this amendment; (2) any previous Amendments from most recent to oldest; and (3) the Agreement.

SIGNATURE PAGE TO FOLLOW

IN WITNESS WHEREOF, the Parties hereto have caused this Amendment No. 4 to be duly executed. Each Party warrants and represents that its respective signatories whose signatures appear below have been and are on the date of signature duly authorized to execute this Amendment No. 4.

"CITY" CITY OF CHANDLER

"CONSULTANT"

JACOBS ENGINEERING GROUP INC.

MAYOR

 15 May 2024
Signature Date

RECOMMENDED BY:


Daniel Haskins, P.E.
CIP City Engineer

Fair Yeager

Print Name

Client Account Manager

Title

fair.yeager@jacobs.com

Signer Email Address

APPROVED AS TO FORM:

City Attorney 

ATTEST:

City Clerk Seal

Amendment No. 4 (cont.)
Project No. WA2103.451

These changes result in the following adjustments of Agreement amount and/or time:

Amendment authorized by Owner name: Danny Sargent		Date: 4/11/24
Consultant email: fair.yeager@jacobs.com		
Original Agreement amount:	\$230,295	
Previous Amendment(s) total:	\$98,520	
Last Agreement amount approved by Council:	\$230,295	
This Amendment:	\$1,286.450	
This Amendment + previous Amendment(s) not approved by Council total:	\$1,384,970	
Revised Agreement total:	\$1,615,265	
Council Approval Required (yes indicates approval required)	Yes	No
Amendment(s) total over \$100,000:	☒	☐
Amendment(s) total causes Agreement to exceed \$100,000:	☐	☒
Agreement Time		
Agreement time prior to this Amendment (including previous amendments):	<u>633</u> Calendar Days	
Net change resulting from this Amendment:	<u>551</u> Calendar Days	
Revised Agreement time (including this Amendment):	<u>1,184</u> Calendar Days	
Council Approval (if applicable)		
Council Approval Date: <u>June 13, 2024</u> Item No. <u>Pending</u>		

cc: Project Manager, Consultant, Owner, File

EXHIBIT A
SCOPE OF WORK

EXHIBIT "A"
CITY OF CHANDLER
PROFESSIONAL SERVICES AGREEMENT
Construction Management Services
PECOS SURFACE WATER TREATMENT PLANT SCADA UPGRADES
Project No. WA2103.451
AMENDMENT 4 - GMP2 CM Services
SCOPE OF WORK
May 3, 2024

PROJECT UNDERSTANDING AND BACKGROUND

The City of Chandler Pecos Surface Water Treatment Plant (PSWTP), located at 1475 East Pecos Road, was put into service in 1989 and PSWTP produces drinking water for the City's residential and commercial customers. Additionally, the control of the City's potable water distribution network is also housed at PSWTP. In order to protect the health and safety of the water customers, City staff relies heavily on automation to reliably communicate with water facilities. This automation is in the form of the Supervisory Control and Data Acquisition (SCADA) system. SCADA controls and monitors PSWTP equipment and 55 remote potable production facilities. The SCADA system also includes remote monitoring capabilities for 21 remote wastewater sites. Beyond system control, SCADA also captures numerous data points for system analysis and regulatory reporting. The City's 2019 SCADA Master Plan identified a project to replace the existing Foxboro system.

The PSWTP SCADA Upgrade project will modernize and improve the City's existing system and will include upgrades to legacy hardware and software. The project will replace the existing Foxboro I/A Distributed Control System (DCS) with Modicon PLCs and Wonderware HMI. This effort will entail hardware replacement, upgrades to operational technology (OT) (i.e. the systems that control and monitor treatment plant functions), integration with remote facilities, and possible replacement of other obsolete equipment, such as power supplies or radio components. The project will include procurement and installation of new virtual machine servers, software packages, Win911 applications with cellular modem and domain servers, and creation of SCADA software screens. No treatment process upgrades are contemplated. The project will use a Construction Manager at Risk (CMAR) delivery approach and is expected to be completed on a fixed budget and schedule.

This document describes the scope of work for services to be provided by Jacobs Engineering Group Inc. (CONSULTANT) for the City of Chandler (City and OWNER) for the Pecos SWTP SCADA Upgrade Construction Management Project WA2103.451 for execution of the work covered in Amendment 4 for GMP2 being constructed by Archer Western (CONTRACTOR/CMAR). Tasks include:

- Pre-Construction Assistance
- Construction Management
- Construction Inspection
- Materials Testing
- Record Drawings
- Maintenance of Plant Operations (MOPO) Coordination and Review

PROJECT TASKS

1. PRE-CONSTRUCTION ASSISTANCE

A. Task 4.1.1 Preconstruction Assistance

- i. Consultant must attend the pre-construction meeting to be coordinated and led by the City.

2. CONSTRUCTION MANAGEMENT

A. Task 4.2.1 Weekly Construction Meetings

- i. Consultant must conduct weekly construction meetings. Each meeting includes an agenda and minutes; Shop Drawing; Request for Information (RFI); Field Directive (FD); Material Certification; and Allowance Logs. Consultant assumes 78 weekly meetings will be held.

B. Task 4.2.2 CPM Schedule

- i. Consultant must review and evaluate Contractor's initial CPM schedule and provide recommendations for acceptance.
- ii. Consultant must review Contractor's monthly CPM schedule updates submitted with each payment application, identify CPM tasks behind schedule that may affect critical path items, project substantial and final completion dates and initiate correspondence to City regarding those tasks. Consultant assumes 18 reviews of updated CPM schedule in alignment with the CMAR construction schedule of 18 months.

C. Task 4.2.3 Requests for Information (RFI's)

- i. Consultant must review, evaluate, and respond to Contractor RFI's; and prepare and maintain a submittal log of all RFI's. Consultant assumes a maximum of 30 RFI responses.

D. Task 4.2.4 Shop Drawing Submittals

- i. Consultant must review, evaluate, and respond to Contractor shop drawing submittals; and prepare and maintain a submittal log of all shop drawing submittals. Consultant assumes a maximum of 20 reviews, not including MOPOs. Submittals will be primarily for testing and commissioning plans prepared by the subconsultants doing the work as required by the specifications, rather than for materials, as most materials have been procured under GMP1. MOPO submittals are included in section 6.

E. Task 4.2.5 Requests for Proposal (RFP)

- i. Consultant must prepare Requests for Proposal (RFP) documents detailing requested additional work tasks; review and evaluate Contractor RFP responses (cost derivations) with approval recommendations; and prepare and maintain a submittal log list of all RFP's. Consultant assumes 10 RFPs due to the amount of allowances being used and needing to be tracked.

F. Task 4.2.6 Field Directives (FD's)

- i. Consultant must prepare FD documents detailing requested additional work tasks or changes in work; review and evaluate Contractor FD responses with approval recommendations; and prepare and maintain a submittal log list of all FD's. Consultant assumes not more than 9 FD's to process CMAR allowances

and contingency. One FD is assumed approximately every 2 months and items will be consolidated and combined as needed.

G. Task 4.2.7 Contractor Payment Applications

- i. Consultant must review and evaluate Contractor monthly payment applications and make recommendations for payment; maintain a weekly record of constructed pay quantities and compile monthly totals; and coordinate payment application with the City quantity report and the inspectors' daily logs. Consultant assumes a maximum of 18 payment applications, with 1 review each, and half having a second review in alignment with the CMAR construction schedule of 18 months.
- ii. Consultant will administer the project including weekly coordination with the City Project Manager (PM), status reporting, and monthly invoices.

3. CONSTRUCTION INSPECTION

A. Task 4.3.1 Inspection Services

- i. Consultant must provide weekly construction inspection to verify materials and installations conform to construction documents; prepare daily inspection reports documenting Contractor construction activities and progress during field inspection visits. Consultant assumes 20 hours per week on average for 78 weeks. Approximately 1 to 4 Jacobs team members will participate in on-site inspection of construction depending on the nature of the work.

B. Task 4.3.3 Project Closeout

- i. Consultant must compile non-conformance list before Substantial Completion; schedule and conduct Substantial Completion inspection; prepare Substantial Completion punch list generated from Substantial Completion inspection; track items on punch list and note completed items; and complete and distribute Substantial Completion certificates.
- ii. Consultant must schedule and conduct Final Completion inspection; and complete and distribute Final Completion certificates.

4. MATERIALS TESTING

A. Task 4.4.1 Quality Control (QC) Test Program

- i. Consultant must review and verify Contractor's Quality Control material test type and frequencies are consistent with City and Maricopa Association of Governments (MAG); review and evaluate Contractor's QC test schedule and provide recommendations on acceptance; and review and evaluate all Contractor sampling, test, and inspection results for conformance with construction documents. This applies to fiber optic and wire testing only as specified.

B. Task 4.4.2 Quality Assurance (QA) Test Program – N/A

- i. Consultant must prepare and maintain a materials Quality Assurance plan per City and MAG.
- ii. Consultant must coordinate with Contractor's testing representative to obtain required QA tests and sample; complete sampling and compaction testing of subgrade (including lime-stabilized subgrade base), aggregate base, and

asphalt concrete materials in new asphalt concrete pavement areas; complete sampling and compaction testing of subgrade, aggregate base (where required) and concrete for new curbs, gutters, sidewalks, and concrete pavement and structures; and complete sampling and compaction testing of backfill for new irrigation, sewer, water, storm drain pipe, and dry utilities.

5. RECORD DRAWINGS

A. Task 4.5.1 Record Drawings with Asset Retagging

- i. Maintain updated redlines of drawings throughout implementation phase. Update all drawings (approximately 800 sheets) to create record drawings after implementation is completed. Record drawing update will also include the retagging all of the assets with the updated tagging syntax.
- ii. Provide resident Consultant and/or architect and/or landscape architect stamp/certification on record drawings cover sheet. Ensure all required signatures are on the cover sheet.
- iii. Provide and deliver Final record drawings in digital pdf and CAD format to the City.
- iv. CONSULTANT will prepare the Approval of Construction (AOC) documentation required by Maricopa County Environmental Services Department (MCESD).

6. MOPO DEVELOPMENT COLLABORATION

This task is Owner-Requested Additional Services During Construction. Due to the critical nature of the SCADA upgrades and the need to minimize operational downtime, detailed coordination and oversight of MOPO development by the CMAR is required. This task includes highly focused collaboration on SCADA hardware cut-over preparation by the CMAR, as a majority of work will need to be done with the plant in operation since shutdowns are very limited. Consultant assumes 20 hours per week on average for 78 weeks.

A. Task 4.6.1 MOPO Coordination

- i. Participate in weekly coordination meetings for MOPO development led by the CMAR team.
- ii. Monitor status and progress of the MOPO activities.
- iii. Coordinate commissioning activities with MOPO activities planned by the CMAR team.

B. Task 4.6.2 MOPO Submittal Review and Oversight

- i. Review contractor MOPO submittals and coordinate approval process.
- ii. Participate in pre-work MOPO walk-throughs.

7. ALLOWANCES

A. Allowances

- i. The allowances below are estimates for optional work to be done at the direction and approval of the City. The following Allowances are included:
 1. Design Coordination Allowance – for additional design of Administration Building UPS and new Filter Sump and Sample Pump cabinets.

2. CMAR Additional Work Allowance – for additional CM or design work as required to align with the CMAR construction requirements for unknowns, contingency use and schedule delays.
 3. Owner's Contingency Allowance - for additional services as directed by the Owner.
- ii. Work done under the allowances will be on a time and material basis. Additional scope definition may be necessary to confirm the level of effort and fee for additional work under these allowances.
 - iii. Work done under the allowances may require an adjustment to the delivery schedule.

SCHEDULE

Work will be performed per the construction schedule developed by the CMAR. The target NTP is July 1, 2024 and construction is anticipated to take 18 months.

COMPENSATION

The work will be done on a time and material basis with a not to exceed (NTE) upper limit as indicated in the attached Level of Effort and Fee spreadsheet. Allowances are provided for optional work to be done at the direction and approval of the City.

ASSUMPTION, CLARIFICATIONS, AND EXCLUSIONS

1. Scope of Services represents Jacobs construction management services during construction for the Chandler Pecos SCADA Upgrade GMP2 based on the completed design from Project WA2103.201.
2. Application fees for City reviews and permits will be paid by CITY.
3. Allowances will only be utilized with prior written approval from the City representative.
4. Direct Reimbursable Expenses are included in the LOE for normal reimbursable expenses on the project. Items must be billed at cost and backup must be provided with pay applications.
5. Budgets will be managed at the Phase and Main Task level. Jacobs will track task budget overruns and underruns and reconcile funds for tasks as needed within the overall project NTE budget. Any scope changes will be accommodated within the overall project budget to the extent possible; Jacobs will inform the City on any changes that may require additional funds via use of an allowance or a change order.
6. To facilitate rapid distribution of information, deliverables will be furnished electronically wherever possible. Unless otherwise indicated, final deliverables will be provided as native electronic files (Microsoft Word®, Microsoft Excel®, Microsoft Access®, and AutoCAD® as appropriate). Reproduction of any additional required copies shall be performed by the OWNER.
7. The CONSULTANT will use a project site as a repository for all electronic deliverables to be shared with the OWNER and CMAR team via file transfer protocol (FTP), SharePoint, or Microsoft® Teams.
8. The Construction Manager will attend all meetings. The Project Manager, Design Manager, subject matter experts (SMEs) and discipline staff will attend as appropriate for the specific topic or type of meeting per the LOE.

9. Travel for site visits, inspections, meetings, and workshops is estimated in the Direct Reimbursable Expenses estimate provided with the LOE attached.
10. The OWNER will conduct the scheduling and coordination of necessary participants of City staff as well as contract operations staff necessary to have efficient meetings and coordination. The OWNER's Project Manager and Plant Manager will coordinate with City's staff to ensure optimal participation at meetings and in site activities.
11. The OWNER will contract directly with a CMAR contractor and will coordinate with the contractor on their involvement on the project.
12. The OWNER will provide access to facilities and will assist the CONSULTANT and CMAR with any necessary entry permits, scheduling, notification, and other requirements to gain access to perform the work.

EXHIBIT B
FEE SCHEDULE

EXHIBIT B

Chandler Pecos SCADA Upgrades

CM Services - Amendment 4 for GMP2

Phase 4: Implementation and Commissioning

LEVEL OF EFFORT

No.	Task Description	Teresa Smith-Dehesus	Jay Hardison	Hong Zhang	Josh Blume	Navneet Jat	Naitik Shah	Ryan/Talitha	Various		Total	Subtotal	Expenses	TOTAL
		Principal/ Project Manager	SCADA Design Manager	Technical Advisor (Modicon)	Cybersecurity / Operational Technology	CM	SCADA/ I&C Designer	Staff I&C Engineer	Technician / CAD	Office Support	Labor Hours	Labor		
	Bill Rate	\$ 280.00	\$ 270.00	\$ 205.00	\$ 250.00	\$ 125.00	\$ 150.00	\$ 125.00	\$ 110.00	\$ 100.00				
4.1	PRE-CONSTRUCTION ASSISTANCE													
4.1.1	Preconstruction Assistance (based upon 1 meeting)	4	4	4	4	4		4		0	24	\$5,020	\$1,000	\$6,020
	Subtotal	4	4	4	4	4	0	4	0	0	24	\$5,020	\$1,000	\$6,020
4.2	CONSTRUCTION MANAGEMENT													
4.2.1	Weekly Construction Meetings (weekly for 78 weeks)	39	78		0	156		0			273	\$51,480	\$0	\$51,480
4.2.2	CPM Schedule (18 months)	17	26			44					87	\$17,280		\$17,280
4.2.3	Requests for Information (RFI's) (Based upon 30 RFIs)	15	30	60	15	60				30	210	\$38,850		\$38,850
4.2.4	Shop Drawing Submittals (based upon 20 reviews)	10	20	40		40				20	130	\$23,400		\$23,400
4.2.5	Requests for Proposal (RFP) (Based upon 10)	5	10	20	20	40				40	135	\$22,200		\$22,200
4.2.6	Field Directives (FD's) (based upon 9)	9	9	18	18	72				18	144	\$23,940		\$23,940
4.2.7	Contractor Payment Applications (18 months)	36	72			216				216	540	\$78,120		\$78,120
	Contract Administration (Jacobs invoicing and mgmt meetings)	108	90			144					342	\$72,540		\$72,540
	Subtotal	239	335	138	53	772	0	0	0	324	1861	\$327,810	\$0	\$327,810
4.3	CONSTRUCTION INSPECTION													
4.3.1	Inspection Services (based upon 78 weeks)	78	78		78	156	624	624			1638	\$253,500	\$6,000	\$259,500
4.3.2	N/A										0	\$0		\$0
4.3.3	Project Closeout	40	40		8	40	8	8			144	\$31,200		\$31,200
	Subtotal	118	118	0	86	196	632	632	0	0	1782	\$284,700	\$6,000	\$290,700
4.4	MATERIALS TESTING													
4.4.1	Quality Control (QC) Test Program	8	8		40	80					136	\$24,400		\$24,400
4.4.2	Quality Assurance (QA) Test Program (N/A)										0	\$0		\$0
	Subtotal	8	8	0	40	80	0	0	0	0	136	\$24,400	\$0	\$24,400
4.5	RECORD DRAWINGS													
4.5.1	Record Drawings with Asset Retagging (800 sheets)	80	80			400			1200		1760	\$226,000		\$226,000
4.5.1	MCESD AOC	20				40					60	\$10,600		\$10,600
	Subtotal	100	80	0	0	440	0	0	1200	0	1820	\$236,600	\$0	\$236,600
4.6	MOPO DEVELOPMENT (assume 20 hours for 78 weeks)													
4.6.1	MOPO Coordination	78	156			234		234			702	\$122,460	\$6,000	\$128,460
4.6.2	MOPO Submittal Review and Oversight	78	156			234		234			702	\$122,460		\$122,460
	Subtotal	156	312	0	0	468	0	468	0	0	1404	\$244,920	\$6,000	\$250,920
	OWNERS ALLOWANCES													
	Design Coordination Allowance													\$25,000
	CMAR Additional Work Allowance													\$25,000
	Owner's Contingency Allowance													\$100,000
	Subtotal	0	0	0	0	0	0	0	0	0				\$150,000
	TOTAL	625	857	142	183	1960	632	1104	1200	324	7,027	\$1,123,450	\$13,000	\$1,286,450