



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP13-161**

1. Agenda Item Number:

31

2. Council Meeting Date:
April 25, 2013

TO: MAYOR & COUNCIL

3. Date Prepared: April 11, 2013

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: West Chandler/Santan Freeway Wastewater Forcemain Construction Management Services

6. RECOMMENDATION: Staff recommends Council approve Contract Amendment No. 1 to Aztec Engineering Group, Inc., for the West Chandler/Santan Freeway Wastewater Forcemain, Project No. WW1012-201, in an amount not to exceed \$818,975 for a revised total contract amount not to exceed \$2,183,089.

7. BACKGROUND/DISCUSSION: This amendment is for construction management services for the West Chandler/Santan Freeway Wastewater Forcemain project. The construction management services consultant would be responsible for monitoring construction activities to ensure the project's completion according to the construction documents. Some of the major activities this project includes are special inspections for pipe and soils, instrumentation controls integration, oversight of contractor operations, inspection of construction work, coordination of traffic control, review of shop drawings, and coordination of construction activities with the Arizona Department of Transportation (ADOT).

The Kyrene Lift Station connects to a 24-inch forcemain crossing under the Santan 202 Freeway at Kyrene Road. It feeds a gravity sewer line flowing to the Lone Butte Wastewater Treatment Plant (WWTP) located on Gila River Indian Community land. The 2008 Wastewater Master Plan recommended installing a forcemain and pumping system to pump wastewater from west Chandler to the Ocotillo Water Reclamation Facility. This pumping alternative adds flexibility to divert wastewater flows back to City treatment facilities for reuse and recharge. This pumping system will also be required when the Lone Butte WWTP lease expires.

The forcemain will be installed in an existing utility corridor reserved for the City of Chandler in ADOT's right-of-way along the south side of the Santan 202 Freeway from Kyrene Road east to the Santan 202/Price 101 interchange. This project also includes new pumps and piping at the existing wastewater lift station located at the Santan 202 Freeway and Kyrene Road and a new junction structure to the existing 66-inch sewer line located near the Santan 202/Price 101 interchange. Construction activity was bid and the award will be brought forward as a separate item on this agenda.

8. EVALUATION: On September 8, 2011, Council approved a design contract to Aztec Engineering Group, Inc., for the West Chandler/Santan Freeway Wastewater Forcemain project. The consultant was selected in accordance with State Law for design services. Staff reviewed the scope of work, billing rates, and total fee for this project, compared them to historical costs, and determined they are reasonable.

9. FINANCIAL IMPLICATIONS:

Cost:	\$ 1,364,114	Original Contract
	\$ 818,975 60%	Amendment No. 1
	\$ 2,183,089	

Savings: N/A
Long Term Costs: N/A

Fund Source:

<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
615.3910.6810.6WW012	Wastewater Operating	Wastewater Projects Supporting Intel Expansion	Yes	\$818,975

10. PROPOSED MOTION: Move Council approve Contract Amendment No. 1 to Aztec Engineering Group, Inc., for the West Chandler/Santan Freeway Wastewater Forcemain, Project No. WW1012-201, in an amount not to exceed \$818,975 for a revised total contract amount not to exceed \$2,183,089, and authorize the Mayor to sign the contract documents.

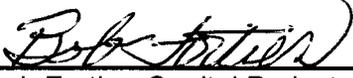
ATTACHMENTS: Location Map, Contract Amendment

APPROVALS

11. Requesting Department


John Knudson, Utilities Engineering Manager

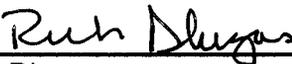
12. Transportation & Development


Bob Fortier, Capital Projects Manager

13. Department Head

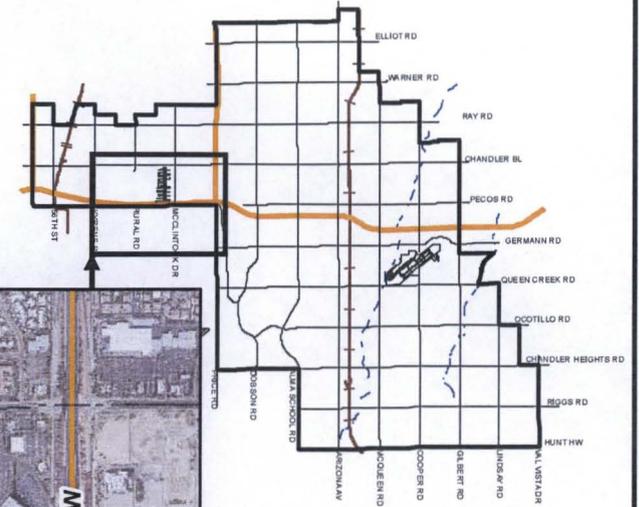

Dave Siegel, Municipal Utilities Director

14. City Manager


Rich Dlugas



WEST CHANDLER/SANTAN FREEWAY WASTEWATER FORCEMAIN PROJECT NO. WW1012-201



MEMO NO. CP13-161

■■■ FORCEMAIN





Chandler Arizona

AMENDMENT NUMBER 1

Project Name: West Chandler / Santan Freeway Wastewater Forcemain
Project No.: WW1012-201

This Amendment No. 1 to that certain Agreement between the City of Chandler (CITY) and Aztec Engineering Arizona, LLC dated September 28, 2011 for West Chandler/Santan Freeway Wastewater Forcemain is entered into this ___ day of ___, 2013.

WHEREAS the parties have determined that it is necessary and desirable for DESIGN CONSULTANT to perform additional services for CITY;

NOW THEREFORE, the parties agree as follows:

- 1. Section 3, of the above referenced Agreement, is hereby; amended by adding additional scope of work described in more detail in Exhibit A attached hereto and incorporated herein by reference.
2. Section 4, of the above referenced Agreement, is hereby; amended by increasing the total contract price by an amount not to exceed the sum of Eight Hundred Eighteen Thousand Nine Hundred Seventy Five Dollars, (\$818,975) for a total Contract Price not to exceed the sum of Two Million One Hundred Eighty Three Thousand Eighty Nine Dollars (\$2,183,089) of all payable in accordance with Exhibit B, attached hereto and incorporated herein by reference.
3. Section 5, of the above referenced Agreement is hereby amended by increasing the Contract Time by Five Hundred Forty Eight (548) days for a total Contract Time of Nine Hundred Thirteen (913) days from the original Notice to Proceed.
4. All other terms and conditions of the above referenced Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, the parties have hereunto subscribed their names this ___ day of ___, 2013.

CITY OF CHANDLER:

By: _____

MAYOR

Date

DESIGN CONSULTANT:

By: [Signature]

Title: CEO 4-17-13

APPROVED AS TO FORM:

City Attorney by: [Signature]

ATTEST:

City Clerk

ATTEST: (If corporation)

Secretary

WITNESS: (If Individual or Partnership)

SEAL

Amendment No. 1 cont.

Project No. WW1012-201

THESE CHANGES RESULT IN THE FOLLOWING ADJUSTMENTS OF CONTRACT PRICE AND TIME

ORIGINAL CONTRACT AMOUNT	\$ 1,364,114
CURRENT CONTRACT PRICE PRIOR TO THIS AMENDMENT (Including previous amendments)	\$ 1,364,114
NET INCREASE / DECREASE (Resulting from this amendment)	\$ 818,975
REVISED CONTRACT PRICE (Including this amendment)	\$ 2,183,089
AMENDMENT PERCENTAGE (Of original contract price)	<u>60%</u>
CONTRACT TIME PRIOR TO THIS AMENDMENT (Including previous amendments).	September 27, 2012 (Days or Date)
NET INCREASE/DECREASE (Resulting from this amendment)	548 (Days or Date)
REVISED CONTRACT TIME (Including this amendment)	March 31, 2014 (Days or Date)
THIS AMENDMENT No. _____	Does not Require Council Approval: Less than \$30,000* _____
	More than \$30,000 but less than 10% of Contract* _____
THIS AMENDMENT No. <u>1</u>	Requires Council Approval Greater than \$30,000* _____
	Greater than 10% of Contract * X
*Including City Manager approved Amendments	
ORIGINAL CONTRACT COUNCIL DATE: September 8, 2011 ITEM NO.: 17, if applicable	
COUNCIL APPROVAL: _____ ITEM NO.: _____, if applicable	
CITY OF CHANDLER (Date & Name of Owner Dept. verbal approval): <u>John Knudson</u>	

CC: City Clerk User Dept Project Mgr Consultant Project Analyst File

EXHIBIT A SCOPE OF WORK

This scope of work describes Post Design and Construction Management Services to be provided to the City of Chandler (City) for the West Chandler/Santan Freeway Wastewater Force Main project.

DESIGN CONSULTANT is comprised of AZTEC Engineering (AZTEC) along with the following subconsultants: Carollo Engineering (Carollo), RAMM Geotechnical (RAMM) and Jensen Systems (JSI).

The duration of construction is assumed to be 272 calendar days (approximately 9 months) from project start to substantial completion.

PROJECT DESCRIPTION

This project is the construction of 28" and 24" wastewater force main beginning at the Kyrene Lift Station at the northeast corner of Kyrene Road and SR 202 and extending to a new junction structure at the southeast corner of Price Road and SR 202. The Kyrene Lift Station will also be upgraded to accommodate additional waste water flows. Also included in the construction of this project is landscape/irrigation restoration and traffic control. All work is within the ADOT right-of-way.

Tasks under this contract include: Post Design Services, Construction Management Services, Office Services, Field Services and Post Construction Services. Each is discussed further on the following pages.

PROJECT ROLES AND RESPONSIBILITIES

A brief description of each role and responsibilities for each type of service is shown below.

Post Design Services

- **Project Principal:** Provide executive level oversight over policies and operations
- **Project Manager:** Provide assistance and oversight in responses to Shop Drawings, Request for Information (RFIs) and other inquiries from the field.
- **Project Engineer:** Provide assistance to the Project Manager in the record keeping of responses to inquiries from the field.

Construction Management Services

- **Construction Manager:** Manage the project for the City with contractor oversight, budget/schedule controls, pay applications, coordination with local agencies and utilities, manage project personnel and certify the final acceptance of the completed work.
- **Resident Engineer:** Oversee contractor operations, manage the Inspectors, monitor traffic control, process RFIs and assist the Construction Manager with schedule/budget controls.
- **Inspectors/Designers:** Oversee contractor operations and inspections for respective discipline related construction tasks (ie: pipeline, lift stations, electrical).
- **Administrative Staff:** Perform all office duties including project controls, record keeping, logs and assuring contractor payments for completed work as approved by the inspectors.

CONSTRUCTION MANAGEMENT – TASK 100

Task 101: General Coordination/Team Oversight

Services include directing the activities of the project team members, regularly monitoring the progress of the work and the budget, communicating with the City regularly through email, telephone, meetings, site visit reports, and monitoring and updating the project schedule.

The DESIGN CONSULTANT shall establish a partnering program with all key stakeholders (City, ADOT, Utilities and other local agencies). A partnering session will be held at the start of construction.

The DESIGN CONSULTANT shall continually coordinate with the City, Contractor, ADOT and local agencies throughout the duration of the project.

Task 102: Construction Meetings/Documentation

The DESIGN CONSULTANT shall attend and lead a construction project kick-off meeting. The construction project kick-off meeting shall include discussion of the project schedule, submittal procedures, processing payment applications, critical work sequencing and safety plans. The DESIGN CONSULTANT will document all discussion items via Meeting Notes.

The DESIGN CONSULTANT will also attend and lead weekly construction meetings.

OFFICE SERVICES – TASK 200

Task 201: Project Controls

Project Controls include monitoring the construction budget, processing payment applications and managing the construction schedule

The DESIGN CONSULTANT shall monitor the construction budget using the schedule and budget milestones as set up in the project controls system. Potential cost overruns will be tracked early in the project and brought to the immediate attention of the project team to quickly resolve any discrepancy.

The DESIGN CONSULTANT shall conduct monthly schedule reviews to ensure the project is on schedule.

The DESIGN CONSULTANT shall authorize payment to the contractor based on inspection reports of completed satisfactory work. A project record keeping system will be established to track payments and how it relates to the overall project schedule and budget.

Task 202: Administrative Duties

The DESIGN CONSULTANT shall establish a record keeping system (Post Design and Construction Management Log) to manage all project activities including incoming and outgoing correspondence, RFI submittals, contractor requests, claim notices, permit submittals and local agency coordination. Both the Resident Engineer and Project Engineer will be responsible for the maintenance of this document for use by other members of the project team.

Administrative Duties also include incoming and outgoing correspondence, ordering supplies and answering phones.

Task 203: Requests for Information (RFIs)

The Construction Manager shall coordinate the RFI request from the Contractor to the Design Project Manager. The Design Project Manager shall review and respond in writing to the RFIs. Submittals will be tracked in the Post Design/Construction Management Log.

Task 204: Shop Drawings

The Construction Manager shall coordinate Shop Drawing submittals from the Contractor to the Design Project Manager. The Design Project Manager shall review shop drawings and other submittal for conformance to the design intent and concept of the project and for compliance with the Contract Documents. (Note: Specific details relative to the submittal/review process shall be in accordance with the provision of the Technical Specifications and Contract Documents.) Such reviews will not extend to means, methods, sequencing of construction or safety precautions/programs

Task 205: Operations and Maintenance Manuals

The DESIGN CONSULTANT will coordinate the review and approval of all Operations and Maintenance Manuals for the City's use upon completion of the project.

Task 206: Change Order/Plan Sheet Revisions

The Construction Manager will review all requests for additional work for the Contractor for relevance and application to the project plans and specifications. In the case of increased cost to the project, the Construction Manager will consult the City for approval prior to executing the Change Order. The Design Project Manager will coordinate any revisions necessary with the design team and issue to the field. All Change Orders/Revisions will be tracked in the Post Design/Construction Management Log.

FIELD SERVICES – TASK 300

Task 301: General Field Services

The DESIGN CONSULTANT shall provide a full-time onsite Resident Engineer to manage inspection services for the duration of the project.

The DESIGN CONSULTANT shall advise and/or consult with the City's Project Manager when it is believed that work should be corrected, rejected, uncovered for observation, or requires special testing, inspection, or approval.

Task 302: Wastewater Force Main Inspection and Testing

The DESIGN CONSULTANT shall assign a full time Assistant Resident Engineer and/or Inspector to monitor the construction of the Force Main. Work under this task includes assurance that all testing requirements are met prior to installation/operation of the pipe, coordinate directly with the Geotechnical Engineer for the required testing, review depth and grade control of the pipe, ensure the existing casings on the project are suitable for use and inspect all joints.

Task 303: Structural/Shoring Inspection and Testing

The DESIGN CONSULTANT shall assign Assistant Resident Engineers and/or Inspectors as needed to monitor the construction of Structures associated with this project and the required shoring at eight locations listed in the project plans.

Task 304: Removals/Landscaping/Erosion Inspection and Coordination

The DESIGN CONSULTANT shall coordinate directly with the contractor and subcontractors to implement the interim and final landscape plan. All plant material shall be inventoried to ensure replacement plants are in conformance. Irrigation facilities shall be inspected.

The DESIGN CONSULTANT shall monitor all removals based on the project plans. Efforts shall be made to minimize removals in areas sensitive to travel and public.

The DESIGN CONSULTANT shall inspect and monitor all Erosion Control necessary to meet the Project Specifications.

Task 305: Traffic Control/Signaling/Signals Inspection

The DESIGN CONSULTANT shall conduct meetings, as needed, with the contractor concerning the placement and maintenance of Traffic Control Devices. The Traffic Control Devices will be inspected to ensure placement per project plans and/or adjustments to meet existing conditions.

Task 306: Lift Station Inspection and Testing

The DESIGN CONSULTANT shall assign a full time Assistant Resident Engineer and/or Inspector for the duration of the Kyrene Lift Station construction to ensure work is progressing in accordance with the construction documents. This includes Bypass Pumping operations and electrical inspections at the Kyrene Lift Station.

Task 307: Junction Structure Inspection and Testing

The DESIGN CONSULTANT shall assign a full time Assistant Resident Engineer and/or Inspector for the duration of the Junction Structure construction to ensure work is progressing in accordance with the construction documents. This includes Bypass Pumping operations and electrical inspections.

Task 308: Materials Testing

The DESIGN CONSULTANT shall assign a Geotechnical Engineer to provide the necessary materials testing required for the project. This includes Trench Backfill, Structural Backfill, Concrete Testing, Masonry Testing and lab work and issuing of reports.

Task 309: Programming and Instrumentation

The DESIGN CONSULTANT shall assign a Programmer to provide programming, instrumentation, communication and inspection for the SCADA system to be installed with this project.

POST CONSTRUCTION SERVICES – TASK 400

Task 401: MCESD Approval of Construction (AOC)

The DESIGN CONSULTANT shall assist the City in obtaining the Approval of Construction (AOC) by preparing the AOC application, Record Drawings, Operations, and Maintenance (O&M) Manuals, if required, and submitting the above to the Maricopa County Environmental Services (MCESD).

Task 402: Certificate of Substantial Completion

The DESIGN CONSULTANT will participate in the development of the Certificate of Substantial Completion. This certificate will be accompanied by a list of observed items (punch list) requiring completion or correction in accordance with the Construction Documents.

After the Contractor has completed the work of the punch list, The DESIGN CONSULTANT shall accompany the City in the conduct of a final inspection in the company of the Contractor. When all work items have been completed in accordance with the Construction Documents, the DESIGN CONSULTANT approve by signature issuance of the Certificate of Final Completion.

Task 403: Record Drawings

The DESIGN CONSULTANT shall prepare Record Drawings for the entire project based on "As-Built" information prepared by the Contractor, and from field observations of the Resident Engineers, and deliver those documents (hard copy on Mylar; electronic .pdf, .dwg, and .dwf on CD) to the City's Project Manager.

**EXHIBIT B
FEE SCHEDULE**

Classification	Estimated Person-Hours	Average Hourly Billing Rate	Labor Costs
Project Principal	20	\$ 195.00	\$ 3,900
Construction Manager/Project Manager	110	\$ 180.00	\$ 19,800
Resident Engineer	1,070	\$ 160.00	\$ 171,200
Project Engineer/Inspector	1,248	\$ 140.00	\$ 174,720
Engineer/Designer	130	\$ 115.00	\$ 14,950
Drafter/Technician	80	\$ 95.00	\$ 7,600
Sec/Clerical	240	\$ 60.00	\$ 14,400
Project Surveyor	0	\$ 120.00	-
2-Person Crew	0	\$ 181.00	-
3-Person Crew	0	\$ 210.00	-
Totals	2,898		\$ 406,570
		Total Estimated Labor	\$ 406,570
Estimated Direct Expenses			
(Listed by Item at Estimated Actual Cost -- No Mark-up)			
Outside Reproduction			\$ -
Outside Messenger			\$ 2,025
Mileage			\$ 4,365
		Total Estimated Expenses	\$ 6,390
Estimated Outside Services			
(Listed by Firm or Name at Estimated Cost -- No Mark-up)			
	Method of Compensation CPNTE, LS, etc.		Cost
Firm			
Carollo	LS		\$ 356,215
RAMM	LS		\$ 30,000
JSI	LS		\$ 19,800
		Total Estimated Outside Services	\$ 406,015
TOTAL BASIC SERVICES COST PLUS NOT TO EXCEED AMOUNT			\$ 818,975