



Chandler - Arizona
Where Values Make The Difference

**PURCHASING ITEM
COUNCIL AGENDA
Memo No. CA09-021**

1. Agenda Item Number:
37
2. Council Meeting Date:
July 31, 2008

TO: MAYOR & COUNCIL
THROUGH: CITY MANAGER

3. Date Prepared: July 14, 2008
4. Requesting Department: Municipal Utilities

5. SUBJECT: Award a project agreement for Reclaimed Water Distribution Lines Infill Project, Project No. WW0509-202, to Engineering and Environmental Consultants (EEC) in an amount not to exceed \$66,530.

6. RECOMMENDATION: Staff recommends Council award a project agreement for Reclaimed Water Distribution Lines Infill Project, Project No. WW0509-202, to EEC in an amount not to exceed \$66,530.

7. BACKGROUND/DISCUSSION: The City's Reclaimed Water Master Plan identifies a need to use effluent from the City's wastewater treatment facilities for irrigation of turf and landscaped areas constructed by developers. In 2005, a contract with Engineering and Environmental Consultants was approved by Council to provide for the design of 12-inch diameter reclaimed water distribution mains in various locations throughout the City to complete loops in the existing distribution system.

Staff identified additional segments to be added, modified, or deleted to accommodate work done by private development in the right-of-way and completed Capital Improvement Projects. This new contract with EEC will modify the existing design as necessary to accommodate the need for new twelve-inch (12") diameter pipelines in the reclaimed water system.

8. EVALUATION PROCESS: The consultant selection process was conducted in accordance with established City policies and procedures. On May 22, 2007, staff received statements of qualifications from twenty-two firms to provide water and wastewater facility design services. The selection committee reviewed the qualifications and selected five firms for recommendation of contract award. The selection committee consisted of the following members:

- John Knudson, Senior Engineer, Municipal Utilities
- Tim Krawczyk, Engineer Assistant, Contract Administration
- Doug Toy, Senior Engineer, Municipal Utilities
- Ray Dubois, Water Distribution Superintendent, Municipal Utilities
- John Pinkston, Wastewater Facilities Superintendent, Municipal Utilities
- Dennis Mittlestedt, Resident

Council approved a contract award to Engineering and Environmental Consultants on September 6, 2007.

9. FINANCIAL IMPLICATIONS:

Cost: \$66,530
Savings: N/A
Long Term Costs: N/A
Fund Source:

Acct. No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
606.3910.0000.6817.9WW192	Reclaimed Water	Effluent Reuse Transmission Mains	FY 08/09	\$66,530

10. PROPOSED MOTION: Move that Council award a project agreement for Reclaimed Water Distribution Lines Infill Project, Project No. WW0509-202, to EEC in an amount not to exceed \$66,530, and authorize the Mayor to sign the contract documents.

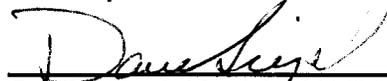
ATTACHMENTS: Location Map, Project Agreement

APPROVALS

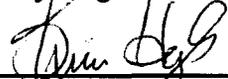
11. Requesting Department


Robert Mulvey, Assistant Municipal Utilities Director

13. Department Head


Dave Siegel, Municipal Utilities Director

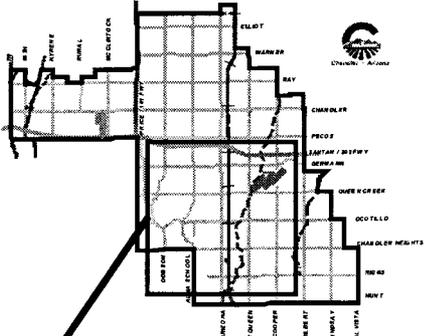
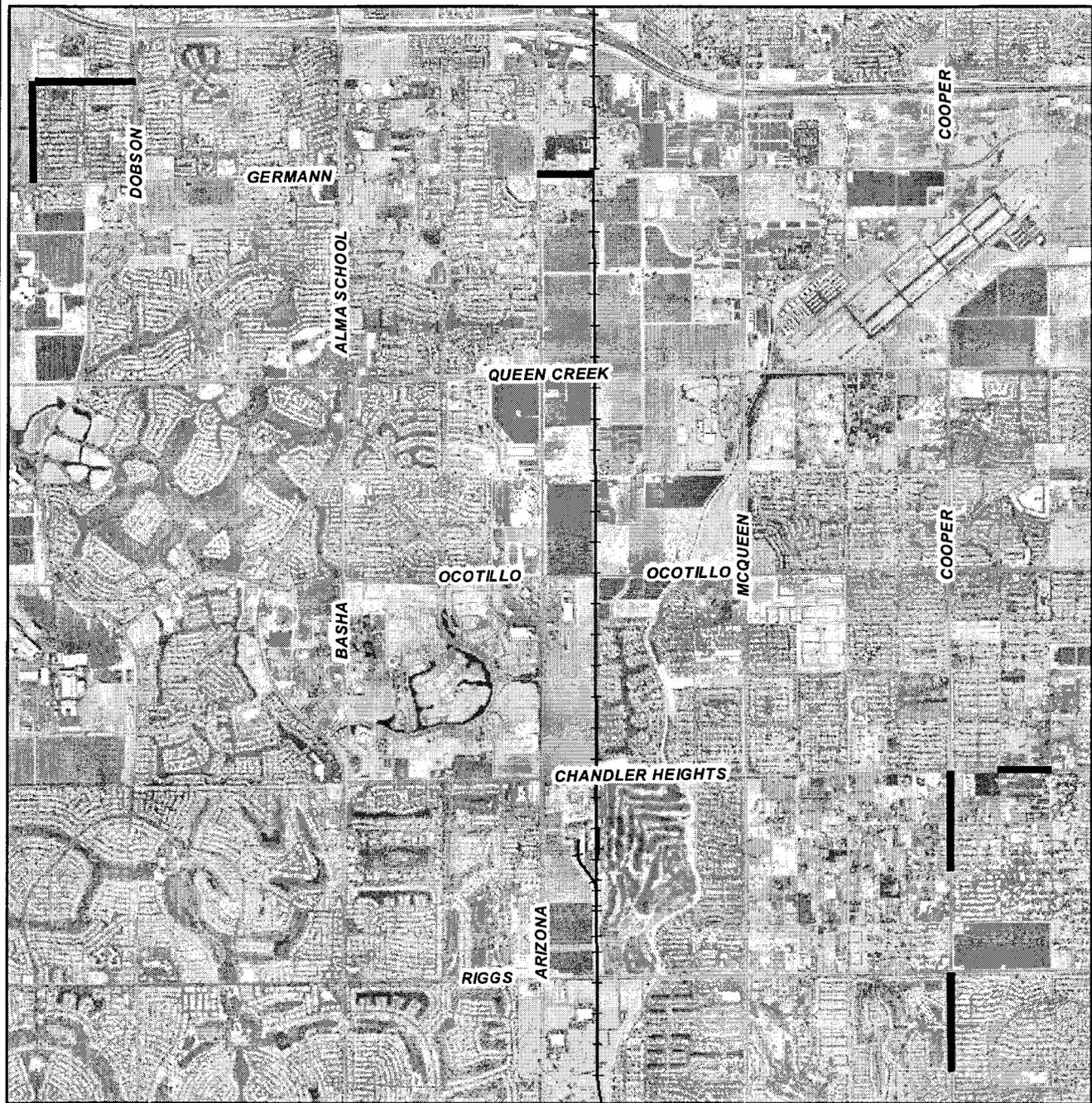
12. City Engineer


Sheina Hughes, Assistant Public Works Director/City Engineer

14. City Manager


W. Mark Pentz

**RECLAIMED WATER
DISTRIBUTION LINES INFILL
PROJECT NO. WW0509-202**



MEMO NO. CA09-021

■ LIMITS OF INFILL



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN0719-101**

AGREEMENT NO: WW0509-202

This AGREEMENT is made this _____ day of _____, 2008, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Engineering and Environmental Consultants, Inc. an Arizona Corporation (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN0719-101.

CITY and Engineering and Environmental Consultants, Inc., in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1. DESCRIPTION OF WORK

This project is Reclaimed Water Distribution Lines – Infill Project, Project Number WW0509-202. The scope of work consists of modifying existing engineering plans to add new sections of reclaimed water distribution pipes, delete unneeded sections from the plans, and alter existing plans to the extent required to meet the system requirements of the City of Chandler's reclaimed infrastructure, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

The Annual Consultant shall not accept any change of scope, or change in contract provisions, unless issued in writing, as a contract amendment and signed by the Contract Administrator.

ARTICLE 2. CONTRACT PRICE

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed Sixty Six Thousand Five Hundred Thirty Dollars (\$66,530) determined and payable as set forth in Annual Contract EN0719-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3. CONTRACT TIME

The contract time is ninety days and Annual Consultant agrees to complete all work within Ninety (90) days of the date CITY issues a Notice to Proceed.

ARTICLE 4. GENERAL

This Project Agreement is entered into pursuant to Annual Contract No. EN0719-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day and year first written above.

This Agreement will be effective on this _____ day of _____, 2008.

CITY OF CHANDLER

FOR THE ANNUAL:

DEPARTMENT HEAD/DESIGNEE DATE:

By: *Glenn Panaro*
Title: VICE PRESIDENT

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE
Mr. Glenn Panaro
EEC
7878 N. 18th St., Ste. 140
Phoenix, AZ 85020

APPROVED AS TO FORM:

Phone: 602-248-7702
Fax: 602-248-7851

City Attorney By: *[Signature]*
ATTEST:

City Clerk

**EXHIBIT A
SCOPE OF WORK**

ANNUAL CONSULTANT shall perform the following modifications to the original plan set developed under project number WW0509-201:

- Project #1 Gilbert Road: Beginning in the Queen Creek Road intersection extending ½ mile north of East Queen Creek Road. The project consists of extending a reclaimed water line from an existing 36" transmission main in the Queen Creek Road ROW to two existing developments: Paseo Trails Subdivision and Peterson Farms. This project will be removed from the plan set.
- Project #2 East Chandler Heights Road: Beginning ¼ mile east of Cooper Road extending an additional ¼ mile east. The project consists of connecting to the reclaimed water installed during development of the Countryside Estates, Units 3 and then extending a reclaimed water line to the piping installed as part of the Circle G @ Riggs Homestead development. This project will remain as-is in the plan set.
- Project #3 Cooper Road I: Beginning at the Chandler Heights Road intersection extending ½ mile south to the intersection at Cloud Road. This project will interconnect the Reclaimed water infrastructure installed with the Creekwood Ranch development to existing reclaimed water infrastructure at Cloud Road. This project will remain as-is in the plan set.
- Project #4 Cooper Road II: This project will extend reclaimed water from the Riggs Road intersection approximately ½ mile south to existing reclaimed infrastructure. This project will remain as-is in the plan set.
- Project #5 Ells Road: This project will design a reclaim pipeline beginning at the Willis Road intersection and extending approximately ½ mile south to Germann Road. This project will remain in the plan set with modifications at the connection point; as-builts to be provided by City of Chandler.
- Project #6 Willis Road: Beginning at the Vintage Villas subdivision on Willis Road and extending approximately ½ mile to the east to Dobson Road. The project will include a 12" diameter main that will extend from the Vintage Villas subdivision to a connection located in Dobson Road.
- Project #7 Germann Road: Beginning at the intersection of Germann Road and Arizona Avenue and extend east on Germann Road and extending approximately 1,400 feet to the Union Pacific Railroad. The project will include a 12" diameter main.

The projects consist of designing new twelve-inch (12") diameter pipelines to interconnect the existing reclaimed water system and to provide stub outs at locations of future reclaimed water demands. The addition of Project number 6 and number 7 will consist of an additional 4,100 feet of pipeline to the original plan set.

The Planned Engineering services will include the following elements that apply to the project and will be the basis of the fee amount.

TASK 1. FIELD INVESTIGATION FOR DETAILED DESIGN

The ANNUAL CONSULTANT shall gather all data pertinent to this project in order to identify reasonable constraints that may affect design. Data that may affect construction bids will be recorded on the drawings. These services will include as a minimum the following:

a. Surveying. The ANNUAL CONSULTANT shall complete a design survey, with sufficient detail, to allow the project to be designed. All existing topographic data, lying within the ROW shall be located. In addition, edges of pavement and centerline of pavement shall be located at a minimum of every 50 feet plus at any grade breaks. Manhole and exposed pipe (sewer, storm drain, and irrigation) inverts shall be measured and converted to an elevation.

The same requirements apply to side streets. The side streets shall be detailed 150 feet, each way from the project alignment street centerline. Existing monuments shall be referenced in a field book. Sufficient monuments at section corners, quarter corners and side streets will be located to determine the alignments of the project alignment street and any side streets. If monumentation has been destroyed, it is the responsibility of the Surveyor to reestablish the appropriate section line. All work shall be completed under the direction of an Arizona Registered Land Surveyor. All work shall be kept in a bound field book used only for this project. The Arizona Boundary Survey Minimum Standards, as published by the State Board of Technical Registration, shall be followed for this Survey, including, if necessary, the preparation and recording of a Record of Survey.

Basis of Bearings -- The survey shall use the City of Chandler coordinate information as a Basis of Bearings. The Basis of Bearings used shall be referenced on the Results of Survey.

Basis of Elevation – The survey shall use the City of Chandler datum and benchmarks as a Basis of Elevation. The Basis of Elevations including a description of benchmarks used, shall be referenced on the Results of Survey.

An ASCII file shall be prepared along with a list describing all descriptions used.

b. Utility Research and Coordination. The ANNUAL CONSULTANT shall contact all utilities identified in the City of Chandler Technical Design Manual #2, Section 4.0, Requirement 10. The ANNUAL CONSULTANT shall identify location, size, availability, type and accessibility of all existing utilities and proposed utilities on or proximate to the project site. Future plans for all major utilities, which may significantly affect this project, will be considered in the design. All utility comments and locations shall be shown on the thirty percent (30%) completion submittal.

TASK 2. DETAILED DESIGN

a. Construction Plans with Details and Specifications. The ANNUAL CONSULTANT shall perform all services necessary to provide the City with reproducible sets of comprehensive, biddable plans with details and specifications. The plans with details, specifications, and opinion of cost for the reclaimed distribution water main, will be based on ductile iron pipe (DIP).

The City will provide all hydraulic information required to perform the design. The term "specification" as used herein will include special specifications prepared by the ANNUAL CONSULTANT, to supplement the City's Standard Specifications and Details. The documents will comply with all applicable standards required by the City. The drawings will be prepared at a scale of one inch equals twenty feet (1"=20') horizontally on twenty-four inch by thirty-six inch (24"x36") bond or blueprints, supplied by the ANNUAL CONSULTANT and will consist of a line drawing with culture and a profile section at a vertical scale of one inch equals two feet (1"=2') below the plan view. For the 100% submittal, the ANNUAL CONSULTANT shall submit plans on transparent mylar and CAD files of plans compatible with AutoCAD rev. 2000 and disks of special specifications in addition to required reproducible plan sheets and documents. In addition to previously listed requirements, the drawings will show the proposed pipeline alignment and size, subdivision names, block numbers, lot numbers, property lines, water meters, existing utilities, physical obstructions, street lighting, traffic control devices, and all other existing and proposed improvements within the easements and rights-of-way. Furthermore, the drawings will show future paving grades and drainage structures, which the pipeline must stay below. The ANNUAL CONSULTANT shall contact the appropriate agency for the criteria for the paving grade projections and proposed improvements within the project area. The design must include provisions for any air and vacuum release valves and in-line valves. Four (4) half sized plans, three (3) full sized plans, and seven (7) copies of the specifications, cost estimates, and bid tabulations will be provided to the City with each formal submittal for review and approval in accordance with the project schedule. City review of each submittal will be limited to twenty (20) working days. The completed plans and specifications will include any comments required by the City or any other approving agency; however, these comments will be evaluated by the ANNUAL CONSULTANT with respect to both accepted engineering practices and accepted construction practices. The ANNUAL CONSULTANT shall not finalize plans and specifications without direction from the City.

The thirty percent (30%) submittal (for Project #6 and #7 only) will include the survey data, utility as-built information and a proposed pipeline alignment. Design drawings will be presented in plan view only.

The ninety percent (90%) submittal will include existing ground profile over the pipe centerline and will show the pipeline alignment in plan and profile view. Utilities will be shown based on as-built information and potholing data. All preliminary details will be provided with this submittal. Any required easement areas will be redlined on the plans. The invert elevations of existing sewers, storm sewers, etc. will be called out on the plan view of all sheets for all pipe sizes. In addition to plans, the ANNUAL CONSULTANT shall provide a draft copy of the technical specifications. This submittal shall be considered a "pre-final" submittal. The plans shall be complete with the exception of final comments from the City.

The one-hundred percent (100%) submittal will address the comments from the 90% submittal. The plans will be stamped and sealed and submitted to Maricopa County to obtain the Approval to Construct permit. The ANNUAL CONSULTANT will fill out the necessary permit forms and fees for the permit will be excluded.

b. Cost Estimates. The ANNUAL CONSULTANT shall include with each formal phase submittal a cost estimate appropriate for that stage of completion in a format acceptable to the City. An "Opinion of Probable Construction Cost" will be submitted with the completed construction plans, detail sheets and specifications and will be revised as a result of changes required by any other approving agency's comments. The cost estimates for

the project provided for herein will be prepared by the ANNUAL CONSULTANT through exercise of experience and judgment in applying presently available cost data.

c. Agency Approvals. The plans and specifications will be considered completed (100 percent) when approved by the City. The City shall coordinate plan approval with other City departments.

d. Engineering Services. The ANNUAL CONSULTANT shall perform engineering calculations and design as required for a complete and reliable pipeline installation for the twelve-inch (12") reclaimed distribution main consistent with the City and industry standards. The pipeline alignment will be consistent with the installation requirements of the pipe to be used, and will minimize the use of special fittings, bends, thrust restraint, steel pipe casings, etc. The ANNUAL CONSULTANT shall perform other design calculations as necessary for a complete design. If boring or tunneling is required under major arterial streets, or other obstacles, the ANNUAL CONSULTANT shall perform design and calculations, and write specifications as required, including any agency requirements. A copy of the design calculations will be available for review by the City.

TASK 3. PRE-BID SERVICES

a. Pre-bid Meeting. The ANNUAL CONSULTANT shall attend the pre-bid meeting and answer technical questions during the meeting related to the bid package. The City will answer all questions related to contract standard terms and conditions.

b. Answering Contractors Requests for Information (RFI). The ANNUAL CONSULTANT shall assist the City during the pre-bid activities of this contract, which will include but not be limited to evaluating "or-equal" submittals, and contractor requests for changes, assisting the City in responding to questions about the contract and attending the pre-bid meeting. It is anticipated that three (3) "or-equal" reviews and six (6) contractor's requests for changes will be required.

TASK 4. SPECIAL SERVICES

a. Potholing. The ANNUAL CONSULTANT shall perform utility potholing via vacuum extraction for up to fifteen (15) potential utility conflicts to confirm utility as-built plans. The potholing services shall be conducted after the City reviews the thirty percent (30%) submittal. This will allow the ANNUAL CONSULTANT to make minor alignment changes to avoid unexpected utility depths or utilities not constructed per as-built drawings.

b. Geotechnical report. The ANNUAL CONSULTANT shall perform a geotechnical evaluation for the proposed reclaimed water main. The geotechnical report will contain the results of the field and laboratory analyses, with presentation of the engineering parameters for design of the improvements and recommendations for construction.

TASK 5. POST DESIGN SERVICES

The ANNUAL CONSULTANT shall revise/update the approved plan set for the construction as-builts. Inspection services during construction are excluded from this scope of work. ANNUAL CONSULTANT shall submit as-builts and supporting documents to Maricopa County to obtain the Approval of Construction permit.

**EXHIBIT B
FEE SCHEDULE**

Task No.	Phase Description	Performed By	No. of Hours	Actual Hourly Rate	Item Cost
1.0	Field Investigation				
1.1	Surveying	Project Manager IV	0	155.00	\$0
		Project Engineer V	0	130.00	\$0
		Admin assistant	0	65.00	\$0
		Survey Manager II	15	110.00	\$1,650
		Professional Surveyor	20	130.00	\$2,600
		2-Person Survey Crew	54	125.00	\$6,750
		CAD Operator III	15	75.00	\$1,125
1.2	Utility Research and Coordination	Principal Engineer	0	175.00	\$0
		Project Manager IV	2	155.00	\$310
		Project Engineer V	8	130.00	\$1,040
		Engineering Designer V	12	120.00	\$1,440
		CAD Operator III	25	75.00	\$1,875
		Admin assistant	8	65.00	\$520
		Survey Manager II	0	110.00	\$0
	Task 1 Subtotal				\$17,310
2.0	Detailed Design				
2.1	30% PS&OC	Principal Engineer	0	175.00	\$0
		Project Manager IV	2	155.00	\$310
		Project Engineer V	8	130.00	\$1,040
		Engineering Designer V	20	120.00	\$2,400
		CAD Operator III	30	75.00	\$2,250
		Admin assistant	4	65.00	\$260
2.2	90% PS&OC	Project Manager IV	4	155.00	\$620
		Project Engineer V	20	130.00	\$2,600
		Engineering Designer V	26	120.00	\$3,120
		CAD Operator III	50	75.00	\$3,750
		Admin assistant	4	65.00	\$260
2.3	100% PS&OC	Principal Engineer	2	175.00	\$350
		Project Manager IV	8	155.00	\$1,240
		Project Engineer V	12	130.00	\$1,560
		Engineering Designer V	20	120.00	\$2,400
		CAD Operator III	20	75.00	\$1,500
		Admin assistant	4	65.00	\$260
	Task 2 Subtotal				\$23,920
3.0	Pre-Bid Services				
3.1	Attend Pre Bid Meeting	Project Manager IV	2	155.00	\$310
		Project Engineer V	4	130.00	\$520
3.2	RFI Response	Project Manager IV	2	155.00	\$310
		Project Engineer V	2	130.00	\$260
		Engineering Designer V	4	120.00	\$480
		Admin assistant	2	65.00	\$130

