



**PURCHASING ITEM  
FOR  
COUNCIL AGENDA  
Memo No. CA11-104**

**1. Agenda Item Number:**  
**13**  
**2. Council Meeting Date:**  
February 24, 2011

**TO: MAYOR & COUNCIL**

**3. Date Prepared:** January 28, 2011

**THROUGH: CITY MANAGER**

**4. Requesting Department:** Municipal Utilities

**5. SUBJECT:** Award a Project Agreement to Wilson Engineers for Water Production Facilities Improvements, Project No. WA1005-201, in an amount not to exceed \$179,150.

**6. RECOMMENDATION:** Staff recommends Council award a Project Agreement to Wilson Engineers for Water Production Facilities Improvements, Project No. WA1005-201, in an amount not to exceed \$179,150.

**7. BACKGROUND/DISCUSSION:** This project is a continuation of Municipal Utilities ongoing efforts to modernize and rehabilitate the City's older water production facilities. To further optimize operation of the system, Variable Frequency Drives (VFDs) will be added to booster pumps at water production facilities to decrease power consumption and stabilize system pressures. Other modifications include booster pump and discharge piping modifications, reservoir modifications, and other items as necessary.

**8. EVALUATION:** On September 16, 2010 Council approved an extension to an existing annual contract, EN0712-101, to Wilson Engineers for Annual Permitting, Study, and Design services for Water/Wastewater. 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: \$179,150  
Savings: N/A  
Long Term Costs: N/A

**Fund Source:**

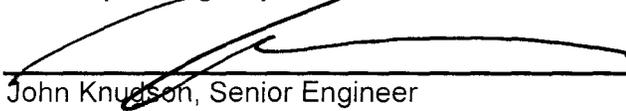
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
601.3820.0000.6718.11W230	Water Bonds	Water Production Facilities	FY 10/11	\$179,150

**10. PROPOSED MOTION:** Move to award a Project Agreement to Wilson Engineers for Water Production Facilities Improvements, Project No. WA1005-201, in an amount not to exceed \$179,150, and authorize the Mayor to sign the contract documents.

**ATTACHMENTS:** Location Map, Project Agreement

**APPROVALS**

**11. Requesting Department**

  
John Knudson, Senior Engineer

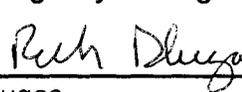
**13. Department Head**

  
Dave Siegel, Municipal Utilities Director

**12. City Engineer**

  
Sheina Hughes, City Engineer

**14. Acting City Manager**

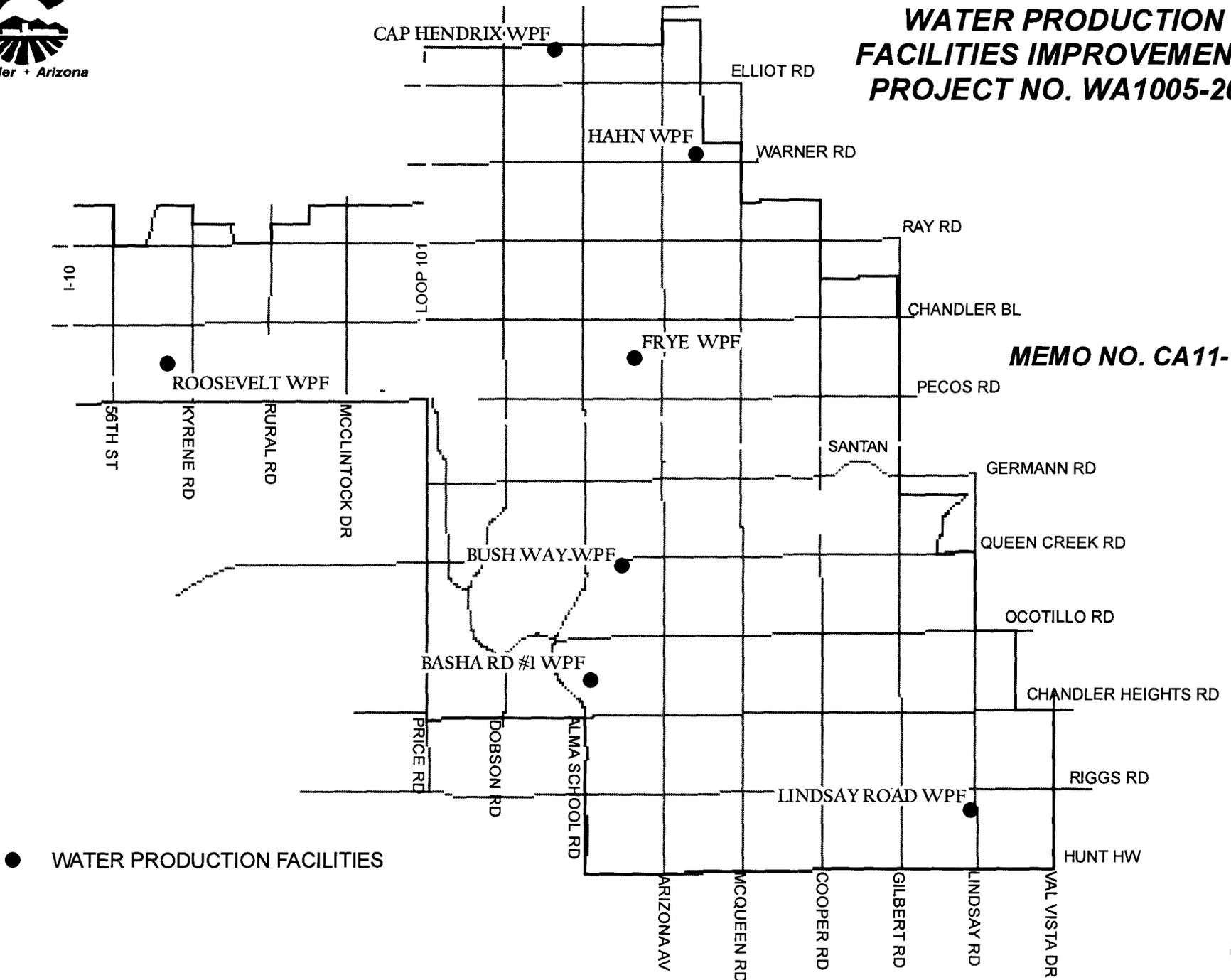
  
Rich Dlugas



Chandler + Arizona

# WATER PRODUCTION FACILITIES IMPROVEMENTS PROJECT NO. WA1005-201

**MEMO NO. CA11-104**



NTS  
ChangGIS

**PROJECT AGREEMENT  
PURSUANT TO ANNUAL CONTRACT NO. EN0712-101**

**AGREEMENT NO: WA1005-201**

This AGREEMENT is made this            day of            2011, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Wilson Engineers, LLC, registered in the state of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN0712-101.

CITY and Wilson Engineers, LLC, in consideration of the mutual covenants herein set forth, agree as follows:

**ARTICLE 1. DESCRIPTION OF WORK**

This project is Water Production Facility Improvements, Project Number WA1005-201. The scope of work consists of coordination with the City staff to identify improvements to several of the Water Production Facilities, documentation of all the items identified to include a budgetary construction cost for each item, and a rank of the items in the order of importance, taking into consideration the need and cost. Work shall also include evaluation of the current operation of Zone 1 and Zone 2 within the City's distribution system and development of recommendations that establish infrastructure improvements necessary to optimize the distribution system operation, 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 One Hundred Seventy Nine Thousand One Hundred Fifty Dollars (\$179,150) determined and payable as set forth in Annual Contract EN0712-101 and Exhibit B attached hereto and made a part hereof by reference.

**ARTICLE 3. CONTRACT TIME**

The contract time is One Hundred Eighty days and Annual Consultant agrees to complete all work within One Hundred Eighty (180) days of the date CITY issues a Notice to Proceed.

**ARTICLE 4. GENERAL**

This Project Agreement is entered into pursuant to Annual Contract No. EN0712-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

**ARTICLE 5. ARIZONA PROCUREMENT LAW**

Compliance with A.R.S. § 41-4401. Pursuant to the provisions of A.R.S. § 41-4401, the Consultant hereby warrants to the City that the Consultant and each of its subcontractors ("Subconsultants") will comply with all Federal Immigration laws and regulations that relate to the immigration status of their employees and the requirement to use E-Verify set forth in A.R.S. §23-214(A) (hereinafter "Consultant Immigration Warranty").

A breach of the Consultant Immigration Warranty (Exhibit C) shall constitute a material breach of this Contract that is subject to penalties up to and including termination of the contract.

The City retains the legal right to inspect the papers of any Consultant or Subconsultant employee who works on this Contract to ensure that the Consultant or Subconsultant is complying with the Contractor Immigration Warranty. The Consultant agrees to assist the City in the conduct of any such inspections.

The City may, at its sole discretion, conduct random verifications of the employment records of the Consultant and any Subconsultant to ensure compliance with Contractors Immigration Warranty. The Consultant agrees to assist the City in performing any such random verifications.

The provisions of this Article must be included in any contract the Consultant enters into with any and all of its subcontractors who provide services under this Contract or any subcontract. "Services" are defined as furnishing labor, time or effort in the State of Arizona by a consultant or subconsultant. Services include construction or maintenance of any structure, building or transportation facility or improvement to real property.

In accordance with A.R.S. §35-393.06, the Consultant hereby certifies that the offeror does not have scrutinized business operations in Iran.

In accordance with A.R.S. §35-391.06, the Consultant hereby certifies that the offeror does not have scrutinized business operations in Sudan.

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 \_\_\_\_\_, 2011.

CITY OF CHANDLER

FOR THE ANNUAL:

\_\_\_\_\_  
MAYOR DATE:

By: *Steve Todd*  
Title: Principal

ADDRESS FOR NOTICE  
City of Chandler  
P.O. Box 4006, Mail Stop 407  
Chandler, AZ 85244-4006  
480-782-3307

ADDRESS FOR NOTICE  
Mr. Steve Todd  
Wilson Engineers  
9833 S. 48<sup>th</sup> St., Ste. 290  
Phoenix, AZ 85044-6658

APPROVED AS TO FORM:

Phone: 480-893-8890  
Fax: 480-893-8938

ATTEST: City Attorney By: *[Signature]*

\_\_\_\_\_  
City Clerk

## EXHIBIT A SCOPE OF WORK

The Water Production Facility Needs Assessment and Improvements Project will consist of two phases. The first phase, Phase I, will be to coordinate with the City staff and identify improvements to several of the Water Production Facilities. CITY, with the assistance of ANNUAL CONSULTANT, will identify items in need for improvements and modifications at each of the City's Water Production facilities. ANNUAL CONSULTANT shall document and create a list of all the items identified and include a budgetary construction cost for each of the items. With the City's input, ANNUAL CONSULTANT shall rank the items in the order of importance, taking into consideration the need and cost.

As part of this phase, ANNUAL CONSULTANT shall also assist the City in evaluating the current operation of Zone 1 and Zone 2 within the City's distribution system. ANNUAL CONSULTANT shall coordinate with the Operations Staff and Engineering Staff to help determine the current baseline operation strategy of the system. Based on the current operation of the system, ANNUAL CONSULTANT shall develop recommendations with Operations Staff input that establish infrastructure improvements necessary to optimize the distribution system operation. These changes will focus on limiting well water production and increasing surface water use. ANNUAL CONSULTANT shall evaluate Water Production Facilities that currently have Wells to optimize the overall utilization of surface water versus groundwater in the system. In addition, ANNUAL CONSULTANT shall evaluate Water Production Facilities to optimize filling of the reservoirs at night from the surface water plant and supplying water to the distribution system during high demand periods which occur during the day time. ANNUAL CONSULTANT shall provide a memorandum that documents the needs assessment items, the cost of the items, and the ranking. In addition, the memorandum will also document the recommendations for optimizing the distribution system as discussed above in more detail. The evaluation for improvements to the system will focus on determining ideal WPF's that can provide pumping flexibility with the addition of a VFD.

The second phase, Phase II, of the project will be implementing and preparing a preliminary design, which will consist of preparation of contract documents including a preliminary design report, drawings and specifications, and bid services for the highest ranked items identified in the needs assessment phase, Phase I, which fits within the City's budget.

ANNUAL CONSULTANT shall perform the following task items for the WPF needs assessment and improvements project:

- Develop a comprehensive list of WPF improvement items. City staff will provide the list and ANNUAL CONSULTANT shall document all items. Budgetary construction costs will be developed for each item. ANNUAL CONSULTANT shall coordinate with City staff and will rank the items based on need and importance.
- Evaluate the operation of the WPF's and Wells associated with the WPF. The intent is to increase surface water production and strategically minimize the use of certain wells. As part of this task the WPF's will be evaluated to determine which WPF's would be best suited for VFD addition or a pump addition.
- Develop a memorandum documenting the needs assessment items, budgetary cost, and ranking. This report will also document recommended WPF improvements associated with improving the operation of the distribution system.
- Develop a preliminary design report of the improvements to the WPF's. ANNUAL CONSULTANT shall submit this report to the MCESD for obtaining the Approval to Construct.
- Develop detailed design drawings and specifications for the items selected that fit within the City's current construction budget of \$2 million dollars. It is assumed that improvements will include items such as valve replacement, pump additions, and VFD additions. It is assumed that the following services are not required nor included
  - Architectural services for major building modifications.
  - Survey services for major facility additions.
- ANNUAL CONSULTANT shall provide electrical design regarding electrical gear design, capacity, placement, and conduit connections.

- ANNUAL CONSULTANT shall provide instrumentation and pump controls including coordination with the existing Water Production Facility SCADA system for the items identified
- Electrical design for new pumps and VFD's is included.

ANNUAL CONSULTANT shall provide the following engineering services under this Project:

## **TASK 1.0 DESIGN DEVELOPMENT**

**Subtask 1.1 Kick-Off Meeting.** A kickoff meeting with representatives from ANNUAL CONSULTANT and the City of Chandler will be conducted at project initiation. The following will be accomplished:

- Introduce key team members
- Establish lines of communication
- Review the project scope and schedule
- Confirm specific goals and expectations
- Identify key issues affecting project development
- Request background information
- Discuss and identify preferred system operation, equipment, and suppliers for the civil, mechanical, electrical, instrumentation, and control equipment
- Prepare and distribute meeting minutes to the attendees prepared by ANNUAL CONSULTANT.

**Subtask 1.2 Data Collection and Review.** Collect and review background information including:

- Water Production Facility as-builts and existing equipment specifications for the facilities that will require improvements – to be provided by the City in hard copy format.
- Needs Assessment Items – ANNUAL CONSULTANT to coordinate with operations staff to determine items.
- Water Production Facility Data as required – to be provided by the City in hard copy format.
- Water Production Facility Hydraulic Operation Set Points
- Buried facility maps for other utilities in the project area.

**Subtask 1.3 Site Investigation.** Take up to ten site visits at the WPF's requiring improvements to confirm the existing mechanical, electrical, and instrumentation configurations. Confirm existing equipment specifications and operating parameters.

If required, ANNUAL CONSULTANT will coordinate with the City to locate underground utilities (confirmation of both vertical elevation and horizontal location).

**NOTE:** The actual vertical confirmation services (i.e. potholing) are not included in this Scope. It is assumed that the City will arrange for potholing services separately after coordination with the Engineer.

**Subtask 1.4 Topographic Site Survey.** It is assumed that a topographic survey of any of the WPF sites is not required for this Project.

**Subtask 1.5 Soils Investigation.** It is assumed that a geotechnical investigation of any of the WPF sites is not required for this Project.

## **TASK 2.0 PRELIMINARY DESIGN**

**Subtask 2.1 Needs Assessment and Distribution System Operations Study – Phase I.** The first phase will be to coordinate with the City staff and identify improvements to several of the Water Production Facilities. The City staff, with the assistance of ANNUAL CONSULTANT, will identify items in need for improvements and modifications at each of the City's Water Production facilities. ANNUAL CONSULTANT shall document and create a list of all the items identified and include a budgetary construction cost for each of the items. With the City's

input, ANNUAL CONSULTANT shall rank the items in the order of importance, taking into consideration the need and cost.

As part of this phase, ANNUAL CONSULTANT shall also evaluate the current operation of Zone 1 and Zone 2 within the City's distribution system. ANNUAL CONSULTANT shall coordinate with the Operations Staff and Engineering Staff to help determine the current baseline operation strategy of the system. Based on the current operation of the system, ANNUAL CONSULTANT shall develop recommendations with Operations Staff input that establishes infrastructure improvements necessary to optimize operation. ANNUAL CONSULTANT shall provide a memorandum that documents the needs assessment items, the cost of the items, and the ranking. In addition, the report will also document the recommendations for optimizing the operation of the distribution system. The evaluation for improvements to the system will focus on determining ideal WPF's that can provide pumping flexibility with the addition of a VFD's.

**Subtask 2.2 Preliminary Design Report – Phase II.** Prepare a preliminary design report for submittal to the City. The preliminary design report will be based on the needs assessment items identified by the City in Phase I that are ranked the highest in priority and are within the City's construction budget. The design report will describe the items that will be designed as part of this project while meeting the City's design standards. ANNUAL CONSULTANT shall prepare a preliminary design report for the WPF improvements that may include:

- Design criteria and standards for booster pump additions, pump modifications, discharge piping modifications, valve replacement, chlorine system modifications, and other critical items of equipment
- Equipment preferences
- Design criteria for the new VFD's, MCC's, and other appurtenant electrical items.
- Operating and control strategy modifications
- Preliminary construction cost estimate
- Identification of any additional design issues and recommendations

ANNUAL CONSULTANT shall submit four (4) copies of the preliminary design report to the City for review. ANNUAL CONSULTANT shall conduct a review meeting with City staff to discuss comments to the preliminary design report. ANNUAL CONSULTANT shall incorporate these comments and submit five (5) copies of the final design report.

### **TASK 3.0 FINAL DESIGN**

**Subtask 3.1 Preparation of 60% Plans.** Prepare preliminary (60%) construction documents (plans only) for the Improvement Items identified in task 2.3. The 60% plans shall include the following detailed design areas:

- Civil: Site grading, drainage and piping modifications.
- Structural: Equipment pads and foundations.
- Mechanical: Pump additions or modifications, piping, valves, and piping appurtenances.
- Electrical and Instrumentation: Preliminary Process & Instrumentation Diagrams.

ANNUAL CONSULTANT shall submit five (5) copies of the preliminary, 60 percent, plans for review to the City's Engineering and Operations Departments. ANNUAL CONSULTANT shall conduct one review meeting to discuss any comments received from the City.

**Subtask 3.2 Preparation of 90% Plans and Specifications.** Prepare preliminary (90%) construction documents including plans, specifications, and a construction cost estimate for the WPF improvement items selected to be implemented as part of the project. The 90% plans shall include the following detailed design areas:

- Civil: Site grading, drainage and piping modifications.
- Structural: Equipment pads and foundations.
- Mechanical: Pump additions or modifications, piping, valves, and piping appurtenances.
- Electrical and Instrumentation: VFD additions, Power supply requirements, control descriptions and instrumentation.

- **Remote Telemetry Unit Modifications:** Modifications to the PLC based I/O configuration at the required WPF's for new VFD or pump additions.
- **Landscaping:** Planting and irrigation modifications.

ANNUAL CONSULTANT shall submit seven (7) copies of the preliminary, 90 percent, plans and specifications for review to the City's Engineering and Operations Departments. ANNUAL CONSULTANT shall conduct one review meeting to discuss any comments received from the City.

**Subtask 3.3 Maricopa County and Development Services Review.** ANNUAL CONSULTANT shall present one (1) set of the 90 percent plans and specifications to Maricopa County and the City's Development Services Department for review. ANNUAL CONSULTANT shall conduct one review meeting to discuss any comments received from the County, if necessary. Also, ANNUAL CONSULTANT shall conduct one review meeting to discuss any comments received from the City's Development Services Department.

**NOTE:** It is assumed that the City will directly pay for all of the required permitting fees including the MCESD Approval to Construct Permit.

**Subtask 3.4 Preparation of 100% Plans and Specifications.** ANNUAL CONSULTANT shall prepare the final 100% plans and specifications including incorporation of the City and County comments. ANNUAL CONSULTANT shall submit one (1) reproducible Mylar set of plans and specifications for preparation of bid sets.

#### **TASK 4.0 BID SERVICES**

**Subtask 4.1 Pre-Bid Conference.** Attend the pre-bid conference to answer bidder questions pertaining to the Contract Documents.

**Subtask 4.2 Questions.** Receive and respond to bidder inquires after the pre-bid conference.

**Subtask 4.3 Prior Approval Review / Addenda.** Review equipment submittals presented for prior approval (according to the City's requirements) and prepare addenda required to clarify or modify the Contract Documents.

**Subtask 4.4 Attend Bid Opening.** Attend the bid opening, review bids, and make recommendation for award.

**EXHIBIT B  
FEE SCHEDULE**

		Hours	Rate	Amount	Hours	Rate	Amount
<b>Task 1.0 - Design Development</b>							
1.1	Kick-Off Meeting	2	4	4			10 \$ 1,510
1.2	Data Collection and Review		4	24			28 \$ 3,840
1.3	Site Investigation		4	40			44 \$ 5,840
1.4	Topographic Site Survey		0	0			0 \$ -
1.5	Soils Investigation		0	0			0 \$ -
<b>Subtotal - Design Development</b>		<b>2</b>	<b>12</b>	<b>68</b>	<b>0</b>	<b>0</b>	<b>82 \$ 10,790</b>
<b>Task 2.0 - Preliminary Design</b>							
2.1	Distribution System Operations/Needs Assessment Study - Phase I	10	48	60	12	6	138 \$ 18,368
2.2	Preliminary Design Report - Phase II (Items to Design From Task 2.3)	4	16	64	48	8	140 \$ 15,644
<b>Subtotal - Preliminary Design</b>		<b>14</b>	<b>64</b>	<b>124</b>	<b>60</b>	<b>14</b>	<b>276 \$ 34,012</b>
<b>Task 3.0 - Final Design</b>							
3.1	60% Construction Documents	8	120	180	120	24	452 \$ 54,292
3.2	90% Construction Documents	6	96	120	80	16	318 \$ 38,878
3.3	Maricopa County / Development Services Submittal		2	8	4	4	18 \$ 1,892
3.4	Final Submittal	6	32	80	40	8	168 \$ 19,934
<b>Subtotal - Final Design</b>		<b>20</b>	<b>250</b>	<b>388</b>	<b>244</b>	<b>52</b>	<b>954 \$ 114,996</b>
<b>Task 4.0 - Bid Services</b>							
4.1	Pre-Bid Conference			2			2 \$ 250
4.2	Questions / RFI Response		4	8		4	16 \$ 1,892
4.3	Equipment Prequalification Review / Issue Addenda		4	8	4	0	16 \$ 1,960
4.4	Attend Bid Opening			2			2 \$ 250
<b>Subtotal - Bid Services</b>		<b>0</b>	<b>8</b>	<b>20</b>	<b>4</b>	<b>4</b>	<b>36 \$ 4,352</b>
<b>Subtotal - Wilson Labor Summary</b>		<b>36</b>	<b>334</b>	<b>600</b>	<b>308</b>	<b>70</b>	<b>1348 \$ 164,150</b>

**II. Other Direct Costs**

Item	Description	Unit	Quantity	Rate	Amount
1.4	Instrumentation Design (Jenson Systems)	LS	1	\$15,000	\$15,000
3.3	MCESD Review Fees - Not Included	LS	1	\$ -	\$ -
<b>Subtotal - Other Direct Costs</b>					<b>\$15,000</b>

**III. TOTAL FEE PROPOSAL**

I	LABOR SUMMARY	\$ 164,150
II	OTHER DIRECT COSTS	\$ 15,000
III	<b>TOTAL FEE</b>	<b>\$ 179,150</b>

EXHIBIT C

**Contractor Immigration Warranty  
To Be Completed by Consultant Prior to Execution of Contract**

A.R.S. § 41-4401 requires as a condition of your contract verification of compliance by the consultant and subconsultants with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of its employees.

By completing and signing this form the Engineer/Annual Consultant shall attest that it and all subconsultants performing work under the cited contract meet all conditions contained herein.

Project Number: WA1005-201		
Name (as listed in the contract):		
Street Name and Number:		
City: Chandler	State: AZ	Zip Code:

I hereby attest that:

1. The Engineer/Annual Consultant complies with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of those employees performing work under this contract;
2. All subconsultants performing work under this contract comply with the Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214 related to the immigration status of their employees; and
3. The Engineer/Annual Consultant has identified all consultant and subconsultant employees who perform work under the contract and has verified compliance with Federal Immigration and Nationality Act (FINA), all other Federal immigration laws and regulations, and A.R.S. § 23-214.

Signature of Engineer/ Annual Consultant (Employer) or Authorized Designee:



Printed Name: Steve Todd

Title: Principal

Date (month/day/year): 2/7/11