



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CA12-125**

1. Agenda Item Number: 30
2. Council Meeting Date: January 26, 2012

TO: MAYOR & COUNCIL

3. Date Prepared: January 10, 2012

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Award Contract Amendment No. 1 to Wilson Engineers, LLC for the Airport Water Reclamation Facility Expansion, Project No. WW1013-201, in an amount not to exceed \$252,310 for a revised total contract amount not to exceed \$6,233,650, contingent upon written notification from Intel and appropriate funding.

6. RECOMMENDATION: Staff recommends Council award Contract Amendment No. 1 to Wilson Engineers, LLC for the Airport Water Reclamation Facility Expansion, Project No. WW1013-201, in an amount not to exceed \$252,310 for a revised total contract amount not to exceed \$6,233,650, contingent upon written notification from Intel and appropriate funding.

7. BACKGROUND/DISCUSSION: The Airport Water Reclamation Facility is located on Queen Creek Road, just west of McQueen Road. Staff identified the need for design and construction of new wastewater treatment capacity to accommodate Intel's plant expansion on South Dobson Road. Public information meetings will be held with residents, neighboring the facility, to present the expansion project and measures to be taken to mitigate any impact to the surrounding community. Construction will begin in 2012 and is expected to be completed in the spring 2014.

Work under this amendment will include a redefinition of wastewater characteristics for Intel and design modification of the Airport Water Reclamation Facility Expansion to accommodate these characteristics.

The facility's treatment capacity will increase from 15 million gallons per day (MGD) to 22 MGD.

8. EVALUATION: On September 22, 2011 Council approved a design contract to Wilson Engineers for the Airport Water Reclamation Facility Expansion 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:	\$5,981,340	Original Contract
	\$ 252,310	Amendment No. 1
	\$6,233,650	Total

Savings: N/A

Long Term Costs: N/A

Fund Source:

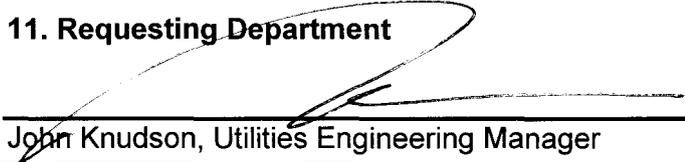
<u>Acct. No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
615.3910.5219.6WW022	Wastewater Operating	Water Reclamation Facility Expansion	Yes	\$252,310

10. PROPOSED MOTION: Move Council award Contract Amendment No. 1 to Wilson Engineers, LLC for the Airport Water Reclamation Facility Expansion, Project No. WW1013-201, in an amount not to exceed \$252,310 for a revised total contract amount not to exceed \$6,233,650, contingent upon written notification from Intel and appropriate funding, and authorize the Mayor to sign the contract documents.

ATTACHMENTS: Contract, Location Map

APPROVALS

11. Requesting Department


John Knudson, Utilities Engineering Manager

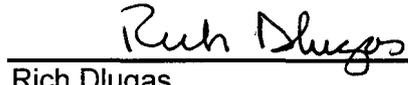
13. Department Head


Dave Siegel, Municipal Utilities Director

12. City Engineer


Sheina Hughes, City Engineer

14. City Manager


Rich Dlugas



AIRPORT WATER RECLAMATION FACILITY EXPANSION PROJECT NO. WW1013-201



MEMO NO. CA12-125

 AIRPORT WRF





Chandler Arizona

AMENDMENT NUMBER 1

Project Name: Water Reclamation Facility Permitting & Design
Project No.: WW1013-201

This Amendment No. 1 to that certain Agreement between the City Of Chandler (CITY) and Wilson Engineers, LLC, dated for September 28, 2011 is entered into this ____ day of _____, 2012.

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 Two Hundred Fifty Two Thousand Three Hundred Ten Dollars, (\$252,310) for a total Contract Price not to exceed the sum of Six Million Two Hundred Thirty Three Thousand Six Hundred Fifty Dollars (\$6,233,650) of all payable in accordance with Exhibit B, attached hereto and incorporated herein by reference.
3. 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 _____, 2012.

CITY OF CHANDLER:

DESIGN CONSULTANT:

By: _____

By: _____

MAYOR Date

Title:

APPROVED AS TO FORM:

ATTEST: (If corporation)

City Attorney by: 

Secretary

ATTEST: _____

WITNESS: (If Individual or Partnership) _____

City Clerk

SEAL

Jan 18, 2012 3:50AM

No. 0649 P. 2



Chandler Arizona

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IN WITNESS WHEREOF, the parties have hereunto subscribed their names this ___ day of ___, 2012.

CITY OF CHANDLER:

By: _____
MAYOR Date

DESIGN CONSULTANT:

By: [Signature]
Title:

APPROVED AS TO FORM:

_____[Signature]
City Attorney

ATTEST: (If corporation)

_____[Signature]
Secretary

ATTEST:

_____[Signature]
City Clerk

WITNESS: (If Individual or Partnership)

_____[Signature]
SEAL

EXHIBIT A SCOPE OF WORK

This project is for design and permitting services for the Airport WRF Expansion Project. This amendment identifies scope and effort associated due to changes in waste characteristics and its impact on the detailed design of the facility. DESIGN CONSULTANT shall perform the scope of services for this phase as identified in the following paragraphs.

This scope of services will also deduct a scope item from the original project contract (Interim Rerating of the Airport WRF). Credit for the removal of this scope item is identified in the cost spreadsheet.

TASK 1.0 PRELIMINARY DESIGN

Subtask 1.1 Flow Characteristics Testing.

The scope of work includes preparation of a draft testing protocol for hydrogen peroxide testing and finalizing the draft protocol after review comments. This scope of work also includes coordinating these sampling events and working with the Airport WRF staff to conduct experiments and testing. Interim Plan of Operations scope is identified in Subtask 1.3.

Subtask 1.2 Waste Characteristics.

This task includes coordination and review of Waste Characteristics evaluation with the City and the rest of the project team to determine final influent characteristics for the Airport WRF Expansion Project.

Subtask 1.3 Interim Plan of Operations.

Loading changes will occur in the service areas as a result of anticipated industrial expansion and related construction logistics. These changes have the potential to impact process operating conditions at both the Ocotillo WRF and Airport WRF. The forcemain and the new Airport LS to be installed at the Ocotillo WRF will reduce the available mixing time between sanitary and industrial wastewater, the industrial proportions received at both facilities will change and increased loadings will be transferred to the Airport WRF before plant expansion activities are complete. In addition to this, temporary conveyance of flows from Intel to the current Airport LS will also change the current mixing time. An Interim Plan of Operation is intended to identify and evaluate factors that have the potential to influence process or performance conditions at the WRFs and to develop contingencies for maintaining plant process stability and compliance with effluent quality goals.

Items to evaluate for this task include:

- Temporary pumping operations at OWRF/Intel
 - Mass and flow balances
 - Ocotillo WRF conditions

- Airport WRF conditions
- Receipt of additional flow/organic/nitrogen loading
 - Flow quantity
 - Transfer capacity
 - Shift in sanitary to Lone Butte WRF
 - Implications of reduced sanitary contribution to Ocotillo WRF and Airport WRF
 - Complex organics
 - Treatability
 - Process impacts
 - Readily and non-readily biodegradable
 - Nitrification
 - Denitrification
 - Carbonaceous removal
 - Pass-through
 - Effluent monitoring
 - Increased nitrogen load
 - Increase discharge loading
 - Implications for Ocotillo WRF and Airport WRF
 - IMLR capacity at Ocotillo WRF
 - Increased transfer implications for Airport WRF
 - Potential for Simultaneous Nitrification and Denitrification
- Provisions for dealing with potential Hydrogen Peroxide impacts
 - Reduced sanitary/industrial wastewater contact time
 - Reduced sanitary availability due to shift to Lone Butte WRF
 - Reaction time for residual decay
 - Potential for RAS/WAS recycle
 - Pre-stage RAS split at AWRF
 - Carbon
- Enhanced influent/effluent monitoring.
- Ramp up conditions
- Process Modeling for the Airport WRF and Ocotillo WRF

As part of this scope, six trips are included (one trip per quarter on average) from our subconsultant (KC Environmental) for coordination purposes. Timeframe for this work is anticipated to begin after NTP and continue until April 2013. Testing necessary for any testing agreed upon by the project team will be completed by others and not included in this scope of work.

This scope of work does not include stair step testing to incorporate additional wastes that are currently hauled off site. Scope and fees for that testing and evaluation will be prepared at a later date.

Task 2.0 CONSTRUCTION DOCUMENTS

The scope of work included in this task is to define additional effort associated with the changes. The initial plan to complete the project in three packages will still remain. The first package shall include an excavation and structural design of major treatment basins. The second package shall include the majority of the remaining structures, partial process-mechanical drawings, and long lead equipment items. The final package shall include the remaining items such as electrical, instrumentation, process mechanical, grading and drainage, and yard piping facilities to complete project design. The following subtasks identify phases of the project.

Subtask 2.1 Preparation of 60% Plans. Prepare preliminary (60%) construction documents including plans, and table of contents for specifications. The plans shall incorporate the comments received on the Design Report submittal and comments received throughout the preliminary design.

Subtask 2.1.1 Package 1 60% Plans: For Package 1, the 60% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.1.2 Package 2 60% Plans: For Package 2, the 60% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.1.3 Package 3 60% Plans: For Package 3, the 60% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.2 Preparation of 90% Plans and Specifications (Agency Review Set). Prepare preliminary (90%) construction documents including plans, and specifications for the Airport WRF Expansion. The plans shall incorporate the comments received on the Design Report / 30% submittal and comments received from 60% drawings. DESIGN CONSULTANT shall complete three packages of 90% set of drawings as described below.

Subtask 2.2.1 Package 1 90% Plans: For Package 1, the 90% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.1.2 Package 2 90% Plans: For Package 2, the 90% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.2.3 Package 3 90% Plans: For Package 3, the 90% submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit six (6) copies of the plans and specifications for review to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.3 Preparation of Final Plans and Specifications. The final 100% plans and specifications shall be prepared incorporating the City's and Maricopa County's comments. DESIGN CONSULTANT shall produce one (1) reproducible set of plans and specifications to produce bid sets. DESIGN CONSULTANT shall prepare final plans for all three packages as described below.

Subtask 2.3.1 Package 1 Final Plans: For Package 1, the Final Submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit one (1) reproducible set to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.3.2 Package 2 Final Plans: For Package 1, the Final Submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit one (1) reproducible set to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

Subtask 2.3.3 Package 3 Final Plans: For Package 1, the Final Submittal shall include drawings for additional processes identified for the expansion project. DESIGN CONSULTANT shall submit one (1) reproducible set to the City. DESIGN CONSULTANT shall conduct a follow up design workshop to discuss any comments received from the City.

TASK 3.0 CM AT RISK COORDINATION

The CM at Risk will be contracted to provide design phase services and then during construction will provide all services required of a general contractor. This task identifies additional scope associated with additional process identified for the expansion project. The relationship between the CM at Risk and the Engineer is intended to be collaborative and proactive, both participating as advisors to the City during the design phase. The City wants to incorporate a contractor's perspective and input to the Project planning and design decisions and have the ability to select certain components of the Project for construction prior to full completion of design. This task identifies effort associated with additional detailed design items.

Design Phase services by the CM at Risk will include:

- Provide a cost model to confirm budgets and guide design decisions;
- Provide detailed independent cost estimating based on current market conditions;
- Provide a construction management plan and schedule;
- Provide alternate systems evaluation and constructability studies;
- Provide long-lead procurement studies and initiate procurement of long-lead items;
- Assist in the permitting process;
- Provide procurement services for selection of subcontractors and suppliers;
- Prepare the Guaranteed Maximum Price (GMP) for construction;

Subtask 3.1 Engineer's Coordination with CM at Risk:

The DESIGN CONSULTANT's effort to coordinate with the CM at Risk shall consist of:

- Solicit CM at Risk input during design development as appropriate;
- Provide information for cost estimating;
- Provide input to construction management plan and schedule;
- Provide assistance with long-lead procurement activities;
- Evaluate alternative systems suggested by CM at Risk;
- Respond to constructability review comments;
- Attend subcontractor pre-selection meetings conducted by CM at Risk;
- Prepare addenda as required;
- Assist and review during GMP development;
- Perform GMP proposal review and prepare recommendation to City;
- Assist City with review of the subcontractor/supplier bid and selection process.

The City intends to issue multiple GMPs to the CM at Risk Contractor to proceed with early construction of certain project features before the full project design is complete and request a GMP for that portion of the work.

**EXHIBIT B
FEE SCHEDULE**

I. LABOR SUMMARY

TASK No.	TASK DESCRIPTION	Staff Hours								TOTAL HOURS	Wilson Labor COST
		Principal E-7 \$ 195	Sr Project Manager E-6 \$ 180	Project Manager E-5 \$ 150	Project Engineer E-4 \$ 125	Design Engineer E-3 \$ 105	Senior Designer D-4 \$ 125	CADD Tech T-3 \$ 70	Clerical A-3 \$ 65		
Task 1.0 - Preliminary Design											
1.1	Hydrogen Peroxide Testing	0	16	40	80	40	8	8	4	196	\$ 24,900
1.2	Waste Characteristics Eval Coordination	4	16	8	16	8	8	8	8	4	\$ 9,780
1.3	Interim Plan of Operations	8	80	40	160	40	8	48	48	4	\$ 53,640
Subtotal - Design Development		12	112	88	256	88	24	64	60	704	\$ 88,320
Task 2.0 - Contract Document Preparation											
2.1	60% Construction Documents										
2.1.1	Package 1 60% Construction Documents	2	4	8	16	24	24	16	8	102	\$ 11,470
2.1.2	Package 2 60% Construction Documents	4	12	16	24	40	40	24	8	168	\$ 19,740
2.1.3	Package 3 60% Construction Documents	4	12	16	24	40	40	24	8	168	\$ 19,740
2.2	90% Construction Documents										
2.2.1	Package 1 90% Constructon Documents	2	8	12	24	24	24	24	12	130	\$ 14,610
2.2.2	Package 2 90% Constructon Documents	4	16	24	40	48	48	40	16	236	\$ 27,140
2.2.3	Package 3 90% Construction Documents	4	16	24	40	48	48	40	16	236	\$ 27,140
2.3	Final Submittal										
2.3.1	Package 1 Final Drawings	2	4	16	16	16	16	16	8	94	\$ 10,830
2.3.2	Package 2 Final Drawings	2	8	16	24	16	24	24	8	122	\$ 14,110
2.3.3	Package 3 Final Drawings	2	8	16	24	16	24	24	8	122	\$ 14,110
Subtotal - Final Design		26	88	148	232	272	288	232	92	1378	\$ 158,890
Task 3.0 - CMAR Coordination											
3.0	CMAR Coordination	4	16	24	40	40	0	0	0	124	\$ 16,460
Subtotal - CMAR Coordination		4	16	24	40	40	16	0	0	140	\$ 16,460
Subtotal - Labor Summary		42	216	260	528	400	328	296	152	2222	\$ 263,670
Task 1.1 - CREDIT FOR REMOVAL OF SCOPE ITEM (INTERIM RERATING) FROM PROJECT											
3.0	Interim Rerating										\$(101,360)
Revised Subtotal - Labor Summary										\$ 162,310	

II. Other Direct Costs

Task No(s)	Expense Description	Unit	Total Units	Cost / Unit	Total
3.0	Structural Engineering Services	LS	1	\$ 15,000	\$ 15,000
3.0	Geotechnical Services (Allowance)	LS	1	\$ 5,000	\$ 5,000
3.0	KC Environmental	LS	1	\$ 70,000	\$ 70,000
Subtotal - Other Direct Costs					\$ 90,000

III. TOTAL FEE PROPOSAL

I	LABOR SUMMARY	\$ 162,310
II	OTHER DIRECT COSTS	\$ 90,000
III	TOTAL FEE	\$ 252,310