



SERVICES AUTHORIZATION XII ENGINEERING SERVICES AGREEMENT

THIS SERVICES AUTHORIZATION is made and entered into this _____ day of _____, 20____, by and between the **City of Orlando, Florida**, a municipal corporation existing under the laws of the State of Florida (CITY), and **AECOM Technical Services, Inc.**, doing business locally at 320 E. South Street, Orlando, Florida 32801 (ENGINEER).

WHEREAS, the CITY and the ENGINEER have previously entered into an agreement for the ENGINEER's professional services (Agreement) on October 27, 2005, concerning the Conserv II Water Reclamation Facility Improvements Evaluation Project (Project); and

WHEREAS, the Agreement was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk, as Documentary #051026J04; and

WHEREAS, the CITY and the ENGINEER wish to amend the Agreement as set forth herein; and

WHEREAS, AMENDMENT I of the AGREEMENT was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on July 24, 2006; and

WHEREAS, AMENDMENT II of the AGREEMENT was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on June 22, 2007; and

WHEREAS, AMENDMENT III of the AGREEMENT was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on October 18, 2007; and

WHEREAS, AMENDMENT IV of the AGREEMENT was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on July 14, 2008; and

WHEREAS, SERVICES AUTHORIZATION V was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on November 10, 2008; and

WHEREAS, SERVICES AUTHORIZATION VI was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on February 25, 2009; and

WHEREAS, SERVICES AUTHORIZATION VII was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on June 10, 2009; and

WHEREAS, SERVICES AUTHORIZATION VIII was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on November 4, 2009; and

WHEREAS, SERVICES AUTHORIZATION IX was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on November 17, 2010; and

WHEREAS, SERVICES AUTHORIZATION X was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on April 10, 2012; and

WHEREAS, SERVICES AUTHORIZATION XI was approved and authorized by the City Council and signed by the Mayor Pro Tem and City Clerk on August 22, 2012; and

WHEREAS, the CITY and the ENGINEER now wish to memorialize their understanding for the ENGINEER's additional professional services for the Project.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein and given one to the other, the sufficiency of which is hereby acknowledged, the parties agree as follows:

I. SCOPE OF SERVICES

The scope of services has been agreed to by the parties, and is attached hereto and incorporated herein, by reference, as EXHIBIT I.

II. FEE

The not-to-exceed fee of \$173,766.61 has been agreed to by the parties, as set forth on EXHIBIT I.

III. TERM

The term of the Services Authorization shall be completed by the end of business (5:00 p.m.) on December 31, 2015, as set forth on EXHIBIT I, attached hereto and incorporated herein by reference. It is also agreed that the CITY shall have an option for extension of this Services Authorization as necessary to complete the present scope of Services (Exhibit I) or to provide additional services.

IV. ENTIRE AGREEMENT

This Services Authorization supersedes all previous services authorizations, amendments, agreements, or representations, either verbal or written, heretofore in effect between the CITY and the ENGINEER that may have concerned the matters covered herein, except that this Services Authorization shall in no way supersede or amend the Agreement or other services authorizations or amendments except as specifically provided herein. No additions, alterations, or variations to the terms of this Services Authorization shall be valid, nor can the provisions of this Services Authorization be waived by either party, unless such additions, alterations, or waivers are expressly set forth in writing in a document duly executed by both parties. CONSULTANT acknowledges and agrees that any proposals or proposed agreements from subconsultants



attached to this SERVICES AUTHORIZATION are attached solely to reflect the scopes of work to be performed and the fees to be charged by such subconsultants. By executing this SERVICES AUTHORIZATION, the CITY does not become a party thereto or bound by the terms thereof.

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

City of Orlando, Florida

By: _____
Mayor Pro Tem

ATTEST:

Alana C. Brenner, City Clerk

(SEAL)

APPROVE AS TO FORM AND LEGALITY
for the use and reliance of the
City of Orlando, Florida, only.

_____, 20____.

Assistant City Attorney
Orlando, Florida



AECOM Technical Services, Inc.

By: _____

(Print Name)

Title: _____

STATE OF FLORIDA }

COUNTY OF _____ }

PERSONALLY APPEARED before me, the undersigned authority, _____, [] well known to me or [] who has produced _____ as identification, and known by me to be the _____ of the corporation named above, and acknowledged before me that he/she executed the foregoing instrument on behalf of said corporation as its true act and deed, and that he/she was duly authorized to do so.

WITNESS my hand and official seal this ____ day of _____, 20____.

NOTARY PUBLIC

Print Name: _____

My Commission Expires: _____

EXHIBIT I – SCOPE OF SERVICES

PROFESSIONAL ENGINEERING SERVICES

Water Conserv II WRF Improvements Evaluation Engineering Services Agreement

Service Authorization XII

Conserv II Mixers: – Part I Final Design and Permitting

– Part II Bidding and Construction Services

I. General

The City of Orlando, Florida (CITY) plans to implement treatment improvements to the Water Conserv II Water Reclamation Facility (WRF). AECOM is under contract to the CITY as the design engineer for upgrades to the Conserv II WRF and has recently completed Phase I of a 2 phase project to improve this facility. The current PROJECT and subject of this Service Authorization is to include the installation of up to 20 mixers in the anoxic zones of Aeration Basin Nos. 1 through 10. This PROJECT was originally to be part of the Phase II improvements that were planned for the facility. The CITY has received grant funding for the filter portion of the Phase II improvements and would like to proceed with final design and construction of the mixers independently of other Phase II improvements. This Service Authorization will provide for an evaluation of alternatives, final design and permitting of the selected mixer technology, bidding and services during construction.

To the extent possible, any assumptions made in revising these tasks are stated herein. If the work tasks required are different from the assumptions presented herein or if the City of Orlando (CITY) desires additional services, the resultant changes in scope and budget will serve as a basis for modifying this Scope of Services as agreed to by both the CITY and the AECOM (CONSULTANT).

CONSULTANT will perform the following services for the CITY for the Water Conserv II Water Reclamation Facility:

II. Consultant's Scope of Services

CONSULTANT's services will include serving as the CITY's professional engineering representative for the Project. CONSULTANT and its subconsultants will provide professional engineering consultation services as described below:

Task Group 1: Project Management

Under this Task Group, CONSULTANT will perform project management tasks including the following:

- Prepare for and attend a project kickoff meeting with CITY, which has the primary purposes of reviewing and approving the selected mixing technology.
- Prepare for and attend three (3) meetings with the City staff to review the Conserv II WRF Mixer Improvements for a 60, 90 and 100% submittal.

- Continued management of the project team and activities including contracting with subconsultants and monitoring the progress of this project.
- Prepare invoices and progress reports for the City during the duration of this contract.

Task Group 2: Mixer Improvements Technical Memorandum and Final Design

AECOM will summarize investigations conducted to date regarding applicable mixer technologies for the CITY in a Technical Memorandum for the CITY's consideration. It is anticipated this will include planning level evaluations of Invent style rag-less mixers and the big bubble mixing technology. The memorandum will provide a discussion of the relative pros and cons of each technology as well as planning level cost estimates. Based on work conducted to date it is anticipated that the big bubble technology will be selected for final design and the remainder of this authorization is based on the big bubble technology. It is assumed that the big bubble mixing system will be based on a single manufacturer. If the City decides to pursue another manufacturer or technology, then additional design phase services may be necessary to accommodate the mixers. If the City decides to pursue the Invent style mixers, then additional design phase services may be necessary to accommodate the mixers.

AECOM will develop final design documents (including Division 11 of the Technical Specifications) for the installation of big bubble mixers in basins 1, 2, 5, 6, 9 and 10. AECOM will coordinate with the manufacturers in developing the layouts for the mixers, compressors and air piping associated with these improvements. Progress submittals will be made at the 60, 90 and 100% completion levels. City staff will review and return comments for incorporation into these documents. Revisions to the opinion of capital cost will be provided at the 60 and 100% submittals. Technical specifications for mixer equipment and other equipment specific to the big bubble mixers will be provided at the 60% submittal. Complete technical specifications will be provided with the 90% submittal for the CITY's review.

Permitting Services – Final design will include the following:

- The City currently holds a permit from FDEP for the modifications envisioned in the original authorization. The improvements in this modified authorization are a subset of these improvements. For the purposes of budgeting it has been assumed that no additional permitting from FDEP is required.
- Submittal of building permit applications and drawings will be included. For the purpose of budgeting this task it is assumed that four signed and sealed permit sets will be supplied and there will be one re-submittal.

Task Group 3: Bidding Services

The following tasks will be included:

- Prepare for and attend one Pre-Bid Conferences.
- Assist City with preparation of up to two (2) addenda.
- Respond to questions from prospective bidders.

- Assist the City with preparation of conformed documents for the selected design.

Task Group 4: Construction Phase

Construction Phase Services will be provided for the Treatment Improvements Project. A 6-month construction time period has been assumed for this task. The following tasks will be included.

1. Pre-Construction Meeting: Prepare for and attend Pre-Construction Meeting.
2. Shop Drawing Review: This task includes the coordination and review of shop drawings in accordance with the Contract Documents. For the purposes of budgeting, it is assumed that 10 shop drawings will be reviewed.
3. Respond to Requests For Information (RFIs): This task includes the coordination, review and response to RFIs from the Contractor and/or City staff. For the purposes of budgeting it was assumed that there would be 6 RFIs. Two hours per RFI was assumed for review and response time.
4. Site Visits: This task includes ten (10) site visits to observe that the work is proceeding in accordance with the Contract Documents. This will include two (2) visits from AECOM structural engineers.
5. Construction Progress Meetings: This task includes bi-monthly progress meetings for a 6-month period.
6. Record Drawings: This task includes preparing a set of reproducible record drawings showing those changes made during the construction process based on the marked-up prints, drawings and other data furnished by the Contractor, Manufacturer and/or City. AECOM will provide one signed and sealed copy of the record drawings as well as digital files of the record drawings on CD. This will include incorporation of the suitable digital survey files developed by the Contractor indicating the as-built locations of facilities.

III. Compensation

CONSULTANT shall be paid in accordance with Section 5 of the Agreement. A labor budget showing the estimated number of hours and associated fee for the tasks described within the Scope of Services and subconsultant fees is presented as Exhibit II. Exhibit II includes an estimated budget for all other project costs, which are expected to include copying costs, postage, and long-distance telephone calls. These budgeted amounts were used to determine the total project not to exceed budget of \$173,766.61. This includes a contingency budget of \$15,800 to be used on written authorization from the City.

IV. City's Responsibilities

The CITY shall be responsible for providing the following in a timely manner so CONSULTANT can complete its work and not delay the performance of services.

1. Provide all criteria and full information as to CITY's requirements for the Project, including design objectives, constraints, capacity and performance requirements, flexibility, and expandability, and furnish copies of all design and construction standards which CITY will require to be used on/included in the Project.

2. Other plant operational data as requested by CONSULTANT.
3. Provide all field surveys that are currently available, including a vertical bench mark within the limits of the project site, required for design of the facilities as determined by the CONSULTANT. Provide operations and maintenance staff availability in order to assist Surveyor in the potholing and location of existing utilities, structures and process equipment if necessary.
4. Promptly review, comment on, and return CONSULTANT's submittals.
5. Execute, process, and obtain all required permits and approvals.
6. Pay all permit and approval fees.
7. Promptly advise CONSULTANT when the CITY becomes aware of any defect, deficiency or changed condition.

V. Deliverables (CONSULTANT)

CONSULTANT will provide the CITY the following deliverables:

1. Seven (7) half size paper and one (1) electronic copy of the 60% plans and selected technical specifications for the Conserv II WRF Mixer Improvements. This will include a revised opinion of probable cost.
2. Seven (7) half size paper and one (1) electronic copy of the 90% plans and technical specifications for the Conserv II WRF Mixer Improvements. This will include a revised opinion of probable cost.
3. Seven (7) half size paper and one (1) electronic copy of the 100% plans and technical specifications for the Conserv II WRF Mixer Improvements. This will include a revised opinion of probable cost.
4. One (1) paper and one (1) electronic copies of the bid set plans and specifications for the Conserv II WRF Mixer Improvements.
5. One (1) paper and one (1) electronic copies of the conformed documents for the selected design.
6. Two (2) full size paper copies and one (1) electronic copy Record Drawing set plans for the Conserv II WRF Treatment Mixer Improvements.

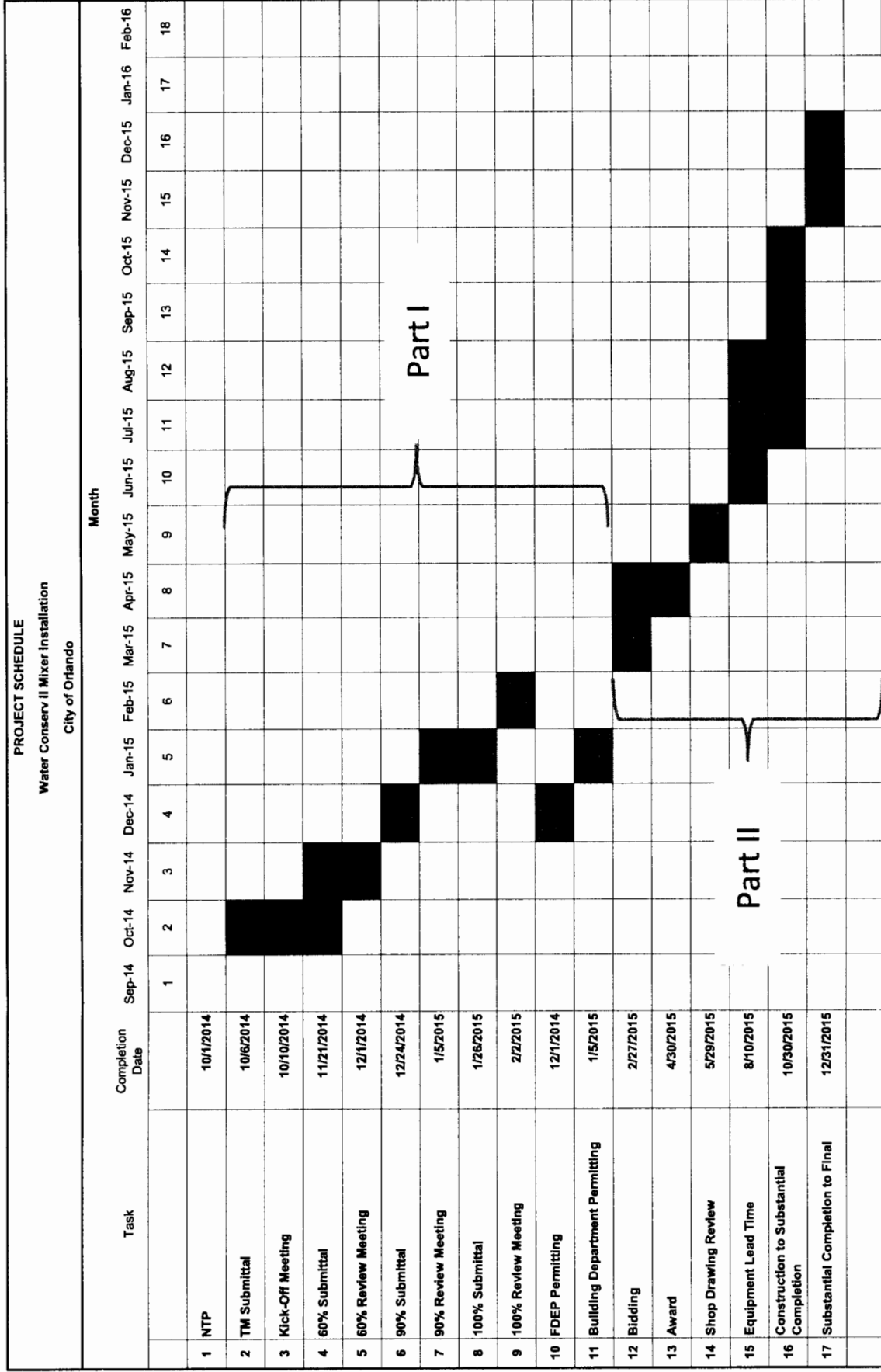
VI. Services Not Included

The following services are not included in this Scope of Services;

1. Start-up Services
2. Operations and Maintenance Manuals
3. Modification of the Operating Protocol

VII. Period of Service

A preliminary project schedule is attached. This project will be divided into 2 Parts. Part I will cover the analysis of mixer technology, preliminary and final design and permitting of the Conserv II mixers. Part II will cover services during bidding and construction. Both parts are covered under this Authorization. This project assumes a notice to proceed from the CITY in October of 2014 with completion of the mixer contract documents in February 2015.



**AECOM Exhibit II - Project Budget Summary
For
Water Conserv II Improvements**

**Amendment XII - Mixer Technical Evaluation, Final Design and
Construction Services**

Company	Fee
AECOM (Labor Fee)	\$ 33,828.00
Subconsultant Fees	
EDA	\$ 41,931.01
Hazen & Sawyer	\$ 68,185.00
Buchhiet	\$ 1,200.00
 Subconsultant Markup (10%)	 \$ 11,131.60
Other Direct Project Costs (AECOM)	\$ 1,691.00
Owner Controlled Contingency	\$ 15,800.00
 Total Not To Exceed Amendment XII	 \$ 173,766.61

AECOM Project Budget

City of Orlando

City of Orlando Conserv II Improvements
Amendment XII - Mixer Technical Evaluation, Final Design and Construction Services

Task Description	Personnel Hours						Budget					
	Principle	Senior Engineer II	Senior Engineer I	Assistant Engineer I	CAD II	Clerical	Total Hours	Labor	Subconsultants	ODCs/Subconsultant Markup	Total Non-Labor	Total
Task Group 1												
Project Management	6		6	8			20	\$ 2,822.00		\$ 141.00	\$ 141.00	\$ 2,963.00
Subtotal	6	-	6	8	-	-	20	\$ 2,822	-	\$ 141.00	\$ 141.00	\$ 2,963.00
Task Group 2												
Technical Memorandum and Final Design	8	10	12	60	40	20	150	\$ 14,640.00		\$ 732.00	\$ 732.00	\$ 15,372.00
Subtotal	8	10	12	60	40	20	150	\$ 14,640	-	\$ 732.00	\$ 732.00	\$ 15,372.00
Task Group 3												
Bidding Services	4	-	10	20	-	4	38	\$ 4,240		\$ 212.00	\$ 212.00	\$ 4,452.00
Subtotal	4	-	10	20	-	4	38	\$ 4,240	-	\$ 212.00	\$ 212.00	\$ 4,452.00
Task Group 4												
Construction Services	10	4	20	70	4		108	\$ 12,126.00		\$ 606.00	\$ 606.00	\$ 12,732.00
Subtotal	10	4	20	70	4	-	108	\$ 12,126	-	\$ 606.00	\$ 606.00	\$ 12,732.00
Task Group 5												
Subconsultant Services												
EDA									\$ 41,931.01	\$ 4,193.10	\$ 46,124.11	\$ 46,124.11
Hazen & Sawyer									\$ 68,185.00	\$ 6,818.50	\$ 75,003.50	\$ 75,003.50
Buchhiet									\$ 1,200.00	\$ 120.00	\$ 1,320.00	\$ 1,320.00
Subtotal	-	-	-	-	-	-	-	\$ -	\$ 111,316.01	\$ 11,131.60	\$ 122,447.61	\$ 122,447.61
Owner Controlled Contingency												\$ 15,800.00
Total Not To Exceed	28	14	48	158	44	24	316	\$ 33,828	\$ 111,316.01	\$ 12,822.60	\$ 124,138.61	\$ 173,766.61

Amounts shown are revenue.

Personnel Category	\$/HR ⁽¹⁾
Principal	\$225.00
Senior Engineer II	\$150.00
Senior Engineer I	\$120.00
Assistant Engineer I	\$94.00
CAD II	\$74.00
Clerical	\$65.00

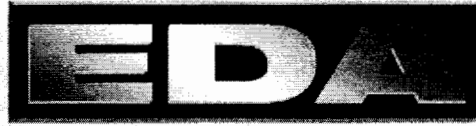
(1) Labor costs are based on a raw labor multiplier of 3.0.

Subconsultant Proposals

❖ EDA

❖ Buchhiet

❖ Hazen & Sawyer



October 20, 2014

Electrical Design Associates

Mr. David Ammerman, P.E.

AECOM

150 N. Orange Avenue, Suite 200
Orlando, FL 32801

Re: Conserv 2 WRF – Mixing System
Orlando, Florida

Dear Mr. Ammerman;

We are pleased to submit our proposal for electrical engineering services for the above project. The following serves to provide an overview of the engineering services Electrical Design Associates, Inc. (EDA) intends to furnish on the above referenced project to AECOM Technical Services, Inc., (AECOM). This letter contract represents an overview of the work and provides the fee amounts. Your signature on this agreement will serve as your letter of intent. EDA shall perform the following services for the CITY for the Conserv 2 Water Reclamation Facility (WRF) addition of proposed Big Bubble Mixing System.

It is our understanding that the Big Bubble Mixing System for the Aeration Zones will provide mixing in liquids by firing short bursts of compressed air through engineered nozzles affixed to the floor of a tank. This compressed air is intermittently fired in fractional second durations to mix the tank. The relatively small surface area of the large gas volumes and their rapid upward velocity enable Big Bubble Mixing System to transfer an insignificant amount of oxygen to the wastewater, providing efficient anaerobic/anoxic mixing. The design will include one (1) Master Control panel and ten (10) Valve Control Panels (VPs) mounted at the tank wall. The Master Control Panel will include the necessary starters for the three (3) blowers. Our scope shall also include:

Task Group 1.0– Design Services

1. Coordination with the Division 11 Specification as it relates to the control panels for the purpose of compliance with City of Orlando Standards.
2. Electrical and Instrumentation design associated with the proposed Master Control panel and the compressors, located on a skid between basins 1-4 and 5-10. Valve control panels are to be located on the upper deck at each basin identified, two (2) at Basin 1, two (2) at Basin 2, Two (2) at Basin 5, two (2) at Basin 6, One (1) at Basin 9 and One (1) at Basin 10. The Valve Control panels will be interfaced with the Master Control panel. Design shall include a 480Volt feeder to the master Control panel and 120V feeder to each Valve Control panel and solenoid valve at the receiving tanks. The design of the panels will be the responsibility of Division 11.
3. EDA shall provide electrical and Instrumentation design associated with the proposed Master Control Panel tie-in to the plant SCADA system via fiber. All terminations and programming at the plant SCADA panel to be completed by the Industrial Automation Group.
4. Preliminary Sheet List

8401 LAKE WORTH ROAD
SUITE 221
LAKE WORTH, FL 33467

4763 S. CONWAY ROAD
SUITE E
ORLANDO, FL 32812

3001 N. ROCKY POINT DRIVE E,
SUITE 200
TAMPA, FL 33607

- E-1 Symbols, Notes and Abbreviations
- E-2 Blower Building Single Line Diagram
- E-3 Wiring Interconnect Wiring Diagram
- E-4 Basins 1 thru 4 plan View
- E-5 Basins 5 thru 10 Plan View
- E-6 Compressor Skid Plan View
- E-7 Electrical Details
- E-8 Electrical Details

5. Deliverables:

- a. 60% Design Drawings and specifications and Opinion of Costs
- b. 90% Design Drawings and specifications and Opinion of Costs
- c. 100% Design Drawings, specifications and Opinion of Costs
- d. EDA shall submit one (1) complete set; all additional reproduction shall be completed by others.

6. Meetings:

- a. EDA shall attend review meetings at the 90% and 100% stage of completion.

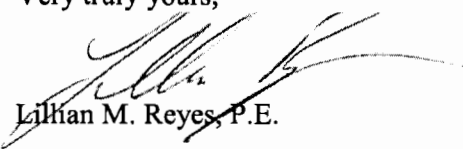
Task Group 2.0- Permitting Services

- 1. EDA shall provide signed and sealed documents for submittal to the Building Department and incorporate requested changes into the final bid documents such that construction permits may be ready for pickup by the contractor after award of the project.

Services not specifically defined are not included. Additional services can be provided under separate Scope of Service(s) or by an amendment to this Scope of Services. Services performed will be on an as-directed basis in accordance with a written Notice to Proceed. Services will be performed hourly with a not to exceed value. Travel to and from the site and other direct costs are included in the overhead rate and will not be billed as a separate line item. Our cost not to exceed fee for this work shall be as follows:

Task Group 1:	\$ 21,050.76
Task Group 2:	\$ 1,271.60
Total:	\$ 22,322.36

Very truly yours,


Lilhan M. Reyes, P.E.

ACCEPTED _____ DATE _____

Enclosure

Conserv 2 WRF – Big Bubble Mixing System Orlando, Florida											Date: 10/20/2014	
Estimate of Work Effort & Fee												
	Principal		Designer		Field Supervisor		Cadd Technician		Clerical/Admin		Totals	
	Hourly Rate		Hourly Rate		Hourly Rate		Hourly Rate		Hourly Rate			
60% Submittal												
Meetings	4	\$ 797.64	0	\$ -		\$ -		\$ -	0	\$ -	4	\$ 797.64
Design	16	\$ 3,190.56	20	\$ 3,121.20		\$ -		\$ -	0	\$ -	76	\$ 9,548.56
Specifications	4	\$ 797.64	0	\$ -		\$ -		\$ -	0	\$ -	4	\$ 797.64
Subtotal:	24	\$ 4,785.84	20	\$ 3,121.20		\$ -		\$ -	0	\$ -	84	\$ 11,143.84
90% Submittal												
Meetings	4	\$ 797.64	0	\$ -		\$ -		\$ -	0	\$ -	4	\$ 797.64
Design	12	\$ 2,392.92	6	\$ 936.36		\$ -		\$ -	0	\$ -	38	\$ 4,947.68
Specifications	4	\$ 797.64	0	\$ -		\$ -		\$ -	0	\$ -	4	\$ 797.64
Subtotal:	20	\$ 3,988.20	6	\$ 936.36		\$ -		\$ -	0	\$ -	46	\$ 6,542.96
Final Submittal												
Meetings	2	\$ 398.82	0	\$ -		\$ -		\$ -		\$ -	2	\$ 398.82
Design	8	\$ 1,595.28	0	\$ -		\$ -		\$ -	12	\$ 971.04	20	\$ 2,566.32
Specifications/Opinion of Costs	2	\$ 398.82	0	\$ -		\$ -		\$ -		\$ -	2	\$ 398.82
Subtotal:	12	\$ 2,392.92	0	\$ -		\$ -		\$ -	12	\$ 971.04	24	\$ 3,363.96
Task 1.0 total:	56	\$ 11,166.96	26	\$ 4,057.56		\$ -		\$ -	72	\$ 5,826.24	154	\$ 21,050.76
TASK 2.0 - Permitting												
Meetings	2	\$ 398.82		\$ -		\$ -		\$ -		\$ -	2	\$ 398.82
Dwg revisions	2	\$ 398.82	2	\$ 312.12		\$ -		\$ -	2	\$ 161.84	6	\$ 872.78
Task 2.0 total:	4	\$ 797.64	2	\$ 312.12		\$ -		\$ -	2	\$ 161.84	8	\$ 1,271.60
Total Not to Exceed Fee:	60	\$ 11,964.60	28	\$ 4,369.68		\$ -		\$ -	74	\$ 5,988.08	162	\$ 22,322.36



Electrical Design Associates

October 20, 2014

Mr. David Ammerman, P.E.
AECOM
150 N. Orange Avenue, Suite 200
Orlando, FL 32801

Re: Conserv 2 WRF – Big Bubble Mixing System.
Orlando, Florida

Dear Mr. Ammerman;

We are pleased to submit our proposal for electrical engineering services for the above project. The following serves to provide an overview of the engineering services Electrical Design Associates, Inc. (EDA) intends to furnish on the above referenced project to AECOM Technical Services, Inc., (AECOM). This letter contract represents an overview of the work and provides the fee amounts. Your signature on this agreement will serve as your letter of intent. EDA shall perform the following services for the CITY for the Conserv 2 Water Reclamation Facility (WRF) addition of proposed Big Bubble Mixing System.

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Task Group 3.0 – Bid Phase Services

1. EDA shall attend the Pre-Bid Meeting.
2. EDA shall respond to any questions from bidders and prepare and issue addenda as required to interpret, clarify or expand the Bidding Documents.
3. EDA shall prepare Conformed Documents resulting from any and all addenda items. EDA shall submit one (1) complete set; all additional reproduction shall be completed by others.

Task Group 4.0 – Construction Administration

1. EDA shall assist AECOM in the preparation of two (2) copies of a conformed set of Contract Documents for the City and one (1) reproducible set for the recommended Contractor. All additional reproduction by others.
2. EDA shall attend a preconstruction conference with the City, selected Contractor, subcontractors, and regulatory agencies.

8401 LAKE WORTH ROAD
SUITE 221
LAKE WORTH, FL 33467

4763 S. CONWAY ROAD
SUITE E
ORLANDO, FL 32812

3001 N. ROCKY POINT DRIVE E,
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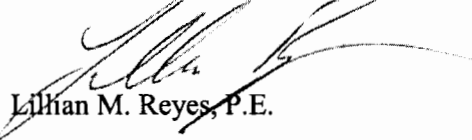
3. EDA shall attend coordination meetings with the vendor and with the City's Industrial Automation Group (IAG) following Notice to Proceed and during the submittal process.
4. EDA shall attend progress meetings with Construction management and the contractors during the life of the project and as per the attached man-hour breakdown.
5. EDA shall conduct site visits to observe construction of the. The site visits will be made at periods appropriate to the various stages of construction to observe, as an experienced and qualified professional, the progress and quality of the executed work of Contractor(s) and to determine in general if such work is proceeding in accordance with the Contract Documents. Prepare trip reports to document observations made during these inspections. ENGINEER shall not be responsible for the means, methods, techniques, sequences or procedures of construction selected by Contractor(s) or the safety precautions and programs incident to the work of Contractor(s). ENGINEER's efforts will be directed toward providing a greater degree of confidence for OWNER that the completed work of Contractor(s) will conform to the Contract Drawings, but ENGINEER shall not be responsible for the failure of Contractor(s) to perform the work in accordance with the Contract Drawings. During such visits and on the basis of on-site observations, ENGINEER shall keep OWNER informed of the progress of the work, shall endeavor to guard OWNER against defects and deficiencies in such work and may disapprove or reject work failing to conform to the Contract Documents.
6. Issue all instructions of OWNER to Contractor(s); issue necessary interpretations and clarifications of the Contract Documents; have authority, as OWNER's representative to act as initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the work thereunder, and make decisions on all claims of OWNER and Contractor(s) relating to the acceptability of the work or the interpretation of the requirements of the Contract Documents pertaining to the execution and progress of the work. The ENGINEER shall render all interpretations or decisions in good faith and in accordance with the requirements of the Contract Documents.
7. Review and approve (or take other appropriate action in respect of) Shop Drawings and samples, the results of tests and inspections and other data which each Contractor is required to submit, but only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents (but such review and approval or other action shall not exceed to means, methods, sequences, techniques or procedures of construction or to safety precautions and programs incident thereto); and receive and review (for general content as required by the Specifications) maintenance and operating schedules and instruction, guarantees, bonds and certificates of inspection which are to be assembled by Contractor(s) in accordance with the Contract Documents.
8. EDA shall conduct a substantial completion site visit and develop a punch list of items to be corrected by the Contractor.
9. EDA shall conduct a final completion site visit to determine if the punch list items have been completed in accordance with the Contract Documents and if the Contractor's obligations are fulfilled, and recommend final payment to the Contractor.

10. EDA shall prepare one (1) copy and an electronic file of the record drawings for the City incorporating changes made during construction based on record information furnished by the Contractor.

Services not specifically defined are not included. Additional services can be provided under separate Scope of Service(s) or by an amendment to this Scope of Services. Services performed will be on an as-directed basis in accordance with a written Notice to Proceed. Services will be performed hourly with a not to exceed value. Travel to and from the site and other direct costs are included in the overhead rate and will not be billed as a separate line item. Our cost not to exceed fee for this work shall be as follows:

Task Group 3:	\$ 1,907.40
Task Group 4:	<u>\$ 17,701.25</u>
Total:	\$ 19,608.65

Very truly yours,



Lillian M. Reyes, P.E.

ACCEPTED _____ DATE _____

Enclosure

AEC-14-004G.Rev2

Conserv 2 WRF – Big Bubble Mixing System
Orlando, Florida

Estimate of Work Effort & Fee

TASK 3.0 - Bidding	hours	Total	hours	Total	hours	Total	hours	Total	hours	Total
Meetings	2	\$ 398.82	-	\$ -	-	\$ -	2	\$ 398.82	2	\$ 398.82
Addenda Preparation	2	\$ 398.82	312.12	\$ 312.12	-	\$ -	2	\$ 312.12	6	\$ 872.78
Dwg revisions	-	\$ -	312.12	\$ 312.12	-	\$ -	4	\$ 323.68	6	\$ 635.80
Task 3.0 total:	4	\$ 797.64	624.24	\$ 624.24	0	\$ -	6	\$ 485.52	14	\$ 1,907.40
TASK 4 - Construction Services	hours	Total	hours	Total	hours	Total	hours	Total	hours	Total
Conformed Documents	1	\$ 199.41	-	\$ -	0	\$ -	0	\$ -	1	\$ 199.41
Precon Meeting	2	\$ 398.82	-	\$ -	2	\$ 184.96	0	\$ -	4	\$ 583.78
IAG Coordination Meetings	12	\$ 2,392.92	-	\$ -	0	\$ -	0	\$ -	12	\$ 2,392.92
Progress Meetings	8	\$ 1,595.28	-	\$ -	24	\$ 2,219.52	0	\$ -	33	\$ 3,993.98
Shop Drawing Review	16	\$ 3,190.56	-	\$ -	4	\$ 369.92	0	\$ -	24	\$ 3,814.80
Issue Clarifications	8	\$ 1,595.28	-	\$ -	4	\$ 369.92	0	\$ -	12	\$ 1,965.20
Site Visits	12	\$ 2,392.92	-	\$ -	20	\$ 1,849.60	0	\$ -	32	\$ 4,242.52
Asbuilts	0	\$ -	-	\$ -	2	\$ 184.96	4	\$ 323.68	6	\$ 508.64
Task 4 total:	59	\$ 11,765.19	-	\$ -	56	\$ 5,178.88	4	\$ 323.68	124	\$ 17,701.25
Total Not to Exceed Fee:	63	\$ 12,562.83	624.24	\$ 624.24	56	\$ 5,178.88	10	\$ 809.20	138	\$ 19,608.65



Buchheit Associates, Inc. Surveyors & Mappers Not to Exceed Fee
Conserv II Misc. Services
October 9, 2014

TASK	Survey Project Manager		Surveyor & Mapper		Survey Crew		Office Technician		Other Expenses	Subtotal Amount
	hours	rate	hours	rate	hours	rate	hours	rate		
Miscellaneous Services	1	\$156.00	0	\$110.76	5	\$149.76	3.7846	\$78.00		\$1,200.00
Total Not to Exceed	\$1,200.00									

Miscellaneous Surveying Services:

Bench Run to determine field verified difference between National Geodetic Vertical Datum of 1929 (NGVD 29) and North American Vertical Datum of 1988 (NAVD 88).
Prepare certified report to detail the Datum shift.

The objective is to provide information for Engineer to be able to utilize data from previous surveys.

Prepared by :

Kimberly A. Buchheit, P.S.M., President 10/9/2014

Kimberly A. Buchheit, P.S.M., President
BUCHHEIT ASSOCIATES, INC. SURVEYORS & MAPPERS
427 Center Pointe Circle, Suite 1811
Altamonte Springs, FL 32701
Phone (407) 331-0505, Fax (407) 331-3266

Approved By:

David Ammerman
AECOM
150 N. Orange Avenue, Suite 200
Orlando, FL 32801
Phone: 407-513-8213

2014 ConservII Misc. (Job No. XXXX)

EXHIBIT “A-1”

SUBCONSULTANT’S PROPOSAL FOR ENGINEERING SERVICES

AMENDMENT NO. X TO TASK ORDER NO. X

Between

AECOM Technical Services, Inc.

and

Hazen and Sawyer, P.C.

for

CITY of Orlando – Water Conserv II WRF

**Treatment Improvements - Mixer Addition Design, Permitting and Construction Phase
Services**

This Task Order is attached to, made part of and incorporated by reference into the Agreement, dated February 26, 2010, between AECOM USA, Inc. (AECOM) and Hazen and Sawyer, P.C. (SUBCONSULTANT) for professional services associated with the City of Orlando Water Conserv II Water Reclamation Facility Treatment Improvements (PROJECT).

BACKGROUND

The City of Orlando, Florida (CITY) plans to implement treatment improvements to the Water Conserv II Water Reclamation Facility (WRF). AECOM is under contract to the CITY as the design engineer for the PROJECT. The PROJECT is to include the installation of up to 20 mixers in the anoxic zones of Aeration Basin Nos. 1 through 10. This PROJECT was originally to be part of the Phase II improvements that were planned for the facility. The CITY has received grant funding for the filter portion of the Phase II improvements and would like to proceed with final design and construction of the mixers. AECOM desires assistance from SUBCONSULTANT during the design and construction phases of the PROJECT.

SCOPE OF SERVICES

SUBCONSULTANT will furnish professional services to AECOM in accordance with this Scope of Services.

Task 1 – Mixer Final Design and Permitting

1. SUBCONSULTANT will develop a Technical Memorandum (TM) comparing the Invent type mixer and big bubble compressed air mixing. SUBCONSULTANT will determine location, size and number of mixers for Aeration Basin Nos. 1, 2, 5, 6, 9 and 10. SUBCONSULTANT will obtain revised design information from Invent as well as design information from Enviromix (big bubble mixing). SUBCONSULTANT will develop a present worth evaluation. SUBCONSULTANT will include a schedule for design and construction in the TM.

2. SUBCONSULTANT will coordinate with AECOM's structural engineer. AECOM will be responsible for design of the aeration system modifications. SUBCONSULTANT will coordinate with AECOM on aeration system modifications. SUBCONSULTANT will coordinate with the electrical engineer on location, HP, and motor requirements.
3. SUBCONSULTANT will develop the process/mechanical drawings for the mixer installation and submit for review at the 60, 90 and 100% design levels. It is assumed that the design will utilize big bubble mixing based on a single manufacturer. If the CITY decides to pursue another manufacturer or technology, then additional design phase services may be necessary to accommodate the mixers. It is assumed that twelve (12) process mechanical drawings will be developed as listed below.
 - Six (6) plan view sheets (one each for Aeration Basin Nos. 1,2, 5, 6, 9, and 10)
 - Two (2) section view sheets (one for Aeration Basin Nos. 1/2 and one for Aeration Basin Nos. 5/6/9/10)
 - Two (2) compressor drawings (plan and section view)
 - Two (2) process mechanical detail sheets
 SUBCONSULTANT will not be responsible for general, civil, yard piping, structural, electrical or instrumentation drawings.
4. SUBCONSULTANT will develop the mixer specification and submit for review at the 60, 90 and 100% design levels. It is assumed that the specification will be developed for big bubble mixing based on a single manufacturer. If the CITY decides to pursue another manufacturer or technology, then additional design phase services may be necessary to accommodate the mixers
5. SUBCONSULTANT will attend the 60, 90 and 100% review meetings with the CITY.
6. SUBCONSULTANT will assist AECOM in responding to up to two (2) RAIs from FDEP and two (2) RAIs from the Building Department for the permit applications.

Task 2 – Bidding and Construction

1. SUBCONSULTANT will provide bid-ready process mechanical mixer installation drawings and mixer specifications for inclusion with the contract documents.
2. SUBCONSULTANT will assist AECOM in responding to up to three (3) RAIs during the bidding process
3. SUBCONSULTANT will review and provide comments for the shop drawing for the mixing equipment.
4. SUBCONSULTANT will review and provide comments for the manufacturer's O&M manual for the mixing equipment.
5. SUBCONSULTANT will perform three (3) site visits during construction. One progress inspection during construction, one to observe performance testing, and one for the substantial completion site visit.

The following tasks will be performed by AECOM:

1. AECOM will revise the previous cost estimate based on the revised number and location of mixers. AECOM will provide the 60, 90 and 100% cost estimates.
2. AECOM will be responsible for the drawings and other contract documents with the exception of the mixer equipment process mechanical drawings and mixer specification.

3. AECOM will be responsible for the design of the structural supports for the mixers and/or concrete pad and roof for the big bubble mixing compressors and receivers.
4. AECOM will be responsible for the diffuser anchoring design and any modifications to the aeration piping or diffusers.
5. AECOM will be responsible for preparation of any necessary permit applications.
6. AECOM will be responsible for bidding assistance to the CITY
7. AECOM will be responsible for amending the CITY's Plant Operation and Maintenance manual.

DELIVERABLES

Task 1:

1. Draft and Final Mixer Technical Memorandum in Microsoft Word and PDF format
2. 60%, 90%, 100% and bid-ready mixer process/mechanical drawings electronically in AutoCAD for incorporation into AECOM's planset.
3. 60%, 90%, 100% and bid-ready specification for the mixing equipment in Microsoft Word and PDF format.

Task 2:

1. Shop drawing comments for the mixing equipment.
2. Mixer O&M manual comments.
3. Punch list comments for the substantial completion site visit.

COMPENSATION

SUBCONSULTANT proposes to undertake this work on a time and materials basis with a not to exceed limit of \$68,185 as shown in the following **Fee Breakdown**. The upper limit will not be exceeded without written approval of AECOM. Monthly invoices will be issued for work completed in the previous month.

SCHEDULE

The schedule for these services will be based on the schedule developed by AECOM for this project.

Fee Breakdown
City of Orlando - Conserv II Amendment

	Vice President	Senior Associate Engineer	Associate Engineer	Senior Principal Engineer	Assistant Engineer	Drafter/Graphics	Admin/Support	Task Hours	Estimated Task Cost
Mixer Final Design, Permitting, and Construction Phase Services									
1 Mixer Technical Memorandum - compare mixers, PW evaluation, schedule	\$235	\$189	\$168	\$124	\$102	\$122	\$75	2	\$5,395
2 Coordination with structural, electrical/I&C, diffuser modifications, civil	2	2	18	6	6			36	\$2,337
3 Develop the process/mechanical drawings at the 60, 90 and 100% design levels - 12 sheets	2	3	36	16	20	122		199	\$26,002
4 Develop the mixer specification and submit for review at the 60, 90 and 100% design levels.	2	3	36	12	12			69	\$10,122
5 Attend the 60, 90 and 100% review meetings with the CITY.			16					16	\$2,682
6 Assist AECOM in responding to up to two RAI from the FDEP and two from Building Dept.			16					18	\$2,832
7 Provide bid-ready specification and drawings for the mixers for inclusion with the contract documents.			8	8		4	2	22	\$2,974
8 Assist AECOM in responding to up to three RAI during the bidding process			8	4	4		4	20	\$2,549
9 Review and provide comments for the shop drawing for the mixing equipment.		2	16	8	4		2	32	\$4,635
10 Review and provide comments for the mixing equipment O&M manual.		2	16	8	4		2	32	\$4,635
11 Perform three site visits during construction. (progress, testing and substantial completion site visit)			24					24	\$4,022
Total Hours	6	12	202	70	50	126	18	484	
Estimated Total Cost	\$1,409	\$2,386	\$33,856	\$8,715	\$5,115	\$15,352	\$1,353		\$68,185
Estimated Total ODC									\$0
Total Items Not to Exceed	\$1,409	\$2,386	\$33,856	\$8,715	\$5,115	\$15,352	\$1,353	\$0	\$68,185