Agenda Item # 3K-8

PALM BEACH COUNTY BOARD OF COUNTY COMMISSIONERS <u>AGENDA ITEM SUMMARY</u>

Meeting Date: April 21, 2015 Consent [X]

Public Hearing []

Regular 🛛

Department: Water Utilities Department

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Work Authorization No. 1 with Globaltech, Inc. (R2015-0315) for the Water Treatment Plant No. 11 (WTP 11) Degasifier and Clearwell Improvements (Project) in the amount of \$1,051,189.81.

Summary: On March 10, 2015, Board of County Commissioners (BCC) approved the Optimization and Improvements Design-Build Services Contract with Globaltech, Inc. Work Authorization No. 1 provides for upgrades to the air filtration system for the degasifier blowers, replacement of the degasifier packing and optimization of the clearwell chemical feed systems at WTP 11. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The contract with Globatech, Inc. provides for SBE participation of 75% overall. This Work Authorization includes 97.04% overall SBE participation. The cumulative SBE participation, including this Work Authorization is 97.04% overall. Globaltech, Inc. is a Palm Beach County company. This project is included in the FY15 Capital Improvement Plan adopted by the BCC. (WUD Project No. 14-073) <u>District 6</u> (JM)

Background and Justification: The proposed improvements are based upon the WTP 11 clearwell and post-treatment evaluation undertaken by Kimley-Horn and Associates, Inc. The Project goals are to reduce turbidity while increasing hardness and alkalinity to improve the stabilization of the post-treated water. This will reduce flushing of the distribution system and optimize the water to reduce lead and copper levels at the customer's tap. The WTP 11 reverse osmosis treated water is currently softer than the County's other WTP and will be raised to comparable levels. The cost of additional chemicals to increase hardness and alkalinity will be offset by the savings in reduced flushing. Globaltech, Inc. will provide builders risk insurance prior to commencement of construction.

Attachments:

- 1. Two (2) Original Work Authorizations No. 1
- 2. Location Map

Recommended By:	Jim States	4-9-15	
	ODepartment Director	Date	
Approved By:	Patty Hidle	4/20/15	
	Assistant County Administrator	Date '	

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2015	2016	2017	2018	2019
Capital Expenditures External Revenues Program Income (County) In-Kind Match County	<u>\$1,051,189</u> <u>0</u> <u>0</u> <u>0</u>	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
NET FISCAL IMPACT	<u>\$1,051,189.</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Budget Account No.: Fund <u>4011</u> Dept <u>721</u> Unit <u>W026</u> Object <u>6541</u>

Reporting Category <u>N/A</u>

Is item Included in Current Budget Yes X No

B. Recommended Sources of Funds/Summary of Fiscal Impact:

One (1) time capital expenditure from user fees with balances brought forward.

C. Department Fiscal Review:

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III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

ÔFMB

Biohecler

B. Legal Sufficiency:

Assistant County Attorney

C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.

Attachment

WORK AUTHORIZATION NO. 01

Palm Beach County Water Utilities Department Water, Wastewater & Reclaimed Water Improvements Design/Build Contract

Project No.: <u>WUD 14-073</u> District: <u>6</u> Budget Line Item No.: <u>4011-721-W026-6541</u> Project Title: WTP 11 – <u>Degasifier and Clearwell Improvements</u>

THIS AUTHORIZATION #_01____ to the Contract for Water, Wastewater & Reclaimed Water Improvements Design/Build Services dated

(R______), by and between Palm Beach County and the Design-Build Entity identified herein, is for the Design/Build Services of this Work Authorization. The Design-Build Entity provides for 75% SBE participation overall. This Work Authorization includes <u>97.04</u>% overall participation. The cumulative proposed SBE participation, including this authorization is <u>97.04</u>% overall. Additional authorizations will be utilized to meet or exceed the stated overall participation goal.

- 1. Design-Build Entity: Globaltech, Inc.
- 2. Address: 6001 Broken Sound Parkway NW, Suite 610, Boca Raton, FL 33487
- 3. Description of Services (Scope of Work) to be provided by the Design-Build Entity:

See ATTACHMENT - A.

4. Services completed by the Design-Build Entity to date:

See ATTACHMENT - G.

 Design-Build Entity shall begin work promptly or deliver ordered materials within the following calendar days from the receipt of Building Permit and Notice to Proceed with construction:

Substantial Completion <u>270</u> Calendar Days Final Construction Completion <u>330</u> Calendar Days Liquidated damages will apply as follows: \$<u>1,000</u> per day past substantial completion date. \$<u>500</u> per day past final completion date. (For Liquidated Damages Rates see ATTACHMENT - B)

- 6. The compensation to be paid to the Design-Build Entity for providing the requested services in accordance with the Guaranteed Maximum Price is \$_1,051,189.81
- 7. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated ______ remain in full force and effect.

WORK AUTHORIZATION NO. 01

Project No.: WUD 14-073

Project Title: WTP 11 – Degasifier and Clearwell Improvements

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Sharon R. Bock, Clerk & Comptroller, Palm Beach County

ATTEST:

Signed:

Palm Beach County, Board of County Commissioners

Signed:______ Shelley Vana, Mayor

Typed Name:

Deputy Clerk

Date

Jas

Approved as to Form and Legal Sufficiency

Signed: _____

Typed Name: _____ County Attorney

CONTRACTOR: Globaltech, Inc.

ATTEST

(Signature)

Bernard P. Gandy, P.E. / President & CFO (Name and Title)

Date

Witness

Richard D. Olson, P.E. / Proposal Manager

(CORPORATE SEAL)

(Name and Title)

.

2

LIST OF ATTACHMENTS

WORK AUTHORIZATION NO. 01

Palm Beach County Water Utilities Department Water, Wastewater & Reclaimed Water Improvements Design/Build Contract

ATTACHMENT - A	Scope of Work & Compensation
ATTACHMENT - B	Rate for Liquidated Damages
ATTACHMENT - C	Public Construction Bond
ATTACHMENT - D	Form of Guarantee
ATTACHMENT - E	Work Authorization Schedule of Bid Items
ATTACHMENT - F	SBE Schedule 1 & Schedule 2
ATTACHMENT - G	Authorization Status Report - Summary & Status of Authorizations
ATTACHMENT - H	Authorization Status Report - Summary of SBE/Minority Business Tracking
ATTACHMENT - I	Location Map
ATTACHMENT - J	Design-Build Criteria Report
ATTACHMENT - K	Vendor Quotes

ATTACHMENT A

WORK AUTHORIZATION NO. 1

Palm Beach County Water Utilities Department

Optimization and Improvements Design-Build Contract

SCOPE OF WORK FOR

WTP 11 – Degasifier and Clearwell Improvements

INTRODUCTION

Palm Beach County (County) entered into an agreement entitled Optimization and Improvements Design-Build Contract Project No. <u>WUD 14-071</u> (CONTRACT) with <u>Globaltech, Inc.</u> (Design-Build Entity) to provide design-build services for various general activities on the Optimization and Improvements Design-Build Contract dated <u>March 10, 2015</u>, (R <u>2015-0315</u>). This Work Authorization will be performed under that CONTRACT.

This Work Authorization encompasses providing services related to the following tasks at WTP 11:

- Modification of three existing blower enclosures to expand filter area and installation of filter media with a minimum MERV rating of 8.
- Installation of a 1½" PVC membrane permeate supply line from existing tap on raw water bypass line to the existing odor scrubber make up water supply connection. Also included is replacement of the existing rotameter, 1" solenoid valve, and associated valves in -+the make-up line.
- Modification to the existing sodium hypochlorite feed lines at the degasifier clearwell. The sodium hypochlorite rotameters are to be relocated close to each other and the two feed lines diverted to the sump of each degasifier in new ring diffusers. Existing sodium hypochlorite feed lines are to be removed.
- Installation of two new booster pumps with variable frequency drives (VFDs) for the carrier water system for the existing carbon dioxide feed system. Water for the booster pumps will be provided by two new 6-inch PVC lines tapped into the north and south sides of the clearwell. Two new 3-inch PVC lines will be installed from the pump discharge to the two existing carbon dioxide feed panels. From the carbon dioxide feed panels, a 3-inch line will be installed into the clearwell. The existing carbon dioxide diffusers of each degasifier will be relocated from inside the degasifier discharge pipes to a location in-front of discharge pipes.
- Installation of a new electrical feed from the high service pump electrical building to the clearwell to provide power to the new equipment. Installation of a new

remote I/O panel at the clearwell due to the limited capacity of the existing system.

- Modification of the existing liquid lime feed system at the clearwell. The two
 existing lime solution feed lines will be extended so that lime can be added in the
 serpentine channels of the clearwell as identified in the Kimley Horn report. Two
 new 10 hp mixers will be added at the lime injection points.
- Modification of the ammonia feed lines. The ammonia feed lines will be extended to the location identified in the Kimley Horn report. Dilution water will be routed from the carbon dioxide carrier water booster pumps to the injection points. Two ammonia analyzers will be installed. One shall be located at the high service pump electrical building and the other in the membrane train process area.
- Installation of two sample points for free chlorine monitoring for the Groundwater Rule 4-log virus treatment prior to ammonia addition. Two new pH meters and sensors shall be installed next to the existing chlorine analyzers used for compliance monitoring.
- Replacement of 3 ½" degasifier packing in the two existing degasifier towers with County supplied packing.

SCOPE OF SERVICES

Design-Build Entity shall perform the Scope of Services described in the **Design-Build Criteria for WTP 11 Clearwell and Chemical Improvements** (PBCWUD, February 10, 2015) and **Lake Region Water Treatment Plant (LRWTP) No. 11 Clearwell and Post-Treatment Evaluation** (Kimley Horn, December 2014) and as described herein:

Modifications to improve the quality of finished water produced at WTP 11 have been identified in the Kimley Horn report. The changes to the configuration, components, and arrangement of the existing clearwell and post-treatment systems in this scope of work represents an interim phase of the overall modifications need as agreed upon by Kimley Horn and the County as described in the Design-Build Criteria. Additional modifications will be required to achieve the treatment goals in the Kimley Horn report and are not a part of scope of work.

The proposed work to be performed by the Design-Build Entity generally includes furnishing all labor, equipment, materials, tools, supervision, and services required to design, construct, test, and startup the proposed work is generally described as follows:

Furnish and install improvements to modify the treatment processes at the degasifier clearwell.

The following is the scope of services:

Task 1 – Administrative and Engineering Services

- 1. Meet with the County to review project scope.
- 2. Conduct utility locates using ground penetration radar and electromagnetic

technologies.

- 3. Develop subcontracts with structural and electrical engineers, utility locator, and electrical contractor and other entities as may be required.
- 4. Prepare a preliminary (60%) design.
- 5. Submit five (5) half-size copies of the 60% design to the County. Meet with the County to review the design.
- 6. Incorporate the County comments and proceed to 90% and final design stages in accordance with the PBCWUD Water Utilities Minimum Design and Construction Standards, Engineering Design-Manual and security requirement.
- 7. Submit FDEP/Palm Beach County Health Department and building department permit applications.
- 8. Prepare and submit four-log virus treatment calculations for Groundwater Rule compliance. It is assumed that the proposed ammonia injection point prior to the weir is satisfactory for Groundwater Rule compliance based on the Kimley Horn recommendations. If it is not satisfactory then the Guaranteed Maximum Price shall be adjusted (deduct or add).
- 9. Prepare detailed construction schedule to include as a minimum; engineering and permitting services, site mobilization, detailed construction activities, scheduled shutdowns and durations, equipment/material delivery times, testing, startup and commissioning.
- 10. Prepare submittals (or confirmation of compliance with County design standards), administer and track submittal process.
- 11. Schedule meetings, inspections, and testing with County staff.
- 12. Provide Engineer's site visits during construction to confirm construction is being performed in conformance with the Design Drawings and Specifications.
- 13. Prepare Record Drawings.

Task 2 – Construction Services

- 1. Modifications to three existing degasifier blower enclosures:
 - a. One blower at a time shall be taken off line for modification as to allow the plant to operate with the other two blowers in operation.
 - b. For each enclosure, the existing filter area shall be modified to increase the filter area. A minimum of 25 square feet and a filter with a minimum MERV rating of 8 has been identified by Kimley Horn.
 - c. The west side of the blower enclosure containing six existing stainless steel mesh filters will be modified. A 6' x 6' opening shall be cut into the existing aluminum wall all of each enclosure. The opening shall be covered by a stainless steel expanded mesh material that will serve as a backing to hold the new filter material (disposable rolls). Aluminum channel shall span the opening to provide three rows for the new filter material to be installed.
 - d. The existing aluminum housing shall be extended 15" to 30" to west and allow for an access panel on the south side of the extension. The extension shall be built around the existing blower control panel. The bottom of the housing extension shall provide for a 36" tall opening for the air intake. An 18" tall opening shall also be provided at the top of the extension for air intake.
 - e. The electrical disconnects for the existing sample pumps shall be relocated for the center blower enclosure to allow for the extension. Restore level control functionality on Salt Tanks 1 and 2 and brine transfer

tank and install flow meter to aid in pretreatment ordinance compliance for sodium and chlorides.

- f. The Design-Build Entity will evaluate the relocation of the existing blower control panels to the east side of the clearwell to provide more room for the blower housing extension. If the relocation of the existing blower control panels are feasible and desired, then the GMP shall be adjusted (adder).
- 2. Installation of a 1¹/₂" PVC membrane permeate supply line to the existing odor scrubber make up water supply connection.
 - a. Connect to the existing 1" SST tap located on the outlet of the raw water bypass cartridge filter line. Connection shall be to the existing 1" PVC pipe above the existing 1" SST ball valve with a 1" PVC tee.
 - b. From the tie-in point, a 1½" PVC line will be field routed to the existing make-up water line of the odor scrubber. A 1 ½" tee shall be provided near the odor scrubber. One branch of the tee will be reduced to 1" PVC and routed to the existing scrubber. The other branch will be capped so that the line can be extended in the future to a future odor scrubber.
 - c. At the existing scrubber, the 0-10 gpm rotameter and associated ball valves will be replaced in kind. The 1" solenoid valve will also be replaced but with a stainless steel type. A 1" PVC check valve will also be provided.
 - d. A 1" connection to the existing process water service that used to be connected to the make-up line shall be provided. However, the connection shall have a removable hose connection.
- 3. Modification to the existing sodium hypochlorite feed lines at the degasifier clearwell.
 - a. The two existing rotameters and associated upstream and downstream isolation/control valves will be relocated to northeast corner of the clearwell wall. The rotameters will be placed next to each other so that flow balancing of the feed to each side of the clearwell can be done in one place.
 - b. New 1" PVC lines shall be routed exposed on top of the clearwell deck from each rotameter to each degasifier sump to a new 1" bulkhead fitting installed in the side of each degasifier. A ½" PVC diffuser ring with drilled holes shall be installed inside each degasifier and connected to the sodium hypochlorite feed line through the bulk head fitting.
 - c. The existing feed lines inside the clearwell will be removed. The existing sodium hypochlorite pipes entering the clearwell will be capped.
- 4. Installation of two booster pumps with variable frequency drives (VFDs) for the carrier water system for the existing carbon dioxide feed system.
 - a. Construct an 8' x 8' x 8" concrete slab on grade to house the booster pumps. It is assumed that no pilings are needed to construct the slab and a suitable location can be found near the northeast corner of the clearwell. Pumps will be mounted on concrete housekeeping pads.
 - b. Furnish and install two 30 hp, 3,600 RPM horizontal end-suction pumps with 316 SST construction with inverter duty motors. Each pump shall be

equipped with 6" SST butterfly isolation valves for the suction and discharge, 6" SST check valve and 1" SST air release valve.

- c. The above-ground 6" common discharge line shall be 316 SST. The above ground 3" lines supplying the two existing carbon dioxide feed panels shall be Sch 80 PVC. Isolation valves will be PVC butterfly valves. Each 3" line will be equipped with a magnetic flow meter. A pressure transmitter shall be placed in the common line feeding the feed panels.
- d. The two existing 2" PVC discharge lines from the feed panels will remain in place, but be paralleled with two new 3" PVC discharge lines. Isolation valves for the 2" and 3" lines will be provided at each feed panel discharge. Two new concrete cores will be constructed in the west wall of the clearwell to route the 3" PVC lines into the clearwell to the new diffuser location. Isolation valves will be PVC butterfly valves.
- e. Remove the two existing carbon dioxide diffusers located inside the degasifier down comer pipes being served by the existing 2" PVC lines and relocate outside the discharge of the down comer pipe. The flanged ports in the down comer pipes shall be capped with a PVC blind flange and stainless steel bolts. Install two new diffusers approximate 5 ft in front of the down comer outlet and mount to floor. The two new diffusers will be connected to the new 3" PVC lines.
- f. Supply water for the booster pumps will be provided by two new 6-inch PVC lines tapped into the north and south sides of the clearwell. The two concrete cores for the pipe entry into the clearwell shall be located above grade. Note that coating repair may take 3 days to allow concrete to dry and coating to cure before placing the clearwell section back into service as the position of the proposed cores are located below the water line. Pipes shall be routed below-grade to the pumps with an isolation valve so that water can be withdrawn from either side or both sides of the clearwell. Access to the 6" SST butterfly valve separating the suction lines shall be above grade.
- g. Two new 3-inch PVC lines will be installed from the pump discharge to the two existing carbon dioxide feed panels. From the carbon dioxide feed panels, the 3-inch line will be installed into the clearwell. The existing carbon dioxide diffusers of each degasifier will be relocated from inside the degasifier discharge pipes to a location in-front of discharge pipes.
- h. Two new 2-inch PVC lines will connect the common discharge line of the pumps and be routed to the relocated ammonia injection points. A flow control valve or orifice plate will be installed to limit the flow to 100 gpm to the two injection points.
- i. The VFDs for the pumps will be mounted on the north wall (east side) of the clearwell. Connect VFDs to electric power and SCADA.
- 5. Provide new electrical feed and remote I/O at clearwell.
 - a. Install a new electrical feed from the high service pump electrical building to the clearwell to provide power to the new equipment. Electrical feed to be installed in concrete electrical duct bank or a concrete cap with red dye will be installed over electrical conduits.
 - b. Install a new power panel and mini power zone at the clearwell. New electrical panel will be located on the south wall (east end) under the stairway overhang.

- c. Install a new remote I/O panel and connect to SCADA system. New remote I/O pan shall be equipped with 16 analog inputs, 16 analog outputs, 64 digital inputs and 64 digital outputs.
- 6. Modification to the existing liquid lime (Calflo) feed system at the clearwell.
 - a. Furnish and install two new 10 hp mixers into the serpentine channels of the clearwell (north and south sides). Mixers blades are assumed to paddle type similar to Lightnin R100 units.
 - b. Core drill new entry points into top of clearwell for mixer shaft. Conduct Ground Penetrating Radar and Electromagnetic Induction to find conduit routing on top of clearwell deck near blowers.
 - c. Install housekeeping pad for mixer base and to prevent rain water from draining into clearwell.
 - d. Extend the two existing 3/8" polyethylene lime solution feed lines at top of the clearwell to the locations for the two new mixers. Core drill new entry points into top of clearwell and route lime feed lines upstream of mixers.
 - e. Modify the PLC programming for the Calflo to allow for both pumps to operate simultaneously.
 - f. The VFDs for the mixers shall be mounted on the north wall (east side) of the clearwell. Connect VFDs to electric power and SCADA.
- 7. Modification of the ammonia feed lines.
 - a. Extend ammonia feed lines with 3/8" SST tubing to the location identified in the Kimley Horn report upstream of the existing weir. Currently, the ammonia feed lines are 1" black iron pipe and are in the process of being replaced with 3/8" 316 SST tubing.
 - b. Route dilution water from the carbon dioxide carrier water booster pumps to the injection points.
 - c. Install dilution tee with ammonia injection and dilution water as shown in Kimley Horn report.
 - d. Install ammonia analyzer (Hach APA 6000 Ammonia/ Monochloramine) on the north exterior wall of the high service pump electrical building. Install sunshade for analyzer. Route 3/8" polyethylene tubing from existing transfer line sample point to ammonia analyzer at high service pump building. The 3/8" polyethylene tubing shall be sleeved in 2" PVC or 2" PE pipe. Install french drain at high service pump electrical building for analyzer. Connect analyzer to electric power and SCADA.
 - e. Install an ammonia analyzer (Hach APA 6000 Ammonia/ Monochloramine) in the membrane building process area next to the finish water sample panel. Route 316 SST tubing from finished water sample panel to ammonia analyzer. Connect drain from ammonia analyzer to finished water drain. Connect analyzer to electric power and SCADA.
 - 8. Groundwater Rule 4-log virus treatment compliance.
 - a. Install new 4-log sample points in each side of the clearwell prior to ammonia injection location. Core both sides of clearwell and install sample lines to the existing Hach CL-17 analyzers. Existing sample lines will be reused.
 - b. Furnish and install two new pH analyzers next to existing Hach CL-17 analyzers. Connect analyzers to electrical power and SCADA.

- c. It is assumed that the proposed ammonia injection point prior to the weir is satisfactory for Groundwater Rule compliance. If it is not satisfactory then the Guaranteed Maximum Price shall be adjusted (deduct or add).
- 9. Replacement of 3-1/2" degasifier packing in the two existing degasifier towers with County supplied packing.
 - a. Transport County furnished 3-1/2" Jaegar Tri pack to WTP 11 site. Packing is loose and will be bagged or boxed for transport to WTP 11 by Design-Build Entity.
 - b. Only one degasifier will be available at a time for packing replacement. County shall isolate each degasifier from service and provide 48 hours down time per degasifier. County will turn over the second degasifier for packing replacement 3 days after the packing has been replaced in the first degasifier. Degasifier entry will be a confined space protocols. No cleaning of the clearwell will be provided.
 - c. To replace packing, the following shall be performed.
 - i. Install wooden cap on 24" effluent pipe to prevent debris from entering clearwell.
 - ii. Remove and dispose of existing 3-1/2" and 2" packing from each degasifier. It is anticipated that approximately eight (8) 20 yard containers will be required.
 - iii. Pressure wash inside of each degasifier, where accessible.
 - iv. Install approximately 1662 cf of 3-1/2" Jaegar Tri packing into each degasifier. Existing level of packing shall be marked and used as the fill mark for the degasifier.
 - v. Chlorinate/disinfect degasifiers using PVC cleaning line with the assistance of plant staff. Chlorinated water to be pumped to drain.
 - vi. Conduct bacteriological testing (2-day) on sump and remove wooden cap on 24" effluent pipe if bacteriological tests are acceptable.
- 10. Restore site to existing conditions.
- 11. Provide O&M manuals supplied with new equipment.

Permits and Fees

It shall be the Design-Build Entity's responsibility to secure all permits required to complete the work under this contract, except permits obtained by the Owner. The Design-Build Entity shall be responsible for all inspections and requirements to closeout the completed permits. The Owner shall pay all permit fees. The Design-Build Entity shall be responsible for all Business tax fees for work within the county or Municipalities.

SALVAGED MATERIALS

- 1. Scrap metal to be placed in the County's salvage dumpster.
- 2. Non-metal waste such as concrete, PVC, fiberglass etc., to be hauled and legally disposed by Design-Build Entity.

ASSUMPTIONS

- 1. County will make available all existing record drawings as may be required to coordinate and complete this scope of services.
- 2. County will make available construction photographs of clearwell and associated areas as may be required to coordinate and complete this scope of services.
- 3. County will review all submittals and provide comments within one calendar week and notify Design-Build Entity of status.
- 4. Liquidated damages may be assessed at a rate of \$1,000 per day up to Substantial completion and \$500 per day from Substantial Completion until Final Completion (consistent with a Moderately Important Project as outlined in Attachment B).
- 5. OWNER shall provide:
 - IP Addresses where required
 - Programming of SCADA screens.

COMPENSATION

Compensation for this Work Authorization shall not exceed the Guaranteed Maximum Price of <u>\$1,051,189.81</u> in accordance with the unit prices established in the Contract for construction services dated <u>March 10, 2015</u>, as approved by the Board of County Commissioners.

SBE/M-WBE PARTICIPATION

As described in the Contract (R_2015-0315_), SBE/M-WBE participation is included in ATTACHMENT F under this Authorization. The attached Schedule 1 defines the SBE/M-WBE applied to this Authorization/Contract and Schedule 2 establishes the SBE/M-WBE contribution from each subcontractor (Letter of Intent to perform as an SBE/M-WBE).

WORK AUTHORIZATION NO. 01

Palm Beach County Water Utilities Department Water, Wastewater & Reclaimed Water Improvements Design/Build Contract

Rates for Liquidated Damages

Palm Beach County Water Utilities Department shall establish liquidated damages rates for each Work Authorization based on the dollar amount and time sensitivity of the project. The rates shall be as follows according to a criticality rating of 1 through 3 assigned to each Work Authorization by the Department as established below:

Moderately Important Project (Criticality 2): Liquidated Damages \$1,000 per day after Substantial Completion Date \$500 per day after Final Completion Date

	P	NIELSON,	Rosenhaus	& Associates
1. 26	新言語		A NUEL CON HOOVER GROUP	P.COMPANY

February 23rd, 2015

Globaltech, Inc. 6001 Broken Sound Pkwy, Suite 610 Boca Raton, FL 33487

RE: Palm Beach County Board of County Commissioners, as Obligee Project: WTP 11 Degasifier and Clearwell Improvements (WUD 14-073) Bond No. SU1129870

Dear Ladies and Gentlemen:

Please supply us with the following information for the above captioned final bond:

Executed Contract with Date:

This letter is also giving Globaltech, Inc. as Principal and/ or Palm Beach County Board of County Commissioners as Obligee, the authority to complete these bonds by dating the bonds with the contract date, execution and Power of Attorney dates. The contract date MAY BE THE SAME date as the execution of the bond or PRIOR to the execution date of the bonds.

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We will forward this information onto your surety company upon our receipt. Please return as soon as possible.

Thank you for your cooperation.

Sincerely,

Brett Rosenhaus, FL Resident Agent

SMART, UNCOMPROMISING. TIMELY, EFFECTIVE, NIELSON, HOOVER & COMPANY, INC. SURETY SOLUTIONS THAT MAKE A DIFFERENCE.

8401 Lake Worth Road Suite 2-231 Lake Worth, FL 33467 P: 561.713.1453 F: 561.713.1455 www.niclsonbonds.com

FRONT PAGE OF PUBLIC PAYMENT BOND Florida Statute 255.05

Attached to and part of BOND NO. SU1129870

In Compliance with Florida Statutes Chapter 255.05 (1) (a), Public Work. All other Bond page(s) are deemed subsequent to this page regardless of any number (s) that may be pre-printed thereon.

CONTRACTOR:	Globaltech, Inc. 6001 Broken Sound Parkway NW Suite 610 Boca Raton, Fl 33487 561-997-6433
SURETY:	Arch Insurance Company 300 Plaza Three Jersey City, NJ 07311 201-743-4000
AGENT:	Nielson, Rosenhaus & Associates 8401 Lake Worth Road, Suite 2-231 Lake Worth, FL 33467 561-713-1453
OBLIGEE:	Palm Beach County Board of County Commissioners 301 N. Olive Avenue West Palm Beach, FL 33401

PROJECT: WTP 11 Degasifier and Clearwell Improvements (WUD 14-073)

HE PROVISIONS AND LIMITATIONS OF SECTION 255.05 FLORIDA STATUTES, NCLUDING BUT NOT LIMITED TO THE IOTICE AND TIME LIMITATIONS IN SECTIONS 55.05(2) AND 255.05(10), ARE INCORPORATED N THIS BOND BY REFERENCE.

ATTACHMENT - C

PUBLIC CONSTRUCTION BOND

BOND NUMBER:	SU1129870
BOND AMOUNT:	\$1,051,189.81
CONTRACT AMOUNT:	\$1,051,189.81
CONTRACTOR'S NAME:	Globaltech, Inc.
CONTRACTOR'S ADDRESS:	6001 Broken Sound Parkway NW Suite 610 Boca Raton, FL 33487
CONTRACTOR'S PHONE:	(561) 997-6433
SURETY COMPANY:	Arch Insurance Company
SURETY'S ADDRESS:	300 Plaza Three Jersey City, NJ 07311
OWNER'S NAME:	Palm Beach County Board of County Commissioners
OWNER'S ADDRESS:	301 N. Olive Avenue West Palm Beach, FL 33401
OWNER'S PHONE:	(561) 493-6000
DESCRIPTION OF WORK:	Modifications to improve the quality of finished water produced at WTP 11 by modifying the treatment process at the degasifier clearwell.
COUNTY'S PROJECT No:	WUD 14-073, WA-1
PROJECT LOCATION:	PBCUD WTP 11, 39700 Hooker Highway, Belle Glade, FL 33430 (PCN 00-37-43-19-00-000-3060)
LEGAL DESCRIPTION:	WTP 11 Degasifier and Clearwell Improvements (WUD 14-073)

BOND - 1C

Rev 10-5-12

PUBLIC CONSTRUCTION BOND

This Bond is issued in favor of the County conditioned on the full and faithful performance of the Contract.

KNOW ALL MEN BY THESE PRESENTS: that Contractor and Surety, are held and firmly bound unto

Palm Beach County Board of County Commissioners 301 N. Olive Avenue West Palm Beach, Florida 33401

as Obligee, herein called County, for the use and benefit of claimant as herein below defined, in the amount of

Dollars \$1,051,189.81

One million fifty-one thousand one hundred eighty-nine dollars and eighty-one cents.

for the payment whereof Principal and Surety bind themselves, their heirs, personal representatives, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated ______, 20____, entered into a contract with the County for:

Project Name: WTP 11 Degasifier and Clearwell Improvements Project No.: WUD 14-073 Project Description: Modifications to improve the quality of finished water produced at WTP 11 by modifying the treatment process at the degasifier clearwell. Project Location: PBCUD WTP 11, 39700 Hooker Highway, Belle Glade, FL 33430 (PCN 00-37-43-19-00-000-3060)

in accordance with Design Criteria Drawings and Specifications prepared by:

Name of Design Firm: Globaltech, Inc. Location of Firm: 6001 Broken Sound Parkway NW, Ste. 610, Boca Raton, FL 33487 Phone: (561) 997-6433 Fax: (561) 997-5811

which contract is by reference made a part hereof in its entirety, and is hereinafter referred to as the Contract.

THE CONDITION OF THIS BOND is that if Principal:

- 1. Performs the contract dated _____, 20___, between Principal and County for the design and construction of WUD 14-073, the contract being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and
- 2. Promptly makes payments to all claimants, as defined in Section 255.05, Florida Statutes, supplying Principal with labor, materials, or supplies, used directly or indirectly by Principal in the prosecution of the work provided for in the contract; and
- 3. Pays County all losses, damages (including liquidated damages), expenses, costs, and attorneys'

BOND - 2C

Rev 10-5-12

fees, including appellate proceedings, that County sustains because of a default by Principal under the contract; and

- 4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.
- 5. Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the contract or the changes does not affect Surety's obligation under this bond and Surety waives notice of such changes.
- 6. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of construction liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against the bond.
- 7. Principal and Surety expressly acknowledge that any and all provisions relating to consequential, delay and liquidated damages contained in the contract are expressly covered by and made a part of this Performance, Labor and Material Payment Bond. Principal and Surety acknowledge that any such provisions lie within their obligations and within the policy coverage's and limitations of this instrument.
- 8. Section 255.05, Florida Statutes, as amended, together with all notice and time provisions contained therein, is incorporated herein, by reference, in its entirety. Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes. This instrument regardless of its form, shall be construed and deemed a statutory bond issued in accordance with Section 255.05, Florida Statutes.
- 9. Any action brought under this instrument shall be brought in the state court of competent jurisdiction in Palm Beach County, Florida and not elsewhere.

HAIMA Witness

Rebecca Thomas Print name

Iness

ι <u>Jessica Seville</u> Print name

Globaltech, Inc.

Bernard P. Gandy Print name

President of Globaltech, Inc. Title

Arch Insurance Company

Surety

Brett Rosenhaus

Attorney in Fact

BOND - 3C

Rev 10-5-12

(Seal)

FORM OF GUARANTEE

GUARANTEE FOR GLOBALTECH INC. (CONTRACTOR) AND ARCH INSURANCE COMPANY (SURETY)

We the undersigned hereby guarantee that the WTP 11 Degasifier and Clearwell Improvements, WUD 14-073, WA-1. Palm Beach County, Florida, which we have constructed and bonded, has been done in accordance with the plans and specifications; that the work constructed will fulfill the requirements of the guaranties included in the Contract Documents. We agree to repair or replace any or all of our work, together with any work of others which may be damaged in so doing, that may prove to be defective in the workmanship or materials within a period of one year from the date of Substantial Completion of all of the above named work by the County of Palm Beach, State of Florida, without any expense whatsoever to said County of Palm Beach, ordinary wear and tear and unusual abuse or neglect excepted by the County. When correction work is started, it shall be carried through to completion.

In the event of our failure to acknowledge notice, and commence corrections of defective work within five (5) calendar days after being notified in writing by the Board of County Commissioners, Palm Beach County, Florida, we, collectively or separately, do hereby authorize Palm Beach County to proceed to have said defects repaired and made good at our expense and we will honor and pay the costs and charges therefore upon demand.

DATED: (notice of completion filing date)

SEAL AND NOTARIAL ACKNOWLEDGMENT OF SURETY

Globaltech, Inc. (Seal) (Contractor) Bv: Bernard P. Gandy Signature) (Printed Name) Arch Insurance Company (Seal) (Surety) By: (Signature)

Brett Rosenhaus, Attorney in Fact (Printed Name)

GUARANTEE - 1D

Rev 10-5-12



WORK AUTHORIZATION COST SCHEDULE

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PBC Water Utilities Department Job: 150479PBC WTP 11 Clearwell Mods (BD)

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
1 General Conditions								
Temporary Facilities								
Trailer Pick up/Delivery		Fa	2	300.00	600.00	6.00	1 1500	731.40
Container Rental		Fa	9	125.00	1 125 00	6.00	1.1500	1 371 38
Sanitary		Month	9	95.00	855.00	6.00	1,1500	1,042.25
Job Site Office Supplies		LOT	1	200.00	200.00	6.00	1.1500	243.80
Waste Hauling		LOT	10	600.00	6,000.00	6.00	1.1500	7,314.00
General Conditions		LOT						
Submittal Labor		HR	40	71.08	2,843.20		1.2992	3,693.89
O&M		HR	40	61.51	2,460.40		1.2992	3,196.55
Progress Meeting		HR	40	87.79	3,511.60		1.2992	4,562.27
Scheduling Labor		HR	20	71.08	1,421.60		1.2992	1,846.94
Construction PM		. HR	240	71.08	17,059.20		1.2992	22,163.31
Construction Superintendent		HR	160	62.13	9,940.80		1.2992	12,915.09
Purchasing & Subcontracts		HR	40	71.08	2,843.20		1.2992	3,693.89
Safety (Construction PM)		HR	8	71.08	568.64		1.2992	738.78
Building Permits		HR	20	71.08	1,421.60		1.2992	1,846.94
Office Admin		HR	40	38.89	1,555.60		1.2992	2,021.04
			Bid Ite	em Totals:	52,405.84			67,381.53
2 Site Work								
Mobilization								
Construction PM		HR	8	71.08	568.64		1.2992	738.78
Construction Superintendent		HR	8	62.13	497.04		1.2992	645.75
3 man Crew		CR-D	2	962.85	1,925.70		1.2992	2,501.87

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Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Utility Locates	Ground Hound	LOT	1	2.950.00	2.950.00		1.1000	3,245.00
Survey		LOT	1	2,000.00	2,000.00		1.1000	2,200.00
Trenching Backfilling and Compaction		LOT						
3 man Crew		CR-D	5	962 85	4 814 25		1,2992	6.254.67
Seed & Sod		LOT	1	4.000.00	4.000.00	6.00	1.1500	4,876,00
Sod Install		CR-D	2	962.85	1,925.70		1.2992	2,501.87
Demob								
Construction PM		HR	8	71.08	568.64		1.2992	738.78
Construction Superintendent		HR	8	62.13	497.04		1.2992	645.75
3 man Crew		CR-D	2	962.85	1,925.70		1.2992	2,501.87
			Bid I	tem Totals:	21,672.71			26,850.34
3 Concrete					·			
Pump Pad								
Form & Materials		LOT	1	700.00	700.00	6.00	1.1500	853.30
Cast In Place Concrete		LOT	1	700.00	700.00	6.00	1.1500	853.30
Installation (3 Man Crew)		CR-D	3	962.85	2,888.55		1.2992	3,752.80
Concrete Pump		LOT	1	600.00	600.00	6.00	1.1500	731.40
· · · · · · · · · · · · · · · · · · ·								
Pump Pedestal								
Form & Materials		LOT	1	150.00	150.00	6.00	1.1500	182.85
Cast In Place Concrete		LOT	1	300.00	300.00	6.00	1.1500	365.70
Installation (3 Man Crew)		CR-D	2	962.85	1,925.70		1.2992	2,501.87
Sidewalk Repair								
Form & Materials		LOT	1	100.00	100.00	6.00	1.1500	121.90
Cast In Place Concrete		LOT	2	300.00	600.00	6.00	1.1500	731.40
Installation (3 Man Crew)		CR-D	2	962.85	1,925.70		1.2992	2,501.87

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Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Grout Equipment/Support Base (3 Man Crew)		CR-D	2	962.85	1.925.70		1.2992	2,501.87
Grout		LOT	1	100.00	100.00	6.00	1.1500	121.90
Mixer Pad								-
Form & Materials		LOT	1	200.00	200.00	6.00	1 1500	243 80
Cast In Place Concrete		LOT	1	200.00	200.00	6.00	1.1000	243.80
3 man Crew (3 Man Crew)		CR-D	1	962.85	962.85	0.00	1.2992	1,250.93
			Did	tom Totalou	42 079 50			40.059.00
5 Metals			DIU I	terri rotais.	13,278.50			10,900.09
SS Unistrut 316 (DEEP)		Ea	10	120.00	1,200.00	6.00	1.1500	1,462.80
SS Unistrut Hardware & Fasteners		LOT	1	2,000.00	2,000.00	6.00	1.1500	2,438.00
SS Unistrut Pipe Clamp		LOT	1	1,500.00	1,500.00	6.00	1.1500	1,828.50
Pipe Support Systems For 6" Pipe		LOT	1	5,000.00	5,000.00	6.00	1.1500	6,095.00
VFD Sunshade		LOT	1	2,500.00	2,500.00	6.00	1.1500	3,047.50
Ammonia Sunshade		LOT	1	1,750.00	1,750.00	6.00	1.1500	2,133.25
Installation (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
			Bid I	tem Totals:	14,912,85			18.255.98
9 Finishes								,
Labels		LOT	1	700.00	700.00	6.00	1.1500	853.30
Clearwell NSF Epoxy Coating		LOT	1	500.00	500.00	6.00	1.1500	609.50
Pipe Coating		LOT	1	600.00	600.00	6.00	1.1500	731.40
Misc Application Material		LOT	1	200.00	200.00	6.00	1.1500	243.80
Installation (3 Man Crew)		CR-D	4	962.85	3,851.40		1.2992	5,003.74
	• .		Bid	Item Totals:	5,851.40			7,441.74
11 Equipment					•			•
Degasifier Blower Modification	Rusty	LOT	3	8,309.00	24,927.00	6.00	1.1000	29,064.88
3 man Crew	•	CR-D	2	962.85	1,925.70		1.2992	2,501.87
Booster pump	Hudson Pump	LOT	1	29,432.00	29,432.00	6.00	1.1500	35,877.61

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Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
VFD (Booster Pump) VFD (Mixer)	HD Supply HD Supply	LOT LOT	2 2	12,272.00 10,296.00	24,544.00 20,592.00	6.00 6.00	1.1500 1.1500	29,919.14 25,101.65
Clearwell Mixer	Hudson Pump	EA	2	19,201.00	38,402.00	6.00	1.1500	46,812.04
			Bid I	tem Totals:	139,822.70			169,277.19
13 I&C								
pH Analyzer	Hach	Ea	1	5,067.36	5,067.36	6.00	1.1500	6,177.11
Pressure Transmitter/Gage Assembly	Rosemount	EA	1	1,940.45	1,940.45	6.00	1.1500	2,365.41
Treansmitter Sunshade, Surge Protector & Accessor		EA	1	1,400.00	1,400.00	6.00	1.1500	1,706.60
Flowmeter	Rosemount	Ea	2	2,354.30	4,708.60	6.00	1.1500	5,739.79
Flowmeter Xmtr Sunshade, Surge Protector & Acce		EA	2	1,200.00	2,400.00	6.00	1.1500	2,925.60
Remote I/O Panel	CC Controls	LOT	1	51,500.00	51,500.00	6.00	1.1500	62,778.50
Pressure Gage Assembly		EA	6	200.00	1,200.00	6.00	1.1500	1,462.80
Ammonia Analyzer APA6000	Hach	Ea	2	16,938.05	33,876.10	6.00	1.1500	41,294.97
Programming	ADS Engineering	LOT	1	28,200.00	28,200.00		1.1000	31,020.00
			Bid I	tem Totals:	130,292.51			155,470.78
15 Mechanical					·			
Odor Scrubber Mods								
SCH 80 PVC Pipe & Ftgs	Ryan Herco	LOT	1	1,500,00	1,500,00	6.00	1.1500	1.828.50
SCH 80 PVC Valve	Ryan Herco	LOT	1	1,000.00	1,000,00	6.00	1.1500	1.219.00
Solenoid Valve	Grainger	LOT	1	1,500.00	1,500.00	6.00	1.1500	1,828.50
Rotameter & Accessories	Ryan Herco	LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Installation (3 Man Crew)		CR-D	3	962.85	2,888.55		1.2992	3,752.80
Chlorine								
SCH 80 PVC Pipe & Ftgs	Ryan Herco	LOT	1	1,579.20	1,579.20	6.00	1,1500	1,925,04
SCH 80 PVC Valve	Ryan Herco	LOT	1	, 950.00	950.00	6.00	1.1500	1,158.05
Rotameter & Accessories	Ryan Herco	LOT	2	1,000.00	2,000.00	6.00	1,1500	2,438.00
Misc Material (Inside Degasifier)	-	LOT	1	500.00	500.00	6.00	1.1500	609.50
Degasifier Disinfection		LOT	- 1	500.00	500.00	6.00	1.1500	609.50
Installation (4 Man Crew)		CR-D	5	1,166.13	5,830.65		1.2992	7,575.18

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pH Analyzer SS Valve, Pipe, Tubing & Figs LOT 1 900.00 6.00 1.1500 1.097.10 PH Analyzer Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2592 1.250.93 Semple Port Relocation (3 Man Crew) CR-D 1 962.85 962.85 1.2592 1.250.93 Concrete Core SCH 80 PVC Pipe & Figs Ryan Herco LOT 1 500.00 6.00 1.1500 609.50 CO2 ARV & Associated Valve & Piping EA 2 900.00 1,800.00 6.00 1.1500 5.4942.00 Gr Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,450.00 1.1500 5.4242.65 Underground Installation (4 Man Crew) CR-D 3 1.180.1 3.439.39 1.2992 4,545.11 Scheck Valve McDade Waterworks LOT 1 3.820.00 6.00 1.1500 7.31.412.00 SS Pipe, Tubing & Figs. McDade Waterworks LOT 1 3.8196.82 8.00 1.1500	Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
pH Analyzer SV 34ve, Pipe, Tubing & Ftgs LOT 1 900.00 900.00 6.00 1.1500 1.097.10 pH Analyzer Installation (3 Man Crew) CR-D 1 992.85 962.85 1.2992 1.250.93 Concrete Core Ea 1 500.00 500.00 6.00 1.1500 609.50 SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 6.00 1.1500 609.50 CO2 CO2 EA 2 900.00 1.600.00 6.00 1.1500 2.194.20 G' Underground Installation (4 Man Crew) EA 2 900.00 4.450.00 6.00 1.1500 2.194.20 G' Underground Installation (4 Man Crew) CR-D 3 1.166.13 3.498.39 1.2992 4.545.11 SS Check Valve McDade Waterworks Ea 2 1.807.72 3.615.44 6.00 1.1500 4.4793.11 SS Fipe, Tubing & Ftgs. McDade Waterworks EA 5 1.826.94 9.134.71 6.00 1.1500 4.566.192 SS BFV McDade Waterworks EA 5			······································						
SS Valve, Pipe, Tubing & Ftgs LOT 1 900.00 6.00 1.1500 1.097.10 pH Analyzer Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1.250.93 Sample Port Relocation (3 Man Crew) CR-D 1 962.85 962.85 1.1500 609.50 SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 500.00 6.00 1.1500 609.50 CO2 ARV & Associated Valve & Piping EA 2 900.00 4.800.00 4.450.00 6.00 1.1500 5.424.55 Underground Installation (4 Man Crew) CR-D 3 1.166.13 3.498.39 1.2992 4.545.11 Expansion Joint Proco Products LOT 1 3.932.00 6.00 1.1500 4.479.23 Saddle LOT 1 3.932.00 6.00 1.1500 4.479.23 Saddle LOT 1 3.932.00 6.00 1.1500 4.479.23 Saddle LOT 1 3.816.44 6.00 1.1500 4.479.23 Saddle McDade Waterworks<	pH Analyzer								
pH Analyzer Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1.250.93 Sample Port Relocation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1.250.93 Sample Port Relocation (3 Man Crew) CR-D 1 962.85 962.85 1.2092 1.250.93 SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 6.00 1.1500 2.194.20 6" Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,460.00 6.00 1.1500 4,242.55 Underground Installation (4 Man Crew) CR-D 3 1,166.13 3,983.90 1.2992 4,545.11 Expansion Joint Proco Products LOT 1 3,932.00 6.00 1.1500 4,793.11 SS Pipe, Tubing & Ftgs. McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,6561.92 SS BFV McDade Waterworks EA 5 1,828.94 9,134.71 6.00 1.1500 4,266.51.92 SS BFV McDade Waterworks EA 5 1,826.94 9,	SS Valve, Pipe, Tubing & Ftgs		LOT	1	900 00	900.00	6.00	1 1500	1 097 10
Sample Port Relocation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1.200.93 Concrete Core Ea 1 500.00 6.00 1.1500 609.50 SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 6.00 1.1500 609.50 CO2 ARV & Associated Valve & Piping EA 2 900.00 1.800.00 6.00 1.1500 5.424.55 Underground Installation (4 Man Crew) CR-D 3 1.166.13 3.498.39 1.2992 4.545.11 Scheck Valve McDade Waterworks Ea 2 1.807.72 3.615.44 6.00 1.1500 4.793.11 SS Check Valve McDade Waterworks Ea 2 1.807.72 3.615.44 6.00 1.1500 4.407.23 SS BFV McDade Waterworks EA 5 1.826.94 9.134.71 6.00 1.1500 4.407.23 SS BFV McDade Waterworks EA 5 1.826.94 9.134.71 6.00 1.1500 4.407.23	pH Analyzer Installation (3 Man Crew)		CR-D	1	962.85	962.85	0.00	1 2992	1,001.10
Concrete Core Ea 1 500.00 6.00 1.1500 609.50 SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 6.00 1.1500 609.50 CO2 ARV & Associated Valve & Piping EA 2 900.00 1,800.00 6.00 1.1500 2,194.20 G" Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 2,194.20 Underground Installation (4 Man Crew) Proco Products LOT 1 3,932.00 3,932.00 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,815.44 6.00 1.1500 46,561.92 SS BFV McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 46,561.92 SS BFV McDade Waterworks LOT 1 3,500.00 6.00 1.1500 42,265.50 Puresure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00	Sample Port Relocation (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
SCH 80 PVC Pipe & Ftgs Ryan Herco LOT 1 500.00 500.00 6.00 1.1500 609.50 CO2 ARV & Associated Valve & Piping EA 2 900.00 1,800.00 6.00 1.1500 2,194.20 6" Underground Ipse & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 5,424.55 Expansion Joint Proco Products LOT 1 3,932.00 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,793.11 SS Pipe, Tubing & Ftgs. McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,607.23 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 1,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 4,135.21 Pump Installation (3 Man Crew) <td>Concrete Core</td> <td></td> <td>Ea</td> <td>1</td> <td>500.00</td> <td>500.00</td> <td>6.00</td> <td>1.1500</td> <td>609.50</td>	Concrete Core		Ea	1	500.00	500.00	6.00	1.1500	609.50
CO2 ARV & Associated Valve & Piping EA 2 900.00 1,800.00 6.00 1,1500 2,194.20 6" Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 5,424.55 Underground Installation (4 Man Crew) CR-D 3 1,166.13 3,498.39 1.2992 4,545.11 Expansion Joint Proco Products LOT 1 3,932.00 3,932.00 6.00 1.1500 4,707.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 4,407.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 4,617.23 SS Pipe, Tubing & Ftgs. McDade Waterworks EA 5 1,826.94 9,13.71 6.00 1.1500 1,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 1.1500 1,1500 1,1500 1,1500 1,1500 1,1500 1,1500 1,1500 1,1500 1,1500	SCH 80 PVC Pipe & Ftgs	Ryan Herco	LOT	1	500.00	500,00	6.00	1,1500	609,50
CO2 EA 2 900.00 1,800.00 6.00 1.1500 2,194.20 6" Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 5,424.55 Expansion Joint Proco Products LOT 1 3,932.00 3,932.00 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,645.110 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 44,656.19 SS BFV McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 41,42 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,601.00 2,601.00 6.00 1.1500 4,265.09 Pump Installation (3 Man Crew) CR-D <t< td=""><td></td><td>·</td><td>,</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>		·	,						
ARV & Associated Valve & Piping EA 2 900.00 1,800.00 6.00 1.1500 2,194.20 G" Underground Ipse & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 5,424.55 Underground Installation (4 Man Crew) Proco Products LOT 1 3,932.00 6.00 1.1500 4,745.11 Sx Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,407.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 4,6561.92 Ss Bripe, Tubing & Ftgs. McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 11,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1.1500 4,266.50 Pure Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 7,575.18 Concrete Core <t< td=""><td>CO2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	CO2								
G" Underground Pipe & Fittings (C-900) LOT 1 4,450.00 4,450.00 6.00 1.1500 5,424.55 Underground Installation (4 Man Crew) CR-D 3 1,166.13 3,498.39 1.2992 4,545.11 Expansion Joint Proco Products LOT 1 3,932.00 3,932.00 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,407.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 4,407.23 Ss BFV McDade Waterworks LOT 1 38,198.82 38,198.82 6.00 1.1500 44,561.92 Ss BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 3,500.00 6.00 1.1500 4,266.50 Pum Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 So S Pipe, Stallation (3 Man Crew) CR	ARV & Associated Valve & Piping		EA	2	900.00	1,800.00	6.00	1.1500	2,194.20
Underground Installation (4 Man Crew) CR-D 3 1,166.13 3,498.39 1.2992 4,545.11 Expansion Joint Proco Products LOT 1 3,932.00 3,932.00 6.00 1,1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1,1500 4,703.31 Saddle LOT 6 100.00 600.00 6.00 1,1500 4,651.40 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1,1500 46,561.92 SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1,1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1,1500 4,265.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,2992 1,250.87 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,57	6" Underground Pipe & Fittings (C-900)		LOT	1	4,450.00	4,450.00	6.00	1.1500	5,424.55
Expansion Joint Proco Products LOT 1 3,932.00 3,932.00 6.00 1.1500 4,793.11 SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,407.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 731.40 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,198.82 6.00 1.1500 46,561.92 SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 3,414.42 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Plange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 1 962.85 1,925.70 1.2992 1,550.93 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13	Underground Installation (4 Man Crew)		CR-D	3	1,166.13	3,498.39		1.2992	4,545.11
SS Check Valve McDade Waterworks Ea 2 1,807.72 3,615.44 6.00 1.1500 4,407.23 Saddle LOT 6 100.00 600.00 6.00 1.1500 731.40 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 46,561.92 SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 42,665.01 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1500 9,693.82 PVC BFV Ryan Herco LOT 1 780.00 780.00 6.00 1.1500 9,690.82<	Expansion Joint	Proco Products	LOT	1	3,932.00	3,932.00	6.00	1.1500	4,793.11
Saddle LOT 6 100.00 600.00 6.00 1.1500 731.40 SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 46,561.92 SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 11,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 6.00 1.1500 2,683.04	SS Check Valve	McDade Waterworks	Ea	2	1,807.72	3,615.44	6.00	1.1500	4,407.23
SS Pipe, Tubing & Ftgs. McDade Waterworks LOT 1 38,196.82 38,196.82 6.00 1.1500 46,561.92 SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 11,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1000 1,760.00 Link Seals LOT 1 780.00 780.00 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia)	Saddle		LOT	6	100.00	600.00	6.00	1.1500	731.40
SS BFV McDade Waterworks EA 5 1,826.94 9,134.71 6.00 1.1500 11,135.21 Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1500 960.82 PVC BFV Ryan Herco LOT 1 780.00 780.00 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 6.00 1.1500 2,483.04 SS Pipe, Tubing & Ftgs (Ammonia) Ryan Herco LOT <td>SS Pipe, Tubing & Ftgs.</td> <td>McDade Waterworks</td> <td>LOT</td> <td>1</td> <td>38,196.82</td> <td>38,196.82</td> <td>6.00</td> <td>1.1500</td> <td>46,561.92</td>	SS Pipe, Tubing & Ftgs.	McDade Waterworks	LOT	1	38,196.82	38,196.82	6.00	1.1500	46,561.92
Pressure Reducing/Sustaining Valve 3" Ryan Herco Ea 1 2,801.00 2,801.00 6.00 1.1500 3,414.42 Flange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1,250.93 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 780.00 780.00 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,2	SS BFV	McDade Waterworks	EA	5	1,826.94	9,134.71	6.00	1.1500	11,135.21
Hange Kits & Misc Materials McDade Waterworks LOT 1 3,500.00 6.00 1.1500 4,266.50 Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1,250.93 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 780.00 780.00 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) Ryan Herco LOT 1 1,500.0	Pressure Reducing/Sustaining Valve 3"	Ryan Herco	Ea	1	2,801.00	2,801.00	6.00	1.1500	3,414.42
Pump Installation (3 Man Crew) CR-D 2 962.85 1,925.70 1.2992 2,501.87 Valve Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1,250.93 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1000 1,760.00 Link Seals LOT 1 780.00 780.00 6.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 2,201.02 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,483.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,256.00 1,256.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) Ryan Herco LOT 1 1,500.00 6.00 1.1500 <td>Flange Kits & Misc Materials</td> <td>McDade Waterworks</td> <td>LOT</td> <td>1</td> <td>3,500.00</td> <td>3,500.00</td> <td>6.00</td> <td>1.1500</td> <td>4,266.50</td>	Flange Kits & Misc Materials	McDade Waterworks	LOT	1	3,500.00	3,500.00	6.00	1.1500	4,266.50
Valve Installation (3 Man Crew) CR-D 1 962.85 962.85 1.2992 1,250.93 SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1000 1,760.00 Link Seals LOT 1 780.00 780.00 6.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 2,214.15 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 6.00 1.1500 1,828.50	Pump Installation (3 Man Crew)		CR-D	2	962.85	1,925.70		1.2992	2,501.87
SS Pipe & Fittings Installation (4 Man Crew) CR-D 5 1,166.13 5,830.65 1.2992 7,575.18 Concrete Core Ea 2 800.00 1,600.00 1.1000 1,760.00 Link Seals LOT 1 780.00 780.00 6.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 2,214.15 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) Ryan Herco LOT 1 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CR-D 7 962.85 6.739.05 1.2002 9.756.54 <	Valve Installation (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
Link Seals LOT 1 780.00 1,600.00 1,1000 1,760.00 Link Seals LOT 1 780.00 780.00 6.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 2,214.15 2,214.15 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,000 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) Example LOT 1 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CP-D 7 962.85 6.730.05 1.2002 9.756.54	SS Pipe & Fittings Installation (4 Man Crew)		CR-D	5	1,166.13	5,830.65		1.2992	7,575.18
Link Sears LOT 1 780.00 780.00 6.00 1.1500 950.82 PVC BFV Ryan Herco LOT 1 2,214.15 2,214.15 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CP-D 7 962.85 6.730.05 1.2002 9.756.54			Ea	2	800.00	1,600.00		1.1000	1,760.00
PVC BFV Ryan Herco LOT 1 2,214.15 2,214.15 6.00 1.1500 2,699.05 SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 2,001.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CP-D 7 962.85 6.739.05 1.2002 9.756.54			LOT	1	780.00	780.00	6.00	1.1500	950.82
SCH 80 PVC/CPVC Pipe & Ftgs (CO2) Ryan Herco LOT 1 2,201.02 6.00 1.1500 2,683.04 SCH 80 PVC/CPVC Pipe & Ftgs (Ammonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CP-D 7 962.85 6.739.95 1.2002 9.756.54		Ryan Herco	LOT	1	2,214.15	2,214.15	6.00	1.1500	2,699.05
Sch do PVC/CPVC Pipe & Ftgs (Animonia) Ryan Herco LOT 1 1,984.20 1,984.20 6.00 1.1500 2,418.74 PVC Ball Valve Ryan Herco LOT 1 1,256.00 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CP-D 7 962.85 6.730.95 1.2002 8.756.54	SCH 80 PVC/CPVC Pipe & Figs (CO2)	Ryan Herco	LOT	1	2,201.02	2,201.02	6.00	1.1500	2,683.04
PVC Ball Valve Ryan Herco LOT 1 1,256.00 6.00 1.1500 1,531.06 SS Pipe, Tubing & Ftgs (Ammonia) LOT 1 1,500.00 1,500.00 6.00 1.1500 1,828.50 PVC & SS Installation (3 Man Crew) CR-D 7 962.85 6.739.95 1.2002 8.756.54	BVC Boll Volve	Ryan Herco	LOT	1	1,984.20	1,984.20	6.00	1.1500	2,418.74
PVC & SS Installation (3 Man Crew)	S Pine Tubing & Etgs (Ammonia)	Ryan Herco	LOT	1	1,256.00	1,256.00	6.00	1.1500	1,531.06
	PVC & SS Installation (3 Man Crow)				1,500.00	1,500.00	6.00	1,1500	1,828.50
Clearwell Modification (4 Man Crew)	Clearwell Modification (4 Man Crew)			1	1 166 12	0,139.95		1.2992	0,100.54
VFD Install (3 Man Crew) 12992 1250 93	VFD Instali (3 Man Crew)		CR-D	1	962.85	3,430.39 962.85		1.2992	1 250 93

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Continued...

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Ammonia Analyzer								
Galvanized Pipe & Fittings		LOT	1	100.00	100.00	6.00	1.1500	121.90
Valves	Ryan Herco	LOT	1	700.00	700.00	6.00	1.1500	853.30
SCH 80 PVC Pipe & Ftgs	Ryan Herco	LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Tubing & Ftgs		LOT	1	200.00	200.00	6.00	1.1500	243.80
SS Pipe, Tubing & Ftgs		LOT	2	500.00	1,000.00	6.00	1.1500	1,219.00
Ramp (drainage piping route)		LOT	1	400.00	400.00	6.00	1.1500	487.60
French Drain System	Ryan Herco	LOT	1	500.00	500.00	6.00	1.1500	609.50
Concrete & Asphalt Repair		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Installation (3 Man Crew)		CR-D	5	962.85	4,814.25		1.2992	6,254.67
Bacteriological Testing		EA	6	425.00	2,550.00		1.1000	2,805.00
Lime								
Tubing & Ftgs	Ryan Herco	LOT	1	500.00	500.00	6.00	1.1500	609.50
SCH 80 PVC Pipe & Ftgs	Ryan Herco	LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Concrete Core		Ea	1	500.00	500.00	6.00	1.1500	609.50
Mixer Installation (4 Man Crew)		CR-D	2	1,166.13	2,332.26		1.2992	3,030.07
Tubing & PVC Installation (3 Man Crew)		CR-D	2	962.85	1,925.70		1.2992	2,501.87
VFD Install (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
Packing								
Packing Replacement (5 Man Crew)		CR-D	10	1,614.26	16,142.60		1.2992	20,972.47
Construction PM		HR	20	71.08	1,421.60		1.2992	1,846.94
Chute		LOT	1	700.00	700.00	6.00	1.1500	853.30
Safety Equipment		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Startup Crew (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
Punch Out Crew (3 Man Crew)		CR-D	1	962.85	962.85		1.2992	1,250.93
			Bid I	tem Totals:	166,733.18			207,853.66

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Continued...

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
16 Electrical								
Electrical Sub Construction PM (I&C)	Energy Efficient	LOT HR	1 20	157,650.00 50.52	157,650.00 1,010.40		1.1000 1.2992	173,415.00 1,312.71
18 [.] Rental Equipment			Bid	Item Totals:	158,660.40			174,727.71
10,000lb Traversing Fork Lift		Month	2	2.646.00	5.292.00	6.00	1 1500	6 450 95
80 ft Art. 4wd Man Lift		Ea	1	5,000.00	5,000.00	6.00	1.1500	6.095.00
Light Plant		Ea	3	508.00	1,524.00	6.00	1.1500	1,857.76
Confined Space Equipment		LOT	1	1,500.00	1,500.00	6.00	1.1500	1,828.50
Misc Tools & Consumables		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Excavator		LOT	1	1,450.00	1,450.00	6.00	1.1500	1,767.55
50 Engineering			Bid	Item Totals:	15,766.00			19,218.76
Engineering		LOT	1	155,128.38	155,128.38		1.0000	155,128.38
60 Bonds & Certifications			Bid	Item Totals:	155,128.38			155,128.38
Bonds & Certifications		LOT	1	18 270 26	18 270 26		1 1500	21 010 80
Builders Risk Insurance		LOT	1	10,099.35	10,099.35		1.1500	11,614.25
			Bid	Item Totals:	28,369.61			32,625.05
			Gi	rand Totals:	902,894.08			1,051,189.81

Note: CR-D=8Hrs *Contract Markups Per Master Agreement: Materials = 1.15, Subcontractors = 1.1, Labor at Burden = 1.2992

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ATTACHMENT - E WA-1: WTP 11 - Clearwell and Chemical Improvements

Engineering Fee Summary

			E5	E4	E3	T4	os		*Sub-		
Task	Task Description	\$56.22	\$54.81	\$52.88	\$37.50	\$27.46	\$17.00	Total Labor	Consultant Services	Sub- Consultant	
						1					
1	Project Coordination								· · · · · · · · · · · · · · · · · · ·		
	Project Mangement/Coordination	6	4		ļ		8				
	Meet w/ staff to review project/collect info	8	8						\$ 4,000,00	UEE	
	Prepare design/construction schedule	4		6		·		•	\$ 4,000.00		
	Subtotal Task 1	20	12	6	8	3 0	10	\$ 2.569.40	\$ 4,000.00		
2	PBCHD Permiting										
	Prepare Construction Application	. 4					2				
	Four-log virus treatment evaluation	8	4								
	Prepare & Submit TM for four-log virus treatment	12	4			8	2				
	Subtotal Task 2	24	8	0	C) 8	4	\$ 2,075.44	\$-		
3	60% Design								·		
	Project Mangement/Coordination	8					8				
	Mechanical Design (8 sheets)	40	30		8	80	2				
	Structural Design	2				2	1		\$ 6,570.00	BDA	
	Electrical/I&C Design	2			12	2 2	1		\$ 24,000.00	HEE	
	Specifications	4	8		8	3	2				
	Update schedule	2									
	Prepare construction estimate	2		6						· .	
	Meet with staff and review	6							4 00 570 00		
	Subtotal Task 3	66	38	6	28	84	14	\$ 9,705.22	\$ 30,570.00		
4	DOW Design	· · · · · · · · · · · · · · · · · · ·					· · · · · · · · · · · · · · · · · · ·				
4	Project Management/Coordination	8					8				
	Mechanical Design	8	8		8	12	2				
	Structural Design	2			,	2	1		\$ 2.034.00	BDA	
	Electrical/I&C Design	2			8	2	1		\$ 12,000.00	HEE	
	Specifications	4	8		4		2				
	Update construction estimate	2		2							
	Meet with staff and review	6									
	Subtotal Task 4	32	16	2	20	16	14	\$ 4,209.12	\$ 14,034.00		
5	100% Design					[
	Project Mangement/Coordination	2	4			10	4				
	Structural Design		0			1					
	Electrical/I&C Design	1			6	1	1		\$ 5,000,00	HEE	
	Specifications	2	4		4	·	4				
	Update schedule	- 1	· · · · · ·	1							
	Update construction estimate	1		1					· · · · ·		
	QC/QA	4	4								
	Subtotal Task 5	14	20	2	10	12	12	\$ 2,897.56	\$ 5,000.00		
6	SDC										
	Project Mangement/Coordination	16		R			R				
	Site Visits	18		30	24					· · · · ·	
	Submittals	.8		12	8		2				
	Structural	2					1		\$ 4,432.00	BDA	
	Electrical/I&C	2			12		1		\$ 5,000.00	HEE	
	Record Drawings	8		12		12	2				
	Permit Closeout	8			6		2				
	Subtotal Task 6	62	0	62	50	12	16	\$ 9,240.72	\$ 9,432.00		
	Labor Hours	218 \$12.255.00	94	(8) \$1.101 P4	116	132	¢1 100 00	\$20 607 40			
	Labor Costs	φ1∠,∠05.96 α.00	ອຸບ, ເວ2.14 ຈຸດດ		φ4,350.00 2 00	\$3,024.12 3.00	ຈາ,190.00 ຈຸດດ	φ30,097.46 2 00			
	Labor Total	\$36.767 88	\$15,456,42	\$12,373,92	\$13.050.00	\$10 874 16	\$3.570.00	\$92.092.38			
		,,. 01.00	,, iod. iz				+	+,			
	Subconsultant Total						· ·		\$ 63,036.00		
	TOTAL ENGINEERING FEE								\$ 155,128.38		

Subconsultants:

SBE SCHEDULE 1 & 2

SCHEDULE 1

LIST OF PROPOSED SBE-M/WBE PRIME/SUBCONTRACTORS

PROJECT NAME:

CONTACT PERSON:

BID OPENING DATE:

NAME OF PRIME BIDDER Globaltech, Inc.

N/A

Bernard P. Gandy, President

WTP 11 - Degasifier and Clearwell Improvements

PROJECT No: WUD 14-073

 ADDRESS:
 6001 Broken Sound Parkway NW, Suite 610

 PHONE NO.:
 561-997-6433
 FAX NO.:
 561-997-5811

 DEPARTMENT:
 N/A

		PLEASE IDENTI	FY AI	LL APPLICA	BLE	CATEGORIES						
Name, Address and Telephone	(Check one or b	oth Categories)						Dollar Amount				
Number of Minority Contractor	Minority Business	Small Business		Black		Hispanic		Women		Caucasian	Othe	er (Please Specify)
Globaltech, Inc., (561) 997-6433												
6001 Broken Sound Parkway NW,												
Suite 610, Boca Raton, FL 33487			\$	-	\$	-	\$		\$	768,276.81	\$	•••
Energy Efficient, Inc. ((561) 655-7211												
Palm Beach, FL 33401 (561) 655-												
7201			\$		\$	_	\$	-	\$	157,650.00	\$	
Bridge Design Associates, Inc.												
1402 Royal Palm Beach Blvd., Bldg		1										
200 West Palm Beach, FL 33441			6		۴		ው		ው	12 026 00	¢	
		· · · · · · · · · · · · · · · · · · ·	\$		\$		\$	-	<u>ф</u>	13,030.00		
Hillers Electrical Engineering, Inc.												
23257 State Rd. 7, Suite / Boca					•	50 000 00	•		•		•	
Raton, FL 33428 (561) 451-9165			\$		\$	50,000.00	\$	-	\$	-	\$	
ADS Engineering, Inc.		4										
4400 N. Federal Highway, Suite 18		\square										
Boca Raton, FL 33064					•		•		•		•	
(954) 415-7378			\$		\$		\$	-	\$	28,200.00	\$	
Ground Hound Detection Services, In												
2930 NW Commerce Park Dr. Suite												
1 Boynton Beach, FL 33426			\$	-	\$		\$		\$	2,950.00	\$	
PRIME CONTRACTOR TO COMPLE	TE:	TOTAL	\$	-	\$	50,000.00	\$	-	\$	970,112.81	\$	-
BID PRICE: \$ 1,051,189.81	Total Value o	of SBE Participation	: \$	1,020,112.8								

NOTE: 1. The amount listed on this form for a Subcontractor must be supported by price or percentage included on Schedule 2 or a proposal from each Subcontractor

listed in order to be counted toward goal attainment. 2. Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and M/WBE, please indicate the dollar amount under the appropriate category.

3. M/WBE information is being collected for tracking purposes only.

SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

 PROJECT NO. __WUD 14-073
 PROJECT NAME: WTP 11 - Degasifier and Clearwell Improvements

 TO: _______Globaltech, Inc. _______(Name of Prime Bidder)

 The undersigned is certified by Palm Beach County as a(n) - (check one or more, as applicable):

 Small Business Enterprise XX

Minority Business Enterprise _____

Black _____ Hispanic _____ Women ____ Caucasian XX Other (Please Specify) _____

Date of Palm Beach County Certification: November 24, 2012

The undersigned is prepared to perform the following described work in connection with the above project (Specify in detail, particular work items or parts thereof to be performed):

ltem/Lo No.	t Item Description	Qty / Units	Unit Price	Total Price
1	Engineering	1	N/A	\$ 92,092.38
2	Mechanical Construction	1	N/A	\$643,540.20
_3	Bonds & Certifications	1	N/A	\$ 32,640.18
3	Bonds & Certifications	11	N/A	\$ 32,640.18

at the following price:

l iné

\$768,276.81 (Seven hundred sixty eight thousand two hundred seventy six dollars and eighty one cents) (Subcontractor's quote)

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: <u>NONE</u>.

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

<u>Globaltech, Inc.</u> (Print Name of SBE-M/WBE Subcontractor)

Bv: (Signature)

Bernard P. Gandy, P.E./President (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

Date:

SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

PROJECT NO. <u>WUD 14-073</u>	PROJECT NA Improvements	ME <u>: WTP 11 –</u>	Degasifier and Clearwell						
O: Globaltech, Inc (Name of Prime Bidder)									
The undersigned is certified by Palm Beach County as a(n) – (check one or more, as applicable):									
Small Business Enterprise XX Minority Business Enterprise									
Black Hispanic Women Caucasian <u>XX</u> Other (Please Specify)									
Date of Palm Beach County Certification: September 4, 2012									
The undersigned is prepared to perform the following described work in connection with the above project (Specify in detail, particular work items or parts thereof to be performed):									
Line Item/Lot Item Description No.	Qty / Units	Unit Price	Total Price						
1 Electrical Construction	1	N/A	\$ 157,650.00						
at the following price:									

\$<u>157,650.00 (One hundred fifty seven thousand six hundred fifty dollars and no cents)</u> (Subcontractor's quote)

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: <u>NONE</u>.

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

Energy Efficient Electric, Inc. (Print Name of SBE-M/WBE Subcontractor)

(Signature) Ву: _____

<u>Rene Viau / Vice-President</u> (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

2/19/15 Date:
SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

PROJECT NO. <u>WUD 14-073</u>	PROJECT NAME <u>: WTP_11 – De</u> Improvements	gasifier and Clearwell
TO:	Globaltech, Inc. (Name of Prime Bidder)	

The undersigned is certified by Palm Beach County as a(n) – (check one or more, as applicable):

Small Business Enterprise XX Minority Business Enterprise

Women ____ Caucasian XX Other (Please Specify) _ Black _ Hispanic _

Date of Palm Beach County Certification: October 24, 2013

The undersigned is prepared to perform the following described work in connection with the above project (Specify in detail, particular work items or parts thereof to be performed):

Line Item/Lo No.	t Item Description	Qty / Units	Unit Price	Total Price
1	60% Electrical Design	1	N/A	\$ 6,570.00
2	90% Electrical Design	1	N/A	\$ 2,034.00
3	SDC	1	N/A	\$ 4 432 00

at the following price:

SDC

3

\$13,036.00 (Thirteen thousand thirty six dollars and no cents) (Subcontractor's quote)

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: NONE.

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

> Bridge Design Associates, Inc. (Print Name of SBE-M/WBE Subcontractor)

By (Signature)

Brian C. Rheault P.E. / President (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

1.5 191 Date:

SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

PROJECT NO. <u>WUD 14-073</u>	PROJECT NAME <u>: W</u> Improvements	<u> TP 11 – Degasifier and</u>	Clearwell
то:	Globaltech, Inc.		
	(Name of Prime bluder)		

The undersigned is certified by Palm Beach County as a(n) - (check one or more, as applicable):

Small Business Enterprise XX

Minority Business Enterprise

Black _____ Hispanic _____ Women _____ Caucasian XX Other (Please Specify) ______

Date of Palm Beach County Certification: October 17, 2012

The undersigned is prepared to perform the following described work in connection with the above project (Specify in detail, particular work items or parts thereof to be performed):

Line Item/Lo No.	t Item Description	Qty / Units	Unit Price	Total Price
1	Project Coordination	1	N/A	\$ 4,000.00
2	60% Electrical Design	1	N/A	\$24,000.00
3	90% Electrical Design	1	N/A	\$ 12,000.00
4	100% Electrical Design	1	N/A	\$ 5,000.00
5	SDC	1	N/A	\$ 5,000.00

at the following price:

\$50,000.00 (Fifty thousand dollars and no cents (Subcontractor's quote)

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: <u>NONE</u>.

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

Hillers Electrical Engineering, Inc.
(Print Name, of \$BE-M/WBE Subcontractor)
By: V. Halls
(Signature)

Paul Hillers P.E./President (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

Date: ____2/19/15

SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

Improvements

TO:Globaltech, Inc (Name of Prime Bidder)				
The undersigned is certified by Palm Beacl	h County as a(n) – (check one or mo	ore, as applicable):	
Small Business Enterprise XX Minority Business Enterprise				
Black Hispanic Women C	aucasian <u>XX</u> Other	(Please Specify)	
Date of Palm Beach County Certification: <u>N</u>	lovember 15, 2013			
The undersigned is prepared to perform the following described work in connection with the above project (Specify in detail, particular work items or parts thereof to be performed):				
Line Item/Lot Item Description No.	Qty / Units	Unit Price	Total Price	
1 Instrumentation Programming	1	N/A	\$ 28,200.00	

at the following price:

PROJECT NO. WUD 14-073

<u>\$28,200.00 (Twenty eight thousand two hundred dollars and no cents)</u> (Subcontractor's quote)

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: <u>NONE</u>.

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

ADS Engineering, PLLC (Print Name of SBE-M/WBE Subcontractor) \$ By

(Signature)

PROJECT NAME: WTP 11 - Degasifier and Clearwell

<u>Alexander Stojanovic, P.E. / President</u> (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

Ŝ Date:

SCHEDULE 2

LETTER OF INTENT TO PERFORM AS AN SBE OR M/WBE SUBCONTRACTOR

PROJE	CT NO.	WUD 14-073	PROJECT NAME:	WTP 11 Deg Improvement	asifier and Clea s	well
TO:			Globaltech, Inc.			
			(Name of Prime Bio	lder)		
The unde	rsigned is	s certified by Palm Be	each County as a(n) -	(check one or	more, as applica	ble):
S	mall Busi	iness Enterprise <u>X</u>	Minority Bus	siness Enterpris	e	
Black	Hispar	ic Women	_ Caucasian <u>X</u> Other	(Please Specify)	
Date of P	alm Beac	h County Certificatio	n: <u>August 18, 2014</u>			
The unde (Specify	rsigned is in detail,	s prepared to perform particular work iter	n the following describ ns or parts thereof t	ed work in conr o be performed	nection with the a	above project
Line Item/ Lot		Item Descri	ption	Qty / Units	Unit Price	Total Price
1 1	Utility	Location Services		· <u> </u>	LS	\$2,950.00
at the follo	owing prie	ce: \$2 950 00 (Two tho	usand nine hundred f	ifty dollars and I	No Cents)	

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated: \$_

The undersigned subcontractor understands that the provision of this form to prime bidder does not prevent subcontractor from providing quotations to other bidders

Groundhound Detection Services, Inc. (Print Name of SBE-M/WBE Subcontractor

1 By:

(Signature)

Sean Halsey / South-Florida Director (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

q Date:

AUTHORIZATION STATUS REPORT March 10, 2015

SUMMARY AND STATUS OF AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	Globaltech Project No.
	CONSULTANT SERVICE AUTHORIZATIONS					
			\$0.00			
			\$0.00			
			\$0.00			
	-		\$0.00			
			\$0.00			
			\$0.00			
			\$0.00			
			\$0.00			
			\$0.00			
			\$0.00			
	Total CSAs		\$0.00			
	WORK AUTHORIZATIONS		,			
				·		
WA-1	WTP 11 - Degasifier and Clearwell Improvements	Pending	\$1,051,189.81		WUD 14-073	
			۰.			
			-			
				· · · · ·		
			A4 054 400 04			
	I otal WAs		\$1,051,189.81			
	Total CSAs + WAs		\$1,051,189.81			

AUTHORIZATION STATUS REPORT WATER, WASTEWATER, AND RECLAIMED WATER IMPROVEMENTS DESIGN-BUILD SERVICES CONTRACT

SUMMARY of SBE/MWBE TRACKING

WUD 14-073: WTP 11 - Degasifier and Clearwell Improvements

	Total
Current Proposal	
Value of Consultant Service Authorization	\$0.00
Value of Work Authorization	\$1,051,189.81
Value of CSA and WA	\$1,051,189.81
Value of SBE Minority Letter of Intent	\$1,020,112.81
Actual Percentages	97.04%
Signed / Approved Authorizations	
Total Value of Approved Consultant Service Authorization	\$0.00
Total Value of Approved Work Authorization	\$0.00
Total Value of CSAs and WAs	\$0.00
Total Value of SBE Signed Subcontracts	\$0.00
Actual Percentages	0.00%
Signed Authorizations Plus Current Proposal	
Total Value of Approved CSAs Plus Current CSA Proposal	\$0.00
Total Value of Approved WAs Plus Current WA Proposal	\$1,051,189.81
Total Value of Approved and Proposed CSAs and WAs	\$1,051,189.81
Total Value of SBE Subcontracts and Letters of Intent	\$1,020,112.81
Actual Percentages	97.04%
GOAL	75%



WUD 14-073 / WTP 11 Degasifier and Clearwell Improvements / WA-01

Design-Build Criteria Report

Design Build Criteria Water Treatment Plant No. 11 Clearwell and Chemical Improvements GL01 – Project No. WUD 14-073



2/25/2015

Stephen McGrew, P.E., DBIA State of Florida Professional Engineer No. 35004 Palm Beach County Water Utilities Department 8100 Forest Hill Blvd. West Palm Beach, FL 33413

Design Build Criteria Water Treatment Plant No. 11 Clearwell and Chemical Improvements GL01 - Project No. WUD 14-073

Part 1 General

1.1 Summary of Work

- A. Legal description of the site: Water Treatment Plant No. 11 (WTP 11 Formerly Lake Region), 39700 Hooker Highway, Belle Glade, FL 33430-5934, PCN 00-37-43-19-00-000-3060.
- B. **Survey information concerning the site:** Owner will provide recent survey from WTP 11 Master Record Drawings (WUD 14-102). Refer to Section 1.5 Site elevations, Lines, and Grades for Design-Build Entity requirements.
- C. Interior space requirements: The work is generally performed on the exterior of buildings and inside the clearwell. The clearwell is a water bearing structure and confined space. Workers entering the clearwell shall be in protective suits and shall be sprayed with chlorine solution. The work plan for inside the clearwell shall be submitted to the Palm Beach County Health Department and approved prior to the work. The Design-Build Entity shall provide all required bacteriological testing.
- D. **Material quality standards:** Design Criteria which includes schematic layouts and conceptual of the project (1.1.E.) below.

E. Schematic layouts and conceptual Design Criteria of the project:

The proposed work to be performed by the Design-Build Entity generally includes furnishing all labor, equipment, materials, tools, supervision, and services required to design, construct, test, and startup improvements to the clearwell and chemical systems to optimize stabilization of the reverse osmosis permeate and improve disinfection. Include PLC programming necessary for the SCADA system additions.

Submit signed and sealed engineering plans, signed and sealed engineering report and signed and sealed permit application to the Palm Beach County Health Department for the proposed inmprovements including revisions to the 4-log Groundwater Rule. All documents shall be signed and sealed by a Florida registered Professional Engineer. Permit fees shall be paid by the County.

The following items are included in the Clearwell and Chemical Improvements at WTP 11 report by Kimley-Horn and Associates, Inc. (KH) report using their cross reference numbering system and Exhibit labeling.

i) Degasifier Blowers (KH 3.12.04)

Modify the existing enclosures to provide expanded filter area to allow passage of air at a lower head loss while providing removal of smaller particulate matter. The filter media shall be replaceable with MERV rating of at least 8 and impose a maximum headloss of 0.4" WC at the air flow face velocity. Stainless steel expanded mesh material shall be placed in between the channel beams to support the flexible filter material. Provide overhang on enclosure to provide rain protection. Materials for the blower modifications shall be 316 SS or aluminum. Design shall minimize increase in noise due to removing portions of the

existing enclosure.

ii) Odor Scrubber (KH 3.12.05)

The odor scrubber requires fresh water be added during operation (called make-up water), to replace water containing the spent chemicals being discharged (called blow down). The existing make-up water for the single-stage scrubber was potable water which has unacceptable levels of calcium hardness. Calcium levels less than 5 mg/l is optimal. RO product water is currently used through a temporary connection for make-up water and should be converted to a permanent method. The Floridan blend water cartridge filter is near the scrubber and there is an outlet pipe prior to the degasifiers which can be used to supply RO product to the scrubber as the Floridan blend is not currently being utilized. Piping to the scrubber, the solenoid at the scrubber, and the rotameter at the scrubber must be replaced with larger units to operate with lower headloss and to accommodate future 2nd stage scrubber. This new source of make-up water will operate at approximately 10 psi (the height of the degasifiers) while the existing plant service water to the scrubber was at approximately 55 psi. Provide check valve on permeate pipe to scrubber. Permeate entering scrubber shall be above maximum chemical level to provide an air gap. Remove existing temporary permeate piping. Provide for potable water to be used for scrubber makeup water if the Floridan bypass system is reactivated.

iii) Chlorine (KH 3.12.7)

Relocate the liquid chlorine application to the bottom of the degasifier sumps to minimize bacterial growth in the sumps, enhance the chlorine contact time (CT), and separate chlorine and CO₂ applications to avoid any possible adverse reactions of these two chemicals.

Chlorine application in the degasifier sump shall be a 1" PVC Schedule 80 pipe configured as a continuous loop using 45[°] bends and a single tee connecting to the chlorine supply installed through the degasifier wall. The application loop requires small diameter holes along the pipe center facing toward the degasifier center. The holes are to be sized and spaced to create an exit velocity of about two feet per second. The applicator loop is to be mounted as close as possible to the floor of the degasifiers.

There is a single chlorine feed pump and pipeline to the clearwell which shall remain in place and therefore currently adjusting chlorine flow to the two degasifiers requires the use of valves on each of the degasifier feed lines which is to be modified. Install rotameters and provide chlorine lines to each side of the clearwell to achieve the desired chlorine flow rates. The rotameters shall be installed adjacent to each other so the operator can easily balance the chlorine flow rate to each side of the clearwell.

iv) Carbon Dioxide (KH 3.12.8)

The existing CO_2 diffusers have poor transfer efficiency. Modify the existing Tomco PSF system to enhance performance of the existing components. Each PSF panel is currently rated at 70 lbs/hr. Future PSF panels shall be rated at 100 lbs/hr. Replacement the existing CO_2 diffusers in each degasifier bay with new diffusers. The pipes to the new diffusers shall be sized for both the existing and future conditions. The diffusers are located inside the degasifier down combers and shall be removed. The new replacement diffusers shall be placed outside of the degasifier down combers.

The degasified permeate booster pump components described below shall be included in this improvement so as to assure proper flow of solution water. Furnish and install a complete booster pump system to supply dilution water since the existing plant service water system is not able to consistently and reliably provide water to the PSF cabinets at a minimum of 65 psi, or higher pressure if recommended by Tomco. Provide redundant booster pumps that take suction from the east side of the clearwell, which will be degasified and low pH water without the increased level of hardness. Core through each clearwell wall the degasifier bay above grade and install 6" suction pipes allowing pumping when one side of the clearwell is out of service for maintenance. Provide interconnect on suction piping with isolation valves so that both pumps can be supplied from either degasifier bay. Below grade piping for pump suction and discharge shall be schedule 80 PVC or HDPE DIPS DR 11. Above grade piping for pump suction and discharge shall be 316 SS for pipes (all sizes) or schedule 80 PVC for pipes 3" and smaller in diameter. Provide booster pump system on concrete slab and pedestals above 100 year flood elevation. A preliminary selection of the pump is a horizontal end suction configuration, 316 stainless steel construction, 1800 RPM or 3600 rpm, 25 hp to 30 hp inverter duty motor. Each pump shall be required to each produce 300 GPM. This flow rate includes future uses of this water for high capacity PSF cabinets and ammonia dilution water. Provide check valves on each pump discharge. Provide interconnect on discharge piping with isolation valves so that each pump can supply the TOMCO PSF cabinets. The provide pressure transmitter and on the discharge of the pumps and connect pressure transmitter to SCADA and VFD's for control loop. Connect booster pumps on-off to SCADA. Provide CO2 solution flow meters prior to each PSF cabinet and connect Ito SCADA

v) <u>Electrical Supply and Instrumentation to the CO₂ Booster Pumps and Clearwell (KH 3.12.08)</u>

The two solution booster pumps and two mechanical mixers will all require electrical power. Based on the study performed by Kimley Horn, the Design-Build Entity should anticipate that there is sufficient capacity in the MCC located in the high service pump electrical building, and that a single circuit can be extended from the high service pump electrical building to the clearwell, and that circuit be distributed to this new equipment. Alternately the electrical feed can come from the membrane building electrical room. Either option will require modifications within the MCC cabinets and extending underground conduit/wire to the clear well area. The proposed electrical feeder will not have redundancy. Provide concrete electrical duct bank or concrete cap with red dye over electrical conduits.

The existing instrumentation system has limited capacity for expansion. The Design-Build Entity shall construct a new I/O panel (RIO 9) for connecting the new equipment in the vicinity of the clearwell to SCADA. Provide 16 analog inputs, 16 analog outputs, 64 digital inputs and 64 digit outputs.

vi) Lime (Calcium Hydroxide) (KH 3.12.10)

Relocate the lime application in each clearwell to maximize the effectiveness of lime addition. The pH is the lowest in this area of the degasifier bay after CO_2 has dissolved and has adequate contact time. The two lime solution feed lines currently on the clear well deck shall be extended to the new injection location shown on the attached drawings. The addition of lime will remain above the water level to allow the lime to dissolve as it settles in the water. Extension of the two lime solution feed lines shall be by coring in the existing clear well top deck at the relocated application locations in order to install the new lime applicators. Pipe and conduit runs shall be designed to minimize tripping hazards.

Control of the Cal-Flo metering pumps shall be modified to have both pumps operating simultaneously at a feed rate needed for the expected flow in each degasifier bay. Maximum

flow rate through each side of the clearwell is 6 MGD based upon the 4-log Groundwater Rule permit.

Mechanical mixers shall be installed immediately downstream of the lime application location. The mixer is intended to be installed through a cored hole in the clearwell deck, one in each degasifier bay as shown on the Exhibit 4 drawings. The mechanical mixers are to be variable speed with the VFD units being located on the clear well deck. Based on preliminary calculations, 10 horsepower mixer motors are required. The mixer blades should be paddle style similar to the Lightnin R100 unit. Provide variable frequency drives for mixers to optimize mixing and minimize turbidity and connect to SCADA.

vii) Ammonia (KH 3.12.09)

The ammonia is currently fed in the common section of the clearwell where the water level elevation varies as the transfer pumps cycle. The clearwell water quality samples are not representative depending upon which combination of transfer pumps are operating. Provide for improved ammonia feed as follows: The ammonia feed shall be relocated as shown on KH Exhibit 4. The common ammonia line shall be split into 2 lines, one for each half of the clearwell with rotometers adjacent to each other to balance the ammonia feed to each side. Provide dilution water system from the degasified permeate booster pumps (see iv. above) for solution feed as shown on the Kimley-Horn drawings.

In order to provide a means for reducing the amount of free ammonia placed in the distribution system, furnish and install free ammonia online analyzers that will provide relatively continuous information to plant operators on current levels of free ammonia. Install one ammonia residual analyzer for the transfer pump discharge using the existing tap (pre-storage) to be mounted on the wall of the high service pump electrical building. Provide a second ammonia analyzer at the high service pump discharge (post storage) located at the finished water analyzer panel in the membrane building. The analyzers shall be APA 6000 Ammonia/Monochloramine unit as manufactured by HACH. Connect ammonia analyzers to electrical power, SCADA and to existing drains.

viii) Groundwater 4-log Compliance

It is assumed that the proposed ammonia injection prior to the weir is satisfactory for Groundwater Rule compliance. If the ammonia injection location varies then the Guaranteed Maximum Price shall be adjusted (deduct or add).

Install new groundwater 4-log sample points for each side of the clearwell prior to the ammonia injection location. Core both sides of the clearwell and install sample pipes to the existing Hach CI-17 analyzers. Furnish and install pH analyzers for each side of the clearwell and mount adjacent to the Hach CI-17 analyzers. Connect pH analyzers to electrical power and SCADA.

ix) Degasifiers Packing (KH 3.12.12)

The Owner shall furnish the packing which shall be transported from the former Belle Glade WTP to WTP 11 by the Design-Build Entity. Replace the degasifier packing while shutting down each side of the clearwell. The packing should be replaced after the degasifier blower modifications are complete. Packing replacement shall be completed within a 24 hour period. Dispose of existing packing.

F. Cost or budget estimates: Cost estimate \$833,131 (Kimley-Horn cost estimate dated 12-23-14).

G. Design and construction schedules:

- i) 60% Design Completion <u>75</u> days after receipt of executed Work Authorization and notice to proceed with design.
- ii) 100% Design Completion <u>120</u> days after receipt of executed Work Authorization and notice to proceed with design.
- iii) Substantial Construction Completion <u>270</u> Calendar Days after receipt of executed Work Authorization and notice to proceed with construction.
- iv) Final Construction Completion 60 Calendar Days after Substantial Construction Completion.
- v) Liquidated damages for design and construction will apply as follows: \$1,000 per day past substantial completion date.
 \$500 per day past final completion date.
 - vi) The following items must be complete (at a minimum) to achieve substantial completion:
 - (1) Complete all work including start-up services (1 to 8 listed above) except punch list.
 - (2) Palm Beach County Building permit inspection approval.
 - (3) Provide O&M manuals and training
 - (4) Modify Groundwater Rule permit including approval by Palm Beach County Health Department.
- H. **Site development requirements:** Site plan approval is not required for this project under the Unified Land Development Code.
- I. **Provisions for utilities:** Refer to Sections 1.3 Utilities and 1.7 Underground Utilities for Design-Build Entity requirements.
- J. **Stormwater retention and disposal:** Provide siltation barriers for all existing storm drainage catch basins impacted by construction activities.
- K. **Parking requirements:** Only current County security badge holders can park inside the plant gate. Do not disrupt traffic flow for chemical deliveries. Project material deliveries shall be between 7:00 AM to 3:00 PM Monday through Friday excluding public holidays. WTP 11 is an active construction site for the 5 MG Water Storage Tank and piping contract and parking is not allowed near those construction and staging areas.
- L. **Other:** Do not impact 5 MG Water Storage Tank and piping construction by others. Extreme care shall be taken to minimize shutdowns resulting in reduced treatment capacity during construction as WTP 11 is a standalone facility. Shutdown only one side of the clearwell at a time. A shutdown plan must be prepared by the Design-Build Entity and submitted for approval.

1.2 Permits and Fees

It shall be the Design-Build Entity's responsibility to secure all permits required to complete the work under this contract, except permits obtained by the Owner. The Design-Build Entity shall be responsible for all inspections and requirements to close-out the completed permits. The Owner shall pay all permit fees. The Design-Build Entity shall be responsible for all Business tax fees for work within the county or Municipalities.

1.3 Utility Services

The Design-Build Entity shall obtain the necessary utility services by making application for the services and paying such fees and charges required by the utility companies, including construction water meters, if required.

1.4 Tests

The Design-Build Entity shall pay for all required tests. Water required for pressure/leakage tests shall be furnished by the Owner.

1.5 Site elevations, Lines, and Grades

Where the dimensions and locations of existing pipe and utilities are of critical importance in the installation or connection of proposed work, the Design-Build Entity shall verify such dimensions and locations in the field prior to the fabrication of any materials or equipment, which is dependent on the correctness of such information. The Design-Build Entity shall employ a land surveyor registered in the State of Florida. The Design-Build Entity shall locate and protect survey control and reference points. The Design-Build Entity shall be responsible to establish elevations, lines, and levels, utilizing recognized engineering survey practices. The Design-Build Entity shall provide all labor, instruments and stakes, templates, and other materials necessary for marking and maintaining all lines and grades. The Design-Build Entity shall submit a copy of as-built drawings signed/sealed by the land surveyor that the elevations and locations of the work in Florida State plane coordinates are in conformance with the contract documents.

1.6 Work Area

The Design-Build Entity shall confine his activities to the site(s) designated by Owner for the work or staging areas for materials storage. All debris, materials, pipe, and miscellaneous waste products from the proposed work shall be removed from the project as soon as possible. They shall be disposed of in accordance with applicable federal, state, and local regulations. The Design-Build Entity shall be responsible for determining these regulations and shall bear all costs or retain any profit associated with disposal of these items.

The Design-Build Entity shall protect his work throughout its length by the erection of suitable barricades and handrails, where required. The Design-Build Entity shall further indicate this work at night by the maintenance of suitable lights or flares, especially along or across thorough fares. Wherever it is necessary to cross a public walk, the Design-Build Entity shall provide suitable safe walkways with hand railings. The Design-Build Entity shall also comply with all laws or ordinances covering the protection of such work and the safety measures to be employed therein. The Design-Build Entity shall carry out his work so as not to deny access to private property. All utility access manholes, valves, and fire hydrants shall be kept accessible at all times. No excavations near walkways, in roadways, or road shoulders are to be left open during night hours without the permission of the Owner, and proper protection.

1.7 Underground Utilities

All water pipes, storm drains, force mains, gas or other pipe, telephone or power cables or conduits, and all other obstructions, whether or not shown, shall be temporarily removed from or supported

across pipeline excavations. Before disconnecting any pipes or cables, the Design-Build Entity shall obtain permission from the Owner, or shall make suitable arrangements for their disconnection by the Owner. The Design-Build Entity shall be responsible for any damage to any such pipes, conduits or cables, and shall restore them to service promptly as soon as the work has progressed past the point involved. Approximate locations of known water, sanitary, drainage, power, and telephone installations along route of new pipelines or in vicinity of the work are shown on as-built drawings, but must be verified in the field by the Design-Build Entity. The Design-Build Entity shall uncover these pipes, ducts, cables, etc., carefully, by hand, to verify location and depth of cover. Any discrepancies or differences found shall be brought to the attention of the Owner in order that necessary changes may be made. Where fences, walls, or other man made obstructions exist illegally in the public right-of-way, the Owner will have them removed upon adequate prior notice by the Design-Build Entity.

The Design-Build Entity shall notify "SUNSHINE STATE" at 811 at least forty-eight (48) hours prior to performing any excavating activities. Evidence of such notice shall be furnished to the Owner prior to excavating. Design-Build Entity is responsible for all utility locates within the project site and will provide an independent locate service for all PBC WUD buried pipelines and electrical.

Design of all underground water, wastewater, and reclaimed water shall comply with the Palm Beach County Water Utilities Minimum Engineering Standards (latest edition), General Electrical Design Requirements, Palm Beach County Wellfield Protection Ordinance, Environmental Control Rule 1 (wastewater), Environmental Control Rule II (water), and applicable provisions of the Florida Administrative Code. Design submittal requirements shall be in accordance with the Palm Beach County Water Utilities Design Manual.

1.8 Maintenance of Operations

The Design-Build Entity's activities or any partial plant shutdowns shall minimize disruption to the treatment facilities and conveyance. The Design-Build Entity shall schedule and perform the proposed work in a manner such that the Owner can keep the existing treatment and conveyance facilities in continuous dependable operation. Operation of all existing valves, gates and equipment shall be performed by Owner.

1.9 Plant Shutdowns

Owner shall approve all plant shutdowns. If, in the opinion of Owner, a shutdown is not required in order for the Design-Build Entity to perform the proposed work, the Design-Build Entity shall use alternative methods to accomplish the work. All shutdowns shall be coordinated with and scheduled at times suitable to Owner. Owner shall be provided a minimum of 7 days notice of Design-Build Entity's need for any system or partial system shutdown. Additional notice may be required for certain shutdowns.

1.10 Project Coordination

Design-Build Entity shall be solely responsible for coordination of all of the proposed work. He shall supervise, direct and cooperate fully with all sub-contractors, manufacturers, fabricators, suppliers, distributors, installers, testing agencies, and all others whose services, materials or equipment are required to ensure completion of the proposed work within the contract time.

Design-Build Entity shall cooperate with and coordinate his work with the work of any other contractor, utility service company or Owner's employees performing additional work related to the

project at the site. Design-Build Entity shall also coordinate his work with the work of others to assure compliance with schedules.

Design-Build Entity shall attend and participate in all project coordination or progress meetings and report on the progress of all work and compliance with schedules. The Design-Build Entity shall provide a responsible representative of his organization may be reached at any time while work is in progress.

1.11 Project CPM Schedule

Design-Build Entity must prepare and maintain a project schedule using Primavera P6 software and the Critical Path Method (CPM) of scheduling. The following outlines the minimal schedule requirements. The schedule must be updated each month at a minimum and will be reviewed by the County to determine design and construction progress. The project schedule will be comprehensive incorporating activities for the full lifecycle of the project. With the initial submittal, later Construction Phase work may be outlined as higher level summary tasks. The level of detail for activities shown in the schedule will be elaborated as additional information about the scope and methods are determined throughout the course of the project.

The basics of the Project Schedule submittals are outlined below.

Baseline Requirement: The Schedule shall reflect how the Design-Build Entity will perform the work. Task Descriptions, Durations, Responsibility Assignment and Relational Logic Ties shall be adequately defined in the schedule so that the Project Manager can accurately monitor the progress of the work. Schedule activities must be consistent with work items listed in the Schedule of Values and be cost-loaded such that schedule updates provide an independent check on the amounts shown in the Monthly progress payment request.

Include a written narrative to address the following Schedule Development Data:

- All calendars developed within the schedule software applicable to the Project Schedule showing the proposed number of working days per week. Include where necessary a description of which calendars apply to which activities.
- The holidays to be observed during the life of the Contract by day, month, and year
- The planned number of shifts per day and number of hours per shift

1.11.1 Planning Phase

The Program Management Team will specify detailed scheduling requirements to each Design-Build Entity through the professional services agreement, requiring that:

- A detailed design schedule be created and routinely updated
 - At a minimum, milestones be depicted for:
 - Notice-to-Proceed
 - o 30 percent submittal
 - o 60 percent submittal
 - o 90 percent submittal
 - Permitting Complete
 - o Procurement and Delivery of Long Lead Items
- An estimate of the construction duration and staging shall be developed. At a minimum, the schedule shall identify significant interim milestones that relate to the Construction Phase including:
 - o Notice-to-Proceed Construction

- o Mobilization
- o Substantial Completion
- o Final Completion
- Start Up/Commissioning

1.11.2 Construction Phase

At the commencement of the Construction Phase, the level of detail provided for each activity in the Project Schedule shall be elaborated and submitted to the OWNER as outlined below. Additional plan details must remain within the confines of established dates for SUBSTANTIAL COMPLETION and FINAL COMPLETION. The accepted version of the elaborated Project Schedule will be used as a new Baseline for monitoring the progress of the work

The schedule will address the logic of construction activities, including any work constraints due to:

- Operational or permit requirements
- Special requirements of the technical specifications
- Standard construction practices
- Safety of the work place
- Manpower loading and availability
- Key Resource or Materials quantity loading

Initial Construction Schedule Submittals: The Design-Build Entity is required to submit two schedule documents at the pre-construction conference. These are:

- The Design-Build Entity's plan of operation for the initial 30-day period of Construction
- An initial draft of the fully elaborated Baseline CPM schedule

The Project Manager and the Design- Build Entity will meet to review and discuss the 30-day plan of operation and Baseline CPM schedule shortly after submittal to the Project Manager. The Project Manager's review and comment on the schedules will be limited to conformance with the sequencing and milestone requirements in the Contract Documents. The Design-Build Entity will be required to make corrections to the schedules necessary to comply with the requirements and adjust the schedules to incorporate any missing information requested by the Project Manager.

Key elements of the schedule reviews will include:

- Production rates for reasonableness
- Appropriate level of detail
- Satisfaction of contractual constraints
- Accurately reflecting submittals, procurements, training and start-up tasks
- Conforms with approved schedule of values
- Complies with industry scheduling practices
- Schedule risk and critical path discussion

The plan of operation depicts accomplishment of the early execution activities (mobilization, permit acquisition, submittals necessary for early material and equipment procurement, submittals necessary for long lead equipment procurement, CPM submittals, initial site work and other submittals and activities required in the first 30 days).

Amend the Baseline written narrative to address the following Schedule Development Data:

- The major construction equipment to be used on the Site
- A written description the nature of the critical path of activities identified for the Project Schedule through project completion.

Resubmit the Baseline schedule will be included in all subsequent schedule updates and will be the basis for measuring progress and performance. Schedule updates and other reporting requirements will be detailed in the schedule specifications.

The construction schedule will provide information on major construction milestones and allow for quantity tracking. Related interface activities pertinent to facilities start-up and commissioning will also be shown. The associated Schedule of Values will delineate information related to quantity unit rate reporting, labor wage rates, bulk materials pricing and other costing/pricing information as requested. Specific schedules (e.g., 90 days to Completion, 4-week look-ahead) will be specified per project needs.

The Project Manager's review of the schedule is to ensure basic compliance with requirements and reasonableness of plan, and does not to constitute an approval of the approach or direction relative to means and methods of construction.

Baseline Schedule Submittal: The Design-Build Entity will be required to submit two schedule documents at the pre-construction conference. These are:

- The Design-Build Entity's plan of operation for the initial 30-day period of the contract Construction
- An initial draft of the fully elaborated Baseline CPM schedule

1.11.3 Schedule Updates

On a regular basis, and not less than monthly, summary schedules should be updated to track and monitor progress of activities, completion of contract deliverables, interim milestone achievement, start and completion dates, and other related aspects of scheduling. Additionally, any approved changes to the scope of work will be reflected as both cost and duration impacts in the updated schedules.

Progress is monitored by comparing monthly work accomplished against both the baseline plan, and the progress of work from the prior month. Starting with the first month of status updating, progress for all projects will be measured against the baseline for start and finish dates, scheduled progress and actual project costs incurred, cash flow, along with analysis for changes in logic and activities durations.

A written Narrative Report shall be submitted in conjunction with all Schedule Update Submittals containing the following:

- Schedule report indicating activities completed during this reporting period.
- Current and anticipated delays and/or early completions.
- Recommendations for recovery of the delays
- Added/deleted activities.
- Other project related scheduling concerns.

1.11.4 Format of Submittals

Submit one electronic copy of the complete Project Schedule as an Oracle Primavera XER export file. Submittal of Paper Form can be substituted with a .pdf file.

Part 2 Acceptance Test Requirements

The Design-Build Entity shall be responsible for coordinating and completing the overall system startup and testing. The Design-Build Entity is responsible for providing all labor, equipment, and materials for conducting systems startup and testing.

2.1 Starting and Placing Equipment in Operation

Design-Build Entity shall initially start-up and place all installed equipment into successful operation according to manufacturer's written instructions and as instructed by manufacturer's field representative. Design-Build Entity shall provide all material, labor, tools, equipment, chemicals, lubricants, and expendables required to complete start-up. No system or subsystem shall be started up for continuous operation unless all components of that system or subsystem, including instrumentation, have been tested and proven to be operable as required for proposed work. General system startup activities include: cleaning; removing temporary protective coatings; flushing and replacing greases and lubricants, where required by manufacturer; lubrication, checking shaft, and coupling alignments and resetting where required; checking and setting motor, pump and other equipment rotation, safety interlocks, and belt tensions; checking and correcting if necessary leveling plates, grout, bearing plates, anchor bolts, fasteners, and alignment of pipe which may put stress on pump equipment; performing any adjustments; providing chemicals and lubricants and all other required operating fluids; providing fuel, electricity, filters, and other expendables required for start-up of equipment. Owner shall provide sufficient personnel to assist Design-Build Entity in the start-up, but the prime responsibility for proper mechanical operation shall belong to Design-Build Entity. Manufacturer's representatives shall be present during initial start-up and operation. Owner shall assume responsibility for operation of the equipment upon completion of start-up and placing equipment in operation.

2.2 Minimum Start-Up Requirements

- A. After system has been placed in operation the Design-Build Entity shall clean strainers, drives, pockets, orifices, valve seats, and headers in fluid system to assure freedom from foreign materials. The Design-Build Entity shall remove rust, scale and foreign materials from equipment and renew defaced surfaces. All visible leakage shall be repaired.
- B. The Design-Build Entity shall check each electrical control circuit to assure that operation complies with regulations and requirements of proposed work and to provide desired performance. The Design-Build Entity shall vent gasses trapped in any part of systems and verify that liquids are drained from all parts of gas or air systems.
- C. The Design-Build Entity shall inspect for cleanliness, and clean and remove all foreign materials, verify alignment, replace defective bearings and those, which run rough or noisy, and grease as necessary in accord with manufacturer's recommendations.
- D. The Design-Build Entity shall adjust tension in V-belt drives, and adjust varipitch sheaves and drives for proper equipment speed, adjust drives for alignment of sheaves and V-belts, and clean and remove foreign materials before starting operation.
- E. The Design-Build Entity shall check each motor for comparison to amperage nameplate value and correct conditions which produce excessive current flow and exist due to equipment malfunction.

- F. The Design-Build Entity shall check glands and seals for cleanliness and adjustment before running pump; inspect shaft sleeves for scoring; inspect mechanical faces, chambers, and seal rings, and replace if defective; and verify that piping system is free of dirt and scale before circulating liquid through the pump.
- G. The Design-Build Entity shall inspect both hand and automatic control valves, clean bonnets and stems; tighten packing glands to assure no leakage, but permit valve stems to operate without galling; replace packing on any valve that continues to leak; remove and repair bonnets that leak; and coat packing gland threads and valve stems with a surface preparation of "Moly-Cote" or "Fel-Pro" after cleaning. The Design-Build Entity shall verify that control valve seats are free from foreign material and are properly positioned for intended service.

2.3. Equipment Startup and Performance Testing

The Design-Build Entity shall be responsible for performance testing during startup of all mechanical, electrical, instrumentation, and piping equipment and systems. Provide a testing plan setting forth the sequence in which all testing work required for the proposed upgrades will be implemented. The Design-Build Entity shall document the results of all equipment and system tests and submit them to the Owner and provide calibration tags for all equipment certifying the date of calibration.

2.4. Instruction of Operations and Maintenance Personnel

Training shall be provided prior to turning over the operation of a system, unit process, or piece of equipment to the owner. Training shall be scheduled for each plant staff work shift accordingly. No system, unit process or any piece of equipment shall be started up for continuous operation without the approved operation and maintenance manuals being turned over to Owner.

Design-Build Entity shall provide services of supplier's operation and maintenance training specialists to instruct Owner's personnel in recommended operation and maintenance procedures for products and equipment. Supplier may be required to provide a combination of classroom and field training. All training shall be conducted at the site, unless otherwise stated in the Specifications. Owner reserves the right to videotape training sessions.

The Design-Build Entity shall provide written documentation and checklists outlining important training items, and provide spreadsheets needed to document new processes for input by operators. Training of plant's personnel shall commence only after:

- a) Acceptable preliminary operation and maintenance data has been provided.
- b) Equipment has been started and placed into operation.
- c) System startup and performance testing has been completed.

Part 3 Technical Requirements

3.1. Plant Site / Civil Requirements

The Design-Build Entity shall be responsible for becoming completely familiar with the site conditions in connection with developing the final site plan including all site investigations, analysis of subsurface conditions, geotechnical conditions, soil borings, and other available information. Limited geotechnical investigation data for the site are provided in Appendix A.

3.2 Demolitions

Design-Build Entity shall be responsible for all labor, materials, equipment, and incidentals required for demolitions and pay for all disposal fees. Design-Build Entity shall not start removals without the permission of the Owner. At least 48 hours prior to commencement of any demolition activities, the Design-Build Entity shall advise the Owner, in writing, of the proposed schedule.

Design-Build Entity shall carry out operations so as to avoid interference with Owner's operations and work in the existing facilities. Design-Build Entity shall perform all demolition and removal work so as not to interfere with the use and safe passage to and from adjacent structures and shall prevent damage or injury to structures, occupants, and adjacent features, which might result from falling debris or other causes. Design-Build Entity shall erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices. The Design-Build Entity is responsible for repairing damage to the Owner's property or facilities, caused by the Design-Build Entity's activities.

Design-Build Entity shall not bring explosives on site nor use explosives without written consent of authorities having jurisdiction. Design-Build Entity shall use water sprinkling, temporary enclosures, and other suitable methods for dust control within the lowest practical level in compliance with governing regulations.

Surfaces of walls, floors, ceilings, or other areas, which are exposed by any of the removals, and which will remain as architecturally finished surfaces shall be repaired and re-finished by Design-Build Entity with the same or matching materials as the existing adjacent surface. Adjacent structures, facilities, and improvements impacted by dust, dirt, and debris caused by demolition operations shall be cleaned and returned to pre-construction conditions.

Where pipe is to be removed passes through existing walls, the pipe shall be cut off and properly capped on each side of the wall. When underground pipe is to be altered or removed, the remaining pipe shall be properly capped. Abandoned underground pipe may be left in place and grouted under major structures/roadways, unless it interferes with the work. Any changes to potable water pipe work shall be made in conformance with all applicable codes and under the same requirements as other underground piping.

All materials and equipment removed from existing work shall become the property of Design-Build Entity, except for those which Owner has identified and marked for their use. All materials and equipment marked by the Owner for its use shall be carefully removed by Design-Build Entity so as not to be damaged, and shall be cleaned and stored in a protected location specified by the Owner. Design-Build Entity shall dispose of all demolition materials, equipment, debris, and all other items not marked by the Owner, off the work site and in conformance with all existing applicable laws and regulations. Upon completion of the work, all materials, equipment, waste, and debris of every sort shall be removed and premises shall be left, clean, neat, and orderly.

3.3 Excavation and Backfill

Design-Build Entity shall furnish all labor, materials, equipment, and incidentals required to perform all excavating, backfilling, and disposing of earth materials required for the purpose of constructing structures, conduits, pipelines, grading, and other improvements required to complete the work in every respect.

Design-Build Entity shall be solely responsible for designing, installing, operating, and maintaining whatever system is required to satisfactorily accomplish all necessary sheeting, bracing, protection, underpinning, and dewatering.

Design-Build Entity shall be responsible for all field test data and shall submit copies to the Owner.

Design-Build Entity shall perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction. Design-Build Entity shall obtain all necessary permits for work in roads, rights of way, etc. and shall also obtain permits as required by local, state, and federal agencies for discharging water from excavations. The use of explosives will not be permitted.

Data on subsurface conditions will be made available by Owner for the convenience of Design-Build Entity. The reports are not intended as a representation or warranty of continuity of such conditions between soil borings. Owner will not be responsible for interpretations or conclusions drawn by Design-Build Entity. Additional test borings and other exploratory operations may be made by Design-Build Entity at no cost to Owner.

Drawings from existing records showing certain surface and underground structures adjacent to the work will be made available by Owner. This existing information is not guaranteed to be correct or complete and is available only for the convenience of the Design-Build Entity. Design-Build Entity shall explore ahead of the required excavation to determine the exact location of all structures. Existing structures shall be supported and protected from damage by the Design-Build Entity, and if broken or damaged, they shall be restored immediately by the Design-Build Entity at its expense.

Design-Build Entity shall locate existing underground utilities in the areas of work. If utilities are to remain in place, Design-Build Entity shall provide adequate means of protection during earthwork operations. If uncharted or incorrectly charted pipelines or other utilities are encountered during excavation, Design-Build Entity shall consult the Owner immediately for directions as to procedure. Design-Build Entity shall cooperate with Owner and utility companies in keeping respective services and facilities in operation. Design-Build Entity shall repair damaged utilities to the satisfaction of Owner.

Design-Build Entity shall not interrupt existing utilities serving facilities occupied and used by Owner or others, except when permitted in writing by an authorized Owner's representative and then only after acceptable temporary utility services have been provided.

3.4 Cast-In-Place Concrete

Design-Build Entity shall be responsible for providing concrete consisting of portland cement, fine and coarse aggregate, water, and approved admixtures; then combined, mixed, transported, placed, finished and cured to accommodate the proposed work. All admixtures, curing compounds, etc. used in concrete or the curing and repair of concrete, which can contact potable water, shall be certified as conforming to the requirements of ANSI/NSF 61 for contact with potable water when in the finished concrete.

3.5 Miscellaneous Metals

All metals shall be non-ferrous except of steel reinforcing and as approved by the Owner. All bolt, nuts and washers shall be 316 stainless steel the nuts shall be coated to prevent galling. Anchor bolts shall be 316 stainless steel. Stanchions, pipe supports, equipment bases, braces, and straps shall be 316 stainless steel or aluminum.

3.6 Painting

Design-Build Entity shall provide all labor, materials, tools, equipment, and incidentals as required to furnish and apply paint systems for surface preparation and painting of all new and existing interior and exterior items and surfaces throughout the project areas. Mechanical and process items to be painted include new and existing walls, floors, pipe, mechanical equipment, supports, and any pertinent accessory items or area damaged by the construction activity. Owner's approval shall be required for all components of the surface preparation, selection of colors, and paint system application before start of proposed work. Exposed PVC piping shall be painted. Exposed 316 SS piping shall not be coated.

Color-coding of pipelines, valves, equipment and ducts shall comply with applicable standards of ANSI A13.1, ANSI Z535.1, and 40 CFR 1910.144. Finish coats of paint for pipelines and equipment shall be coded in basic colors. Colors shall be brilliant, distinctive shades matching safety and pipeline colors per ANSI Z535.1, Recommended Standards for Water Works; Recommended Standards for Wastewater Facilities, color specifications for safety colors and other primary colors.

Provide pipe labels with flow arrows at each change in direction, tees (all sides) and every 20 feet of straight run.

3.7 Valve and Pipe Requirements

The Design-Build Entity is responsible for the final sizing and selection of all equipment, pipe, and materials. Design-Build Entity shall provide all labor, materials, equipment, and incidentals to furnish and install valves, pipe, and fittings complete and operational as required for the proposed work. The Design-Build Entity shall conform to the Palm Beach County Water Utilities Manual of Minimum Design and Construction Standards. Valves, pipe, and fittings, including linings and coatings, that will convey potable water or water that will be treated to become potable shall be certified by an accredited organization in accordance with ANSI/NSF 61 as being suitable for contact with potable water, and shall meet requirements of the regulatory authorities having jurisdiction at work site.

The following information shall be submitted to the Owner for review and approval: detailed drawings and data on valves, pipes, joints, fittings, gaskets, harness, and all other pertinent information required for the manufacture and performance history of the product; certificates of compliance with all applicable referenced standards and any provisions for valves, pipes, joints, fittings, coatings, linings, sleeves, gaskets, harnesses, and all other appurtenances; complete field pressure testing, flushing, and disinfection plan

Materials shall be delivered to the site to ensure uninterrupted progress of the work. Valves, pipes, fittings, specials, and accessories shall be handled carefully with approved handling devices. Materials shall be stored on heavy wood blocking or platforms so they are not in contact with the ground. Delivered materials shall be inspected for cracked, gouged, chipped, dented or other damaged material and immediately removed from site. If in the process of manufacture, transportation, storage or handling any valves, pipe, fittings or specials receive any damage such material shall be rejected and replaced at the Design-Build Entity's expense.

Pipe interiors shall be kept completely free from dirt and foreign matter. All pipe shall be installed in complete accordance with the manufacturer's instructions and recommendations. If any pipe must be cut, the work shall be done in a satisfactory manner using a machine specifically designed for cutting the pipe, so as to avoid damage to the pipe and to leave a smooth end. The manufacturer's field representative shall certify the installations observed were satisfactorily completed and all installation crews were familiar with the proper methods and procedures for the pipeline installations.

3.8 Secondary Containment Pipe

Secondary containment pipe shall be furnished for all below grade chemical piping outside of that chemical's containment area. Secondary containment pipe shall be Schedule 80, PVC construction, with fittings, as required and rated for 50 psig. Inner and outer systems shall be factory assembled. Secondary containment pipe shall be. System shall have centralizers that center and support carrier pipe within double containment pipe. No mechanical elastomeric seal system will be accepted. Installation of all containment pipe shall be as recommended by the containment pipe manufacturer. Installers shall use testing equipment recommended by the manufacturer for double containment pipe.

Part 4 Electrical Requirements

4.1 Basic Requirements

Design-Build Entity shall design and provide all labor, materials, equipment, and incidentals to complete the electrical work. All systems shall be properly grounded. Exterior systems shall have lightening protection.

4.2 Codes

Material and equipment shall be installed in accordance with the current standards and recommendations of the National Electrical Code, the National Electrical Safety Code, and with local codes, which apply. Where discrepancies arise between codes, the most restrictive regulation shall apply.

4.3 Area Classifications

A. Wet Locations

The following areas shall be considered wet locations:

- 1. All outdoor areas.
- 2. All indoor areas below grade unless otherwise specified.

Materials, equipment, and incidentals in areas identified as wet locations shall meet NEC and NEMA requirements for wet locations. Enclosures shall meet NEMA 4 requirements as a minimum. Conduits shall be terminated at enclosures with watertight threaded hubs.

B. Corrosive Locations

All chemical storage and pumping areas or rooms. Materials, equipment, and incidentals in areas identified as corrosive shall meet NEC and NEMA requirements for corrosive locations. Conduit systems shall be PVC and enclosures shall meet NEMA 4X requirements. Conduits shall be terminated at enclosures with watertight hubs. Independent supports shall be PVC-coated galvanized steel, or fiberglass-reinforced epoxy struts.

4.4 Electrical Equipment

All new electrical equipment shall be capable of operating successfully at full-rated load, without failure, with an ambient outside air temperature of 0 degrees F to 122 degrees F and an elevation of 400 feet (MSL). All electrical devices and equipment shall have ratings based on 75 degrees C terminations. All electrical equipment enclosures at a minimum shall meet NEMA 12 requirements.

4.5 Schematic Diagrams

Schematic diagrams shall be prepared by the Design-Build Entity to act as guidance in fulfilling the operational intent of the conceptual documents. It shall be the Design-Build Entity's responsibility to meet all safety and electrical codes, and to provide all equipment, appurtenances and specialty items required to provide for complete and operable systems. Review of control schemes submitted by Design-Build Entity shall not relieve Design-Build Entity of their contractual responsibility to provide complete and successfully operating systems.

4.6 Raceway Systems

Design-Build Entity shall furnish and install conduit and fittings to form complete, coordinated, and grounded raceway systems. Design-Build Entity shall provide for the proper installation of all conduits for each system.

- A. Rigid aluminum conduit for exposed indoor conduit runs in non-corrosive areas and rigid aluminum at all other sites.
- B. PVC Schedule 80 for individual conduit runs direct buried in earth and PVC coated rigid steel at all other sites (minimum 24-inch burial depth).
- C. Schedule 40 PVC for conduit runs embedded in or under structural concrete slabs or in concrete ductbanks (all sites).
- D. PVC schedule 80 conduit for exposed indoor and outdoor runs in corrosive areas and PVC coated rigid steel at all other sites.
- E. Flexible conduit for connections to motors and equipment.

4.7 Inspections, Testing, and Adjustments

Accompany the normal installation tests with inspections to demonstrate to the satisfaction of the required judicial authorities the following:

- A. Connections: All circuits are properly connected in accordance with the drawings and applicable approved shop drawings.
- B. Operation: All circuits and devices are operable.
- C. Identification: All conductors are properly identified at each terminal.

Test each electrical circuit after permanent cables are in place to demonstrate that the circuit and connected equipment perform satisfactorily and that they are free from improper grounds and short circuits. Individually test 600-volt cables for insulation resistance between phases and from each phase to ground. Test after cables are installed and before they are put in service with a Megger whose rating is suitable for the tested circuit. Tests shall meet with the applicable specifications of ICEA S 66 524 and NEMA WC7 1971. The insulation resistance for any given conductor shall not be less than 1 megohm for 600 volt and less service. Any cable not meeting this value or which fails when tested under full load conditions shall be replaced with a new cable for the full length.

Test shielded instrumentation cable shields with an ohmmeter for continuity along the full length of the cable and for shield continuity to ground. Connect shielded instrumentation cables to a calibrated 4-20 milliamp DC signal transmitter and receiver. Test at 4, 12, and 20 milliamp transmitter settings.

Test the completed ground systems for continuity and for resistance to ground using an electrical ground resistance tester. Ground system resistance must be less than 5 ohms. Add up to two additional rods, spaced at 20 feet minimum from other electrodes, until resistance is less than 5 ohms.

Operate all starters, circuit breakers, and associated equipment to demonstrate suitability and compliance with Specifications and reference standards, except for short circuit interrupting rating or other inherent design features covered by shop tests. Test all motors for direction of rotation and reverse connections if necessary. Check control circuits to determine that operation and sequence are correct and adjust limit switches, pressure switches, float switches, timers and other devices to give proper operation.

Part 5 Instrumentation and Control Requirements

5.1 General

Design-Build Entity shall provide all labor, materials, equipment, and incidentals as shown, specified, and required to furnish, install, calibrate, test, start-up, and place in satisfactory operation a complete and operating system for proposed work, including programming of the PLC, SCADA, and all required wire terminations. Tag number, equipment number, and description shall match the Owners numbering convention standards.

5.2 Calibration, Start-Up and Testing

Field verify the calibration and performance of each instrument prior to start-up of the associated equipment, and document on a separate sheet for each.

5.3 System Check-Out and Start-Up Responsibilities

Design-Build Entity shall retain the services of the system supplier to supervise and/or perform check out and start up of all system components. As part of these services, the system supplier shall coordinate and include check-out and start-up for those equipment items not manufactured or provided by him. The services of an authorized manufacturer's representative to check the equipment installation and place the equipment in operation may be required. The manufacturer's representative shall be thoroughly knowledgeable about the installation, operation and maintenance of the equipment.

Check and approve the installation of all instrumentation and control system components and all cable and wiring connections between the various system components prior to placing the various processes and equipment into operation. Conduct a complete system checkout and adjustment, including calibration of all instruments, tuning of control loops, checking operation functions, and testing of final control actions. When there are future operational functions included in this work, they should be included in the system checkout. All problems encountered shall be promptly corrected to prevent any delays in start up of the various unit processes.

System supplier shall provide all test equipment necessary to perform the testing during system checkout and start up. Design-Build Entity and system supplier shall be responsible for initial operation of monitoring and control system and shall make any required changes, adjustment or

replacements for operation, monitoring, and control of the various processes and equipment necessary to perform the functions intended.

Design-Build Entity shall furnish to the Owner certified calibration reports for field instruments and panel mounted devices specified in this Section as soon as calibration is completed. Design-Build Entity shall furnish Owner an installation inspection report certifying that all equipment has been installed correctly and is operating properly. The report shall be signed by authorized representatives of both Design-Build Entity and the system supplier.

5.4. Instrumentation and Control System Field Test

Following the plant monitoring and control system checkout and initial operation, system supplier, under the supervision of the Design-Build Entity, shall perform a complete system test to verify that all equipment and programmed software is operating properly as a fully integrated system, and that the intended monitoring and control functions are fully implemented and operational. Any defects or problems found during the test shall be corrected by system supplier, and then retested to demonstrate proper operation. Following demonstration of all system functions, the plant monitoring and control gives and instruments, and telemetry system shall be running and fully operational for a continuous 72 hour period.

5.5 Control Panels and Enclosures

Control panels located inside control or electrical room areas shall be NEMA 12 rated unless differently noted on drawings. All others shall be stainless steel or non-metallic NEMA 4 except in corrosive areas, which shall be NEMA 4X. Provide panel ventilation or air conditioning if required by ambient conditions. Use pan type construction for doors. Door widths shall not exceed 36-inches. Exterior panel with displays shall face north. Exterior control panels shall be 316 stainless steel with powder coated white epoxy exterior finish.

5.6 Surge Protection

Surge protection shall be provided to protect all electronic instrumentation from surges propagating along the signal, telephone, and power supply lines. Locate the suppression device as close as possible to the load device. The protection systems shall be such that the protection level shall not interfere with normal operation, but shall be lower than the instrument surge withstand level, and be maintenance free and self-restoring. Instruments shall be housed in suitable metallic cases, properly grounded. Ground wires for all surge protectors shall be connected to a good earth ground and where practical each ground wire run individually and insulated from each other.

1.

5.7 Lightening Protection (Not Applicable)

Vendor Quotes

	Palr	n Beach County Water	Utilities Departm	ent
	WA-1:	WTP 11- Clearwell and	Chemical Improve	ements
	-	Globaltech, Inc. Venc	lor Cost Summary	
		Vendor		
Bid Item	1	2	3	Comments
Degasifier Blower Modification	Rusty			Limited contractor availabilty
Booster Pump	Hudson Pump	TruFlo		
Booster Pump VFD	HD Supply	Howard Woodrow & Assoc.		
Mixer VFD	HD Supply	Howard Woodrow & Assoc.		
Mixer	SPX/Lightin Mixer	Mixtec	Philadelphia Mixer	Chose SPX as known quantity using specified mixer
pH Analyzer	Hach	Rosemont		· · · · · · · · · · · · · · · · · · ·
Remote I/O Panel	CC Controls			Provided previous Panels for PBCWUD Projects
Ammonia Analyzer	Hach		r	Specified
Programming	ADS Engineering			Provided previous Programming for PBCWUD
SS Pipe, Tube & Fittings	McDade Waterworks			History of lowest price vendor
SS Butterfly Valve	McDade Waterworks			History of lowest price vendor
Electrical Subcontractor	Energy Efficient			Provided previous Electrical installation for PBCWUD

Rusty's Portable Sandblasting, Inc.

PO Box 998 Belle Glade, Florida 33430 Phone: 561-996-7307 Fax: 561-996-7309 Email: rustysinc@wildblue.net

January 15, 2015

David Shuman Globaltech 6001 Broken Sound Pkwy NW Ste #610 Boca Raton, FL 33487

RE: Blower Filter Housin (Belle Glade Water Plant)

Description of work: Based on the sketch : The housing will be built from 5052 H32 11 gauge aluminum with stainless steel 304 3/4 #9 expanded metal. Latches and hinges will also be stainless.

In the amount of \$8,209.00 (each)

If you have any questions please call me at (561) 261-0436.

Thank You, Rusty Hernandez Rusty's Portable Sandblasting, Inc.

Bryant Facey

From:
Sent:
То:
Subject:
Attachmonts.

Nate Geiger <ngeiger@tencarva.com> Tuesday, January 06, 2015 3:28 PM Troy Lyn RE: PBC WTP 11 - Booster pump station for CO2 System 20150106152306358.pdf

Troy,

Attached is a complete work-up. I used an all 316SS wet end on the pump and shaft and a 25 hp Baldor severe duty motor that is premium efficient and inverter ready. The budget price for two units with a pump test, freight and one day of start-up is \$29,432 total. Please let me know if you have any questions. Nate

From: Troy Lyn [mailto:tlyn@globaltechdb.com]
Sent: Monday, January 05, 2015 7:34 PM
To: Nate Geiger
Subject: PBC WTP 11 - Booster pump station for CO2 System

Nate. We are looking for a booster pump skid to provide water to a CO2 System. A general description of the system is provided in iv) Carbon Dioxide in the attached PDF. The system is to consist of two pumps (1 + 1 standby) with VFDs. The pump will need to have a flow range of 150 to 300 gpm. The pump will provide water to 1 to 2 feed panel at 100 gpm each (200 gpm total). The CO2 feed panels have a feed pressure requirement of 65 psi. The other 100 gpm will be 50 gpm each to a chemical injector assembly which basically discharges to atmosphere I am thinking about a Goulds SS end suction pump – information on the pump in the pdf. Can you provide me with a proposal to meet these requirements. Thanks.

The information contained in this transmission may contain confidential information. It is intended only for the use of the person(s) named above. If you are not the intended recipient, you are hereby notified that any review, dissemination, distribution or duplication of this communication is strictly prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.

1

HSU <u>AVADOS</u> <u>A</u> Specialist in	<i>9 21/0022</i> Fluid M	De <u>Gmc.</u> Ovement		
250 Springview Commerce Drive				
Debary Florida 32713	Sales Representat	ive		
Phone: 407 330 3456	hone: 407 330 3456 Contact Information			
Phone: 800 323 1731 954-240-9359				
Fax: 407 330 3404	Fax: 561-8	52-1948		
TO: Globaltech	FROM:	Brian Shields S4		
	EMAIL:	brian@hydraservice.net		
ATTN: Troy Lyn, P.E.	DATE:	January 15, 2015		
PHONE (561) 997-6433	QUOTE:	150115-1BS		
FAX:	REF:	LRWTP Co2 Booster		
EMAIL: <u>tlyn@globaltechdb.com</u>	ENG FIRM:	Kimley-Horn		

1 TruFlo Model 4x3-13 end suction ANSI pump for CO2 booster, 316 SST incl impeller trim. Motor 40 HP TECO Max 1800 rpm 3/60/460. Max 300 gpm at 65 psi.

Note: No other components or options (other than the scope of supply listed above) are included.

TOTAL PRICE, F.O.B. JOB, FREIGHT ALLOWED\$10,356.18PLUS ANY FEDERAL,STATE OR LOCAL TAXES WHICH MAY APPLY. TERMS ARE NET 30 DAYS. PRICES ARE FIRM 30 DAYSHYDRA SERVICE STANDARD TERMS AND CONDITIONS APPLY. PAYMENT TERMS ARE NET 30 DAYS.ESTMTD DELIVER'10-12WEEKS AFTER RECEIPT IN OUR OFFICE OF COMPLETEAPPROVED SUBMITTAL DATA AND SIGNED PROPOSAL.THESE TERMS ARE INDEPENDENT OF, AND ARE NOT CONTINGENT UPON THE TIME OR MANNERIN WHICH PURCHASER MAY RECEIVE PAYMENT FROM OTHERS.ONE DAYS OF FACTORY START-UP IS INCLUDED AND REQUIRED FOR WARRANTY. PAYMENTFOR MATERIALS WILL BE REQUIRED BEFORE THE AUTHORIZED START-UP IS CONDUCTED.

ACCEPTED DATE

Review Date: 1/15/15

Brian Shields

NAME OF PURCHASER

REVIEWED BY HYDRA SERVICE PUMP REP.

			Detail Bill of Material	Negotiation	Page 1 of 1 MI850121X5K7	
Powering Business Worldwide		usiness Worldwide	General Order No:	No: Alternate No:	0000	
Item No. 001	Qty 2	Product Adjustable Frequency Drives	Description Catalog Number: SVX01534EP, SVX Series, 480VAC, 15 HP (11 KW) HP, 21A IH, Enclosure: SVX PumpPackageNEMA Type 3R, High Overload (IH), Brake Chopper Circuit Included	Unit Quote 1 \$8,7	Price Extended Quot '92.00 \$17,584.0	
		Catalog No Designation	SVX01534EPK2L1P1PF+LDP5P8 15HP HD			
		QtyList of Materials1SVX9000 VFD F1(PF) - Output Fili1(P8) - Transient1(P5) - Additional1Upgrade Enclose1Enclosure to be1(SS) - Stainless1(P1) - Circuit Bree1(K2) - Speed Poi1(LD) - Stop Light1(L1) - Power On,	S PUMP PANELS NEMA 3R Encl 480V 15HP CT ter Voltage Surge Suppressor (50KA per Phase) 3% Input Reactor ure to 316 Stainless Steel Powder Coated White Steel Enclosure saker t with HOA Switch : (Green) 22mm Run,Fault Indicator Lights 22mm		·	
Item No. 002	Qty 2	Product Adjustable Frequency Drives Catalog No Designation	Description Catalog Number: SVX04034DP, SVX Series, 480VAC, 40 HP (30 KW) HP, 52A IH, Enclosure: SVX PumpPackageNEMA Type 3R, High Overload (IH) SVX04034DPK2L1P1PF+LDP5P8 40HP HD	Unit Quote) \$11,7	Price Extended Quot 80.00 \$23,560.0	
		QtyList of Materials1SVX9000 VFD P1(PF) - Output Fill1(P8) - Transient1(P5) - Additional1Upgrade Enclose1Enclosure to be1(SS) - Stainless1(P1) - Circuit Bree1(LD) - Stop Light1(L1) - Power On,	WMP PANELS NEMA 3R Encl 480V 40HP CT ter Voltage Surge Suppressor (50KA per Phase) 3% Input Reactor ure to 316 Stainless Steel Powder Coated White Steel Enclosure eaker t with HOA Switch (Green) 22mm Run,Fault Indicator Lights 22mm			
			Total Quote Price		\$41,144.00	

Eaton Selling Policy 25-000 applies.

All orders must be released for manufacture within 90 days of date of order entry. If approval drawings are required, drawings must be returned approved for release within 60 days of mailing. If drawings are not returned accordingly, and/or if shipment is delayed for any reason, the price of the order will increase by 1.0% per month or fraction there of for the time the shipment is delayed.

Howard Woodrow & Associates, Inc.

255 Bermuda Beach Drive Fort Pierce, FL 34949 772-461-6227 Fax 772-461-6231

Price Quote

DATE	QUOTE #
1/22/2015	5374

NAME/ ADDRESS

Globaltech, Inc. Attention: Nico Shaner 6001 Broken Sound Pkwy NW, Ste 610 Boca Raton, FL 33487

	TERMS	FC	ЭB	F	PROJECT
	Net 30			HSP D	egas 01-22-15
DESCRIPTION			QTY	PER UNIT	TOTAL
 Eaton SVX9000 VFD PUMP PANEL CT (SS) - Stainless Steel Enclosure (CQ) - Ethernet IP (K2) - Speed Pot with HOA Switch (P5) - Additional 3% Input Reactor (PF) - Output Filter (P8) -TVSS (50KA per Phase 	S NEMA 3R Encl 480V 1 n or se)	ОНР	2	11,215.00	22,430.00T
 Eaton SVX9000 VFD PUMP PANEL CT (P5) - Additional 3% Input Reacted (SS) - Stainless Steel Enclosure (SS) - Stainless Steel Enclosure (PF) - Output Filter (CQ) - Ethernet IP (K2) - Speed Pot with HOA Switch (P8) -TVSS (50KA per Phase) 	S NEMA 3R Encl 480V 3 or n se)	ОНР	2	15,506.00	31,012.00T
Shipping & Handling: Prepay and Add				0.00	0.00
			Subto	otal	\$53,442.00
			Sales	Tax (6.0%) \$3,206.52
All Prices Valid for 60 Days. FOB Factory.			тот	AL	\$56,648.52



>Lightnin[•]

Hudson Pump & Equipment 3524 Craftsman Blvd. Lakeland, Florida 33803-7307 United States Phone: 863-665-7867 Fax: 863-666-5649 cmccaughey@tencarva.com

Quote Form

Attention: Troy Lin

Date: 1/16/2015

Globaltech Inc. 6001 Broken Sound Parkway, NW Suite 610 Boca Raton, Florida 33487 United States Phone: 561-997-6433

Project Name: Globaltech - 14Q3/16Q10

Quote Number: 106855037 Revision 1

Comments: FCA Rochester, NY 14611

Item No	Product	Description	Quantity	Price Each			
Mixer	Series 10	Model 15Q3	1 \$13,713.00				
Details:	Motor:	3.0HP, TEFC, Severe Duty/Premium 213TC, 230/460 v, 1200 RPM	.0HP, TEFC, Severe Duty/Premium Efficiency-Inverter Duty, 3 ph, 60 Hz, 13TC, 230/460 v, 1200 RPM				
		Operating Speed:	Variable				
		Minimum Speed for Variable Operation	mum Speed for Variable Operation is 34 RPM				
		Minimum Input Speed:	589.0				
	Machine:	Gear Reduction Ratio: Output Speed:	17.31 68 RPM				
		Tachometer:	Shaft Speed Includes PVC pulser wrap and aluminum body hall effect sensor with 10 feet of 3-conductor sheilded cable. Not rated for XP environment. 2.0 inches 106.0 inches with 32 degree Tip Cord Angle 24.0 inches 316ss Steel-Flex Axial Flow L-17632, DS-E-866, L-17674,				
		Tachometer Description:					
	Shaft:	Diameter: Length:					
	Impeller(s):	Lower, 47.0 inches, A510E with 32 de Off Bottom:					
	Other Data:	Wetted Parts Material: High Speed Coupling: Tagging ID: Drawings:					
			L-1//30	¢10,001,00			
Mixer	Series 10	Model 16Q10	1.	\$19,201.00			
Details:	Motor:	10.0HP, TEFC, Severe Duty/Premium Efficiency-Inverter Duty, 3 ph, 60 Hz, 256TC, 230/460 v, 1200 RPM					
		Operating Speed:	Variable				
		/linimum Speed for Variable Operation is 34 RPM					
		Minimum Input Speed:	589.0				
	Machine:	Gear Reduction Ratio:	17.31				
	Output Speed: Tachometer:	68 RPM Shaft Speed					
--------------	--	--					
	Tachometer Description:	Includes PVC pulser wrap and aluminum body hall effect sensor with 10 feet of 3-conductor sheilded cable. Not rated for XP environment.					
Shaft:	Diameter: Length:	2.5 inches 99.0 inches					
Impeller(s):	Lower, 38.0 inches, R100 wit Off Bottom:	h 90 degree Tip Cord Angle 31.0 inches					
Other Data:	Wetted Parts Material: High Speed Coupling: Tagging ID: Drawings:	316ss Steel-Flex Radial Flow L-17632, DS-E-866, L-17674, L-15715					
I		Total (US Dollars): \$32,914.00					

Shipment In: Payment Terms: Delivery Terms: Quote Expiration Date: 9 Weeks After Receipt of Order 30 Days from Invoice Date FOB Origin 2/15/2015

Please Address Purchase Order to: SPX Flow Technology - LIGHTNIN c/o Hudson Pump & Equipment 3524 Craftsman Blvd. Lakeland, Florida 33803-7307 United States

Thank you,

Kerry Bonilla / Mark Lesko Sales Engineer

This quote/proposal is subject to SPX Standard Terms and Conditions of Sale, a copy of which are attached hereto and are also available on the Internet at http://www.spx.com/en/lightnin/sales-terms-and-conditions/. Any acceptance of this quote/proposal is expressly conditioned upon your acceptance of these Terms and Conditions.



Furnished by: Mixtec North America 4106 S. Commerce Drive Murray, Utah 84107 (801) 290-3762 (Phone) (801) 290-3777 (Fax) Contact: Dave Vu dvu@mixtecna.com





Proposal No. 15023

Prepared for:

Envirosales of Florida

Date Prepared:

February 3, 2015

Project:

Clearwell Flash Mixer

Equipment:

Two (2) Flash Mixers

CONTENTS

- Design Summary
- Equipment Summary
- Equipment Pricing
- Clarifications
- Warranty / Terms & Conditions

Description	Recommended	Specified
Application	Water Treatment	Water Treatment
Tank Size – L x W x Height (ft)	6 x 10 x 11	6 x 10 x 11
Liquid Level (ft)	8.5	8.5
Product Description	Water	Water
Viscosity (cP)	1	5
Design Basis Tank Turnovers	3.3	3.3
(TTO/min)		
Actual Pumping (gpm)	12,682	12,707
Installed HP @ Shaft RPM	3 HP @ 68 RPM	10 HP @ 74 RPM
Speed Reducer	Parallel Helical	Parallel Helical
Shaft Diameter x Length (in)	2 Dia. x 83	2.5 Dia. x 84
Impeller Diameter (in) / Type	37 Dia. / HA745 4 Blade Pitch	36 Dia. / HA790 6 Blade Rushton
	Blade Turbine	Turbine
Number of Impellers	One (1)	One (1)
Materials of Wet Ends	316 Stainless Steel	316 Stainless Steel
Seal Type	None	None
Weight, lbs. (Each)	312	563
Quantity	Two (2)	Two (2)

\$7,281.00	\$9,521.00
\$14,562.00	\$19,042.00
\$650.00	\$650.00
None Included - See Page 3 of	None Included - See Page 3 of
this proposal for current rates	this proposal for current rates
6-8	6-8
15023 REC GA	15023 SPEC GA
	\$7,281.00 \$14,562.00 \$650.00 None Included - See Page 3 of this proposal for current rates 6-8 15023 REC GA

(1) After Receipt of Approved Drawings in Our Office Unless otherwise indicated, prices listed are for equipment only in the given quantities. All optional items will be offered with the purchase of the scoped equipment only and will not be sold separately.

Exceptions/Exclusions:

• None

Clarifications:

None 0





Bryant Facey Globaltech, Inc. 561.997.6433 bfacey@globaltechdb.com

PM Quotation Number: 61146

Ref:Belle Glades, FL- Palm Beach County WUDSubject:PMSL Budget Proposal

Dear Mr. Facey,

Thank you for your inquiry for the referenced opportunity. Philadelphia Mixing Solutions is pleased to offer our equipment and services to meet your requirements:

Agitator Name		PMSL Model / Description	Qty.	Unit Price Each (USD)
	Drive:	UniFirst 4000 Series		
Lime Bapid Mixers	Motor:	10 HP, TEFC, Inverter duty, 1800 RPM, 460 VAC, 60 Hz, 3 phase	2	\$ 37 000
	Shaft:	3" diameter, 316 Stainless Steel	<u>ک</u>	φ 37,000
	Impeller:	2x36" diameter, 4PBT45 Turbine, 316 Stainless Steel		
TOTAL			LOT	\$ 74,000

Standard Lead Time: 12-16 weeks ARO

Freight Terms: Price is quoted F.O.B. Palmyra, PA.

Attachments: Mixer Cut Sheet

Clarifications:

No Spare Parts are recommended for two (2) years of operation.

Anchor Bolts, Controls, and Baffles are not included in scope of supply.

No lubricants are included in PMSL scope of supply.



1221 East Main Street • Palmyra • PA • 17078 • Phone: 717.832.2800 • Fax: 717.832.1740 • www.philamixers.com

Venture House, Bone Lane • Newbury • Berkshire, RG14 5SH, UK • Phone: +44 (0) 1635 275300 • Fax: +44 (0) 1635 275375 www.mixingsolutions.com • sales@mixingsolutions.com



Be Right[™]

luote Number: 100056145v2 se quote number at time of order to ensure nat you receive prices quoted

luote Date: 09-Jan-2015

Quote Expiration: 10-Mar-2015

JLOBAL TECH UITE 610 001 BROKEN SOUND PKWY NW OCA RATON, FL 33487

lame: NICO SHANER 'hone: 404-226-7645 mail: NShaner@globaltechdb.com

ustomer Account Number: 40101923 ustomer Quote Reference: pH Probes & SC200's

ales Contact: Chris Bunch Email: cbunch@hach.com Phone: 800-227-4224

PRICING QUOTATION

line	Part Number	Description	Qty	Unit Price:	% Disc	Extended Price
•	DPD1P1	pHD sc; Differential pH Digital Sensor, PEEK Body Material, Convertible Body Style, General Purpose Glass Electrode,70 C (158 F)Maximum Temperature	2	957.00	8%	1,760.8
:	LXV404.99.00552	sc200 CONTROLLER, AC-DC, 2 DIG, HACH	2	1,797.00	8%	3,306.4
TANK P	THE PARTY OF THE PARTY OF THE PARTY	Berther and the second fair of the second second states and the second second second second second second second		. I S I Gran		\$ 5,067.3

TERMS OF SALE

'reight: Ground Prepay and Add

FOB: Origin

Il purchases of Hach Company products and/or services are expressly and without limitation subject to Hach Company's Terms & Conditions of Sale ("Hach TCS"), incorporated erein by reference and published on Hach Company's website at <u>www.hach.com/terms</u>. Hach TCS are contained directly and/or by reference in Hach's offer, order acknowledgment nd invoice documents. The first of the following acts constitutes an acceptance of Hach's offer and not a counteroffer and creates a contract of sale "Contract" in accordance with the ach TCS: (i)

uyer's issuance of a purchase order document against Hach's offer; (ii) acknowledgement of Buyer's order by ach; or (iii) commencement of any performance by Hach pursuant to Buyer's order. Provisions contained in uyer's purchase documents (including electronic commerce interfaces) that materially alter, add to or subtract om the provisions of the Hach TCS are not part of the Contract.

ue to International regulations, a U.S. Department of Commerce Export License may be required. Hach reserves the right to approve specific shipping agents. Wooden boxes suitable or ocean shipment are extra. Specify final destination to ensure proper documentation and packing suitable for International transport. In addition, Hach may require : 1). A statement f intended end-use; 2).Certification that the intended end-use does not relate to proliferation of weapons of mass destruction (prohibited nuclear end use, chemical / biological reapons, missile technology); and 3). Certification that the goods will not be diverted contrary to U.S. law.

RDER TERMS

erms are Subject to Credit Review

lease reference the quotation number on your purchase order. ales tax is not included. Applicable sales tax will be added to the invoice based on the U.S. destination, if applicable provide a resale/exemption certificate.

hipments will be prepaid and added to invoices unless otherwise specified. quipment quoted operates with standard U.S. supply voltage.

ach standard terms and conditions apply to all sales. dditional terms and conditions apply to orders for service partnerships. rices do not include delivery of product. Reference attached Freight Charge Schedule and Collect Handling Fees.

tandard lead time is 30 days

QUOTATION

Hach Company PO Box 608 Loveland, CO 80539-0608 Phone: (800) 227-4224 quotes@hach.com Email: Website: www.hach.com

iales Contact:

Vame:Chris BunchTitle:Regional Sales ManagerYhone:800-227-4224Imail:cbunch@hach.com

Prepared By:

Name: Title: Phone: , Email:

Susan Corsberg Field Sales Support Specialist 800 227 4224 x6265 scorsber@hach.com



Here were and the states of the second of the second s				Date of Order:		
				Date Quoted:	6-Feb-15	
111 Mari	time Drive	407-302-5611		FCS Quote #:	RAM020615-0001	
Sanford,	Florida 32771	407-302-5612		Quoted By:	Robert McCall	
Project:	Palm Beach County Sys #11 pH	Analyzer	Cust PO #:		FCS SO#	
Company: Address: City, St Zip: Attn:	^{Bill to:} Globaltech, Inc. 1075 Broken Sound Parkway Boca Raton, FL 33487 Nico Shaner		Company: Address: City, St Zip: Attn:	Ship to:		
Contact: Email: Phone: Fax:		Ship Via: Taxes: FOB: fa Delivery: Tax ID	actory		Credit Card Type: Name: Number: Expiration:	

Special Notes:

To order make purchase order to "Fluid Control Specialties, Inc."

Item	Qty	Model/Description	1	Unit Price	% Disc	 Ext
1	2	Rosemount Analytical Model 3500VP-PR-02-10-21-31 PERpH-X pH sensor, double junction reference for 100 psig water service, Pt-100 RTD, Tefzel body, GPHT Hemi Glass Bulb, 1" male NPT threaded connection, Viton O-ring, without integral preamplifier, Variopol Cable connector	\$	835.00		\$ 1,670.00
2	2	<i>Rosemount Analytical</i> Part #24281-07 VP08 Connector Cable, 20 feet shielded	\$	245.00		\$ 490.00
3	2	Rosemount Analytical Model 5081-P-HT-20-60 pH 2-wire loop power 24 volts DC transmitter, one pH input, one 4-20 mA output HART, large LCD display, rugged weatherproof NEMA4X aluminum enclosure, infrared remote controller included	\$	2,790.00		\$ 5,580.00
ЗA	2	Rosemount Analytical Part #23820-00 Pipe/Wall Mounting Bracket	\$	55.00		\$ 110.00
4	1	FREIGHT - Ground	\$	50.00		\$ 50.00
		Lead Time - 4-5 weeks				

Order Page Total \$ 7,900.00

Quotation validity - 30 days from date shown. Payment Terms - Net 30 days with manufacture's approval.

This document is subject to the terms and conditions, including the modification of warranties contained therein as described in Attachment A.



C. C. CONTROL CORP.

5760 CORPORATE WAY, SUITE 100 WEST PALM BEACH, FLORIDA 33407

> PHONE: 561 293-3975 FAX: 561 293-3976

CUSTOMER:	GLOBALTECH		
ATTN:	NICO SHANER		
PROJECT:	WTP NO.11 REMOTE I/O PANEL RIO-9 PALM BEACH COUNTY WATER UTILITIES DEPT.		
DATE:	1/21/2015		тоти
DESCRIPTION		QUAN	PAGES 3
C C	. C. CONTROL CORP. PROPOSES TO FURNISH THE FO OMPLETE WITH EXCEPTIONS AS LISTED:	DLLOWING	a an an filing and
A) B) C) D) E) F) G) H) I) J) K)	EXCEPTIONS: QUOTE DOES NOT INCLUDE CONDUIT SYSTEM. QUOTE DOES NOT INCLUDE WIRE/CABLE. QUOTE DOES NOT INCLUDE INSTALLATION. QUOTE DOES NOT INCLUDE FIELD TERMINATIONS. QUOTE DOES NOT INCLUDE ANY PANEL MOUNTING F QUOTE DOES NOT INCLUDE ANY PANEL MOUNTING F QUOTE DOES NOT INCLUDE ANY POWER PANELS OR QUOTE DOES NOT INCLUDE ANY POWER PANELS OR QUOTE DOES NOT INCLUDE ANY EXTERNAL SPD'S. QUOTE DOES NOT INCLUDE ANY VFD'S. QUOTE DOES NOT INCLUDE FIELD INSTRUMENTS. QUOTE DOES NOT INCLUDE FIELD OR SCADA PROGRA	RACKS. ER THAN NOTED MPZ'S. MMING.	BELOW.
ITEM NO.1 REMOTE I/O PANEL NEMA 4X 316 S.S. FI A) SIZE: 60"H X B) 3PT. S.S. PAD C) SUBPANEL: S D) TRACK FOR F E) STUDS FOR D F) FINISH: PAINT G) 3" FLANGED F SQD 9007 AP221 DC EDCO HSP-121A SU PROGRESS P7008-3 HUBBELL CS115-I S HUBBELL GF15IL GF HUBBELL SS26 GFI HUBBELL SS26 GFI HUBBELL S7 S.S. SII SQD QOU120 120V 4	RIO-9 REESTANDING ENCLOSURE WITH THE FOLLOWING: 48"W X 18"D LOCKABLE HANDLE TEEL PAINTED WHITE PANEL LIGHT OOR SWITCH ED WHITE 30TTOM CUTOUT OR SWITCH RGE ARRESTER 0 36" UNDERCABINET LYTE NGLE 15A TOGGLE SWITCH FI RECEPTACLE 15A PLATE SS SINGLE 15A RECEPT. NGLE RECEPT. PLATE I POLE 15 AMP CIRCUIT BREAKERS I POLE 20 AMP CIRCUIT BREAKER	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
	REMOTE IO PANEL RIO-9 GLOBALTEC		Page 1

ALLEN BRADLEY 1756-A17 17 SLOT CONTROLLOGIX CHASSIS	1		
ALLEN BRADLEY 1756-PA75 POWER SUPPLY	1		
ALLEN BRADLEY 1756-EN2T CLX ETHERNET/IP 10/100 BRIDGE	1		
ALLEN BRADLEY 1756-ENBT ETHERNET/IP 10/100 BRIDGE	1		
ALLEN BRADI EY 1756-IA16I 16 POINT, 120VAC ISOLATED DI	4		
ALLEN BRADI FY 1756-0A16I DIGITAL OUTPUT MODULE 16PT.	4		
ALLEN BRADI FY 1756-IF16 ANALOG INPUT 8CH	2		
ALLEN BRADLEY 1756-OF6CLANALOG OUPUT 6CH	3		
ALLEN BRADLEY 1756-TBNH 20 POSITION NEMA SCREW CLAMP BLCK	8		
ALLEN BRADI EY 1756-TBCH 36 POSITION NEMA SCREW CLAMP BLCK	5		
ALLEN BRADI FY 1783 FTAP-2E MEDIA CONVERTER	2		
ALLEN BRADI EY 1756-N2 EMPTY SLOT FILLER CARD	1		
PULS SLR10 100 10A 24VDC POWER SUPPLY	1		
ALLEN BRADLEY 700-HA33A1-3-A 3PDT 120VAC RELAY	66		
ALLEN BRADI EV 700-HN101 11PIN SOCKET	66		
EDCO PC6/2C-036-X DUAL SIGNAL SURGE PROTECTOR	28		
	1		
ALLEN BRADLEY 1600-BOUGN 120V 500VA 015))		
	2		
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NOLEA WER-00010-02 ST LOADED FIDER FATCH PANEL			·
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	. Z		
PHOENIX CONTACT 3044597 UT 4-QUATTRO-PE GROUND BLOCK	6		
PHOENIX UK5-HESI 3004100 FUSIBLE TERMINAL BLOCK	34		
BUSSMAN GMA FUSES	34		
PHOENIX CONTACT 3044102 UT4 TERMINAL BLOCK	34		
PHOENIX CONTACT 304/028 D-UT TERMINAL BLOCK END COVER	34		
PHOENIX CONTACT UTTB4 3044814 DOUBLE TIER TERMINALS	70		
PHOENIX CONTACT D-UTTB 2.5/4 3047293 END BARRIER	. 1	÷	
PHOENIX CONTACT FSB20-6 3030365 20 POLE PLUG IN BRIDGE	2		
PHOENIX CONTACT E/UK1 1201413 END CLAMPS	4		
MISC. PHOENIX MARKING STRIPS	LOT		
PANDUIT UGB-B-SO STANDOFF KIT	. 1		
PANDUIT UGB2/0-414-6 GROUND BAR KIT	1		
WIRE, DUCT & NAMEPLATES	LOT		
U.L. 508A LABEL	LOT		
ITEM NO.2			
REMOTE MATERIALS			
ALLEN BRADLEY 1783 ETAP-2F MEDIA CONVERTER	2		
FIS X288LM1FISC ST-LC 1M PATCH CABLE	2		
ITEM NO.3			
SERVICE SUMMARY			
ENGINEERING	LOT		
SUBMITTALS	LOT		
TESTING	LOT		
START-UP	LOT		
TRAINING	LOT		
O & M MANUALS	LOT		
		<u> </u>	
SUMMADY			

ITEMS NO.1 THRU NO.3

SELL: \$51,500.00 PLUS TAX

REMOTE IO PANEL RIO-9 GLOBALTEC

Page 2

NOTE:

THIS IS A BUDGETARY NUMBER BASED ON THE INFORMATION PROVIDED AT THE TIME OF THE QUOTE.

SUBMITTALS4-6 WEEKS
AFTER RECEIPT OF PURCHASE ORDERFOB:JOB SITEDELIVERY:8-10 WEEKS
AFTER APPROVED DRAWINGSTERMS:NET 30 DAYS
(SUBJECT TO CREDIT APPROVAL)

WARRANTY: ALL WARRANTIES SHALL EXPIRE ONE (1) YEAR FROM DATE OF START-UP FROM SELLER TO BUYER UNLESS SPECIALLY INDICATED OTHERWISE AND WILL BE NULL AND VOID UNLESS MATERIALS ARE STORED UNDER PROPER CONDITIONS DETERMINED BY C.C. CONTROL CORP.

JOHN C. STOCK

REMOTE IO PANEL RIO-9 GLOBALTEC

Page 3



luote Number: 100056398v4 se quote number at time of order to ensure nat you receive prices quoted

luote Date: 12-Jan-2015

Quote Expiration: 13-Mar-2015

JLOBAL TECH UITE 610 001 BROKEN SOUND PKWY NW OCA RATON, FL 33487

lame: NICO SHANER hone: 404-226-7645 mail: NShaner@globaltechdb.com

ustomer Account Number: 40101923 ustomer Quote Reference: Palm Beach County WTP 11 - Belle Glade

ales Contact: Chris Bunch Email: cbunch@hach.com Phone: 800-227-4224

PRICING QUOTATION Line Part Number Qty Net Unit Price Extended Price APA 6000 Ammonia/Monochloramine Analyzer, 0.02-2.0 mg/L as N, 0.1 to10.0 mg/L as Cl2 (in NEMA-4X/IP66 enclosure. Includes AquaTrend Interface, 30-day 16,738.05 33,476.11 2 5500610 reagent supply, basic sample conditioning kit, maintenance kit, and manual) the exclusion building the state of 33,476.1 Grand Total S TERMS OF SALE

reight: Ground Prepay and Add

FOB: Origin

Il purchases of Hach Company products and/or services are expressly and without limitation subject to Hach Company's Terms & Conditions of Sale ("Hach TCS"), incorporated reference and published on Hach Company's website at <u>www.hach.com/terms</u>. Hach TCS are contained directly and/or by reference in Hach's offer, order acknowledgment nd invoice documents. The first of the following acts constitutes an acceptance of Hach's offer and not a counteroffer and creates a contract of sale "Contract" in accordance with the ach TCS: (i)

aun ros: () uyer's issuance of a purchase order document against Hach's offer; (ii) acknowledgement of Buyer's order by ach; or (iii) commencement of any performance by Hach pursuant to Buyer's order. Provisions contained in uyer's purchase documents (including electronic commerce interfaces) that materially alter, add to or subtract om the provisions of the Hach TCS are not part of the Contract.

ue to International regulations, a U.S. Department of Commerce Export License may be required. Hach reserves the right to approve specific shipping agents. Wooden boxes suitable or ocean shipment are extra. Specify final destination to ensure proper documentation and packing suitable for International transport. In addition, Hach may require : 1). A statement f intended end-use; 2).Certification that the intended end-use does not relate to proliferation of weapons of mass destruction (prohibited nuclear end use, chemical / biological eapons, missile technology); and 3). Certification that the goods will not be diverted contrary to U.S. law.

RDER TERMS:

rems are Subject to Credit Review Jease reference the quotation number on your purchase order.

ales tax is not included. Applicable sales tax will be added to the invoice based on the U.S. destination, if applicable provide a resale/exemption certificate. hipments will be prepaid and added to invoices unless otherwise specified.

quipment quoted operates with standard U.S. supply voltage. ach standard terms and conditions apply to all sales.

dditional terms and conditions apply to orders for service partnerships. rices do not include delivery of product. Reference attached Freight Charge Schedule and Collect Handling Fees. tandard lead time is 30 days

Quotation

Hach Company PO Box 608 Loveland, CO 80539-0608 (800) 227-4224 Phone: Email: quotes@hach.com www.hach.com Website:



January 10, 2015

Troy Lyn GlobalTech, INC 1075 Broken Sound Pkwy. NW, Suite 103 Boca Raton, FL 33487

Subject: Water Treatment Plant No. 11 Clearwell and Chemical Improvements

Dear Troy:

ADS Engineering. PLLC. (ADS) is pleased to provide GlobalTech a proposal for the programming services associated with the above referenced project. The scope of the design is as follows:

Implementing control strategies and configuring databases, iFix Screens and ladder logic as required by the Project.

1. Carbon Dioxide (KH 3.12.8)

Integrate new booster pump system, pressure and solution flow meters in to the control system. Maintain supply dilution water pressure set point. Complete all miscellaneous programming necessary to integrate all CO2 system modifications.

Configure and add to the PLC RIO system new Remote I/O (RIO 9)

2. Lime (Calcium Hydroxide) (KH 3.12.10)

Modifying Cal-Flo metering pumps to have both pumps operating simultaneously at a feed rate needed for the expected flow in each degasifier bay.

Integrate new mechanical mixers into the control system. Maintain optimal mixing speed for the process. Complete all miscellaneous programming necessary to integrate all Cal-Flo system modifications.

3. Ammonia (KH 3.12.09)

Integrate new APA 6000 units (2) and one chlorine analyzer in to the control system. Adjust ammonia controls as required by the process. Complete all miscellaneous programming necessary to integrate all Ammonia system modifications.

4. Groundwater 4-log Compliance

Integrate new pH analyzers (2) in the control system. Complete all miscellaneous programming necessary for Groundwater 4-log Compliance modifications

- 5. Screen design and SCADA Software configuration
- a. Creating the HMI testing screens
- b. Modification of the existing iFIX database to incorporate the programming modifications.
- c. Coordination with PBC Scada department for developing new screens and testing the system
- 6. Testing and Start-up
- 7. Trainings for O&M staff to describe created Application Software usage and features.

Our proposed lump sum programming fee is \$ 28,200.00

If you have any questions, please call.

Sincerely,

Alex Stojanovic 954-415-7378 Waterworks

6520 Harney Road - Tampa, FL 33610 Post Office Box 16039 - Tampa, FL 33687-6039 (813) 740-1144 - FAX (813) 627-9387

Serving the Water & Wastewater Plant Industry for over 24 Years

To:	Globaltech, Inc.	Fax:	
Attn:	Bruce Rahmani	Phone:	
Subject:	SS Pricing	Date:	January 22, 2015
From:	Wesley Bunn	Quote #:	012215

Net 30 Tampa FFA to Jobsite Bestway 30 Days				Ship Wia	Validity
	Net 30	Tampa	FFA to Jobsite	Bestway	30 Days

Quantity	Description	HUDDI Price		MEDE
1	6" SCH10 316SS BW LR 90 BEND	88.70	88.70	Ń
1	6' SCH10 316SS BW 45 BEND	100.00	100.00	
20	6" SCH10 316SS WELDED PIPE	44.72	894.40	
1	6" SCH10 316SS BW TEE	141.12	141.12	
20	4" SCH10 316SS WELDED PIPE	27.24	544.80	
1	6" X-4" SCH10 316SS RED COUPLING	27.98	27.98	
1	6" SS LUG STYLE BUTTERFLY VALVE	1,800.00	1,800.00	
1	6" X 3" SCH10 316SS RED TEE	206.14	206.14	
1	6" 150# 316SS BLIND FLANGE	121.58	121.58	
20	3" SCH10 316SS WELDED PIPE	21.28	425.60	
1 .	3" 150# 316SS SLIP-ON FLANGE	50.78	50.78	
1	4" 150# 316SS SLIP-ON FLANGE	69.90	69.90	
1	6" 150# 316SS SLIP-ON FLANGE	105.74	105.74	
		, -	-	*
1	4" 316SS FLG ACCY SET - EPDM	24.00	24.00	
1	6" 316SS FLG ACCY SET - EPDM	36.00	36.00	
1	8" 316SS FLG ACCY SET - EPDM	38.00	38.00	
-		. ••	-	
1	SHOP WELDING COST PER HOUR	125.00	125.00	
	(USE 1.5HRS PER WELD JOINT)	Sub-Total:	4,799.74	
		Freight:		
		Tax:		

TOTAL:

All Material Subject to Prior Sale

This quotation is for your acceptance in its entirety within 30 Days. If quantities or descriptions should change, McDade Waterworks, Inc, reserves the right to submit a revised quotation.

Sincerely, McDade Waterworks, Inc.

Wesley G. Bunn

Energy Efficient Electric, Inc. 1600 Mercer Ave. Unit 6 West Palm Beach, FL. 33401 Phone (561) 655-7211 Fax (561) 655-9661 Mobile (561) 722-1381 E-Mail Address: rene@energyeff.com State License #EC 0001096

January 21, 2015

Electrical Scope of Work PBC Lake Region Degas

Quote # 30841

We are pleased to provide your firm with our scope and proposal for the necessary electrical work on the above referenced project. Our scope and proposal is based on a hand sketch and assumption from Troy Lyn and Thein Win.

Included:

- 1. Furnish and install a new 250 amp Square D model 6 breaker bucket in existing MCC-4.
- 2. Furnish and install panel PP-Degas, 15 KVA Mini powerzone, (2) SPD, and (1) lighting contactor per drawings and assumptions.
- 3. Assist with the installation of the (2) FIT's and supports furnished by others.
- 4. Assist with the installation of the VFD control panel and RIO-9 furnished by others.
- 5. Furnish and install a concrete encased ductbank with rebar for the 2 ½" power conduit, (2) 1" conduits for fiber optic and (2) 2" future conduits from the HSP building to the clearwell structure. Furnish and install (2) 1" conduits in a ductbank from the VFD's to the CO 2 pump number 1 and 2. Excavate and backfill to a rough grade. Final restoration by others.
- 6. Furnish and install conduit and wire as indicated on the drawing.
- 7. Furnish and install F O and Modbus cable furnished by others.
- 8. Furnish and install conduit and wire for the APA 6000 at the HSP building and the Membrane building as indicated on the drawings.
- 9. Adder no. 1, relocate (3) existing blower control panels to the west side of the clearwell. Reroute conduit and wire as needed.
- 10. Adder no. 2, relocate sample pump disconnect, conduit and wire within 10 feet of existing location.
- 11. Adder no. 3, disconnect/reconnect existing scrubber solenoid valve.

Excluded:

- 1. Permit fees.
- 2. MOV's, LS's, PIT's, FIT's and pumps.
- 3. Electric or pneumatic op. valves, solenoids, pipe taps, pipe saddles, pneumatic impulse piping, test taps or shut off valves.
- 4. Programming.
- 5. Concrete and asphalt cutting and patching.
- 6. Concrete pads.
- 7. Lightning protection and grounding.
- 8. Signed and sealed engineering plans.

Residential ----- Lighting Systems ----- Commercial ----- Industrial

CAUSERS/BFACEYAPPDATA/LOCAL/MICROSOFT/WINDOWS/TEMPORARY INTERNET FILES/CONTENT,OUTLOOK/VE51AX44/REVISED SCOPE.DOC

Energy Efficient Electric, Inc. 1600 Mercer Ave. Unit 6 West Palm Beach, FL. 33401 Phone (561) 655-7211 Fax (561) 655-9661 Mobile (561) 722-1381 E-Mail Address: rene@energyeff.com

Base Bid	<u>\$155,150</u>				
Adder no. 1	<u>\$ 15,000</u>				
Adder no. 2	<u>\$ 2,200</u>				
Adder no. 3	<u>\$ 300</u>				

We appreciate the opportunity to quote your organization on this project. If you have any questions, please call me at the office.

Thank You Very Kindly,

Rene Viau

Vice President

Residential ----- Lighting Systems ----- Commercial ----- Industrial PORARY INTERNET FILES/CONTENT.OUTLOOK/VE51AX44/REVISED SCOPE.DOC

S\TEM



December 22, 2014

Troy Lyn Global Tech 4722 NW Boca Raton Blvd. Suite C103 Boca Raton, FL 33431 Email: tlyn@globaltechdb.com

Re: "GPR and EM Investigation-PBC Lake Region WTP (WTP 11) - concrete slab"

Mr. Lyn,

Ground Hound Detection Services, Inc. (GHD) is pleased to provide the following proposal for Subsurface Investigation services. Based on the information outlined in your email and our phone conversation on December 22, 2014, GHD will perform a subsurface investigation to determine the presence of any detectable objects consistent with electrical conduits, plumbing/product pipes and reinforcement bars within the areas described and proposed for saw cutting/drilling. The provided drawings depicting the investigation area(s) shall be considered a part of this proposal.

Professional Utility Locating Service

DESCRIPTION OF SERVICES: Multiple tools involving differing technologies are proposed for this investigation.

EM-Magnetic Detection Electromagnetic induction is a method in which a transmitter signal is applied by directly coupling to a target. As long as the target is metallic, a receiver is used to detect the transmitted signal. Passive detection is another technique used to locate naturally occurring magnetic fields that exist on power cables generating a 50/60 Hz signal. Additionally, passive VLF signals can be detected on other metallic utilities that are typically long in length and are well grounded electrically. Some utility systems/structures contain portions of non-metallic material and therefore may be un-locatable using EM techniques. Additional magnetometer measuring equipment will be used to identify potentially large magnetic mass targets such as UST's and other structures.

Ground Penetrating Radar (GPR) Ground Penetrating Radar (GPR) method transmits electromagnetic waves, which are pulsed at discrete distance/time intervals. The transmitted pulse radiates through the earth whereby a portion of the energy is reflected from interfaces of contrasting electrical properties (e.g. pavement and soil interface, soil stratigraphic changes and buried metallic and nonmetallic objects) while the remaining energy continues until reaching additional reflectors where the process is repeated. Reflected energy is received by the antennae and recorded for later processing and interpretation. Factors such as soil moisture, clay content, and variations in the dielectric constants of materials control the effectiveness of the GPR method. Wet conductive soils severely attenuate GPR signals and thus the effective depth of exploration. The presence of foreign product leeched into the soil can eschew the data collected. GPR energy cannot transmit through ferrous objects since metal acts as a pure reflector. Pan decking, freshly-poured concrete (less than 60 days), concrete containing metal fibers, fine-mesh screenings beneath tile, Foil-back insulation/Styrofoam board between floors, or roof slabs composed of lightweight concrete can inhibit the effective permeability and accuracy of GPR. In addition, objects within ¼" of the surface may not be imaged due to the nature of the GPR technology. In order to be accurate, radar scans must be made across the target area. Confined or obstructed areas that restrict an even scanning pattern can impede the data collected and reduce the accuracy of the final results. GPR does not measure diameter of objects and approximates/estimates depths of objects, only their horizontal location(s). A stand-off margin of at least 1.5 inches from surface markings is required for best safety practices when cutting or drilling in close proximity to markings referencing subsurface objects.

GHD follows the Concrete Sawing and Drilling Association's (CSDA) Best Practice for Ground Penetrating Radar for Concrete Scanning. (CSDA-BP-007)

2930 NW Commerce Park Drive, Suite #1, Boynton Beach, FL 33426 PHONE: (561)737.9800 FAX: (561)737.1742 WEB: www.groundhound.com EMAIL: <u>info@groundhound.com</u>

Page Two Mr. Lyn December 22, 2014

DESCRIPTION OF SERVICES (cont.):

Locating subsurface objects is not an exact science. Therefore, Ground Hound Detection Services, Inc. (GHD) expresses no guarantees that using one or any of the available technologies for identifying objects/structures will identify <u>all</u> objects/structures and/or meet the objective of this or any individual project Global Tech understands that limitations within the available technology, the complexity of site conditions and circumstances beyond the control of GHD may limit the performance/results of the GHD's services. Project Owners, Global Tech and any of its Subcontractors shall hold harmless and indemnify GHD against any and all losses as a result of inability to locate or mislocate due to limitations within the available technology, the complexity of site conditions and circumstances beyond its control, but not against negligence on the part of GHD or its employees. The services provided by GHD shall be performed in accordance with generally accepted professional practices as related to the nature of services performed and in accordance to the Standard Guide for Using the Surface Ground Penetrating Radar Method for Subsurface Investigation as set forth by the American Society for Testing and Materials: D 6432 - 99 (Re-approved 2005). Payment to GHD shall not be contingent upon its performance or results due to any limiting condition as described.

This proposal constitutes the entire agreement between the parties. The agreement may not be altered, modified or conditioned in any respect without the prior written consent of all parties. Documents such as but not limited to "change orders", "purchase orders", sub-contract agreements, and statements of terms and conditions of work shall require prior written acceptance by GHD to be binding. Payment to GHD for work performed pursuant to this proposal shall not be contingent upon GHD's consent to any proposed alteration, modification or condition to the agreement.

CONDITIONS - Locating subsurface objects for informational purposes:

- Limitations include maximum scan limit of up to 4.0 inches from a wall, protruding object (vertical impediment) or edge of scanned surfaces.
- Pipe/conduit and rebar locations are being provided in an attempt to aid in additional information about the site and verify the existence or lack of conflicts prior to saw cutting/drilling for damage avoidance.
- Areas to be investigated must be accessible, level and free of obstructions.
- GHD's inability to complete the project due to conditions outside of GHD's control does not void this contract.
- If GHD is to produce a map, client is responsible for providing an electronic AutoCAD file or other graphical file for GHD to map its discoveries.
- Maps produced by GHD are *not* considered to be "survey grade" drawings. GHD will include dimensions from a fixed feature (referenced to the staked targeted areas provided by the client) in the field to the horizontal position of the discovered target being depicted. Drawings are not prepared by a licensed Engineer, Surveyor or Draftsman. Drawings are not prepared to any State survey or drafting standard.
- If GHD reviews its discoveries with others responsible for data collection/mapping, a copy of the finished drawing must be supplied to GHD for review.
- GHD is not responsible for moved, altered, and obliterated marks or maintaining marks. GHD will impose an additional fee to relocate/remark facilities.
- GHD is not a substitute for Chapter 556 of the FL State Statute (Underground Facility Damage Prevention and Safety Act). Prior to project construction, excavating contractor is responsible for securing locations of public utilities through Sunshine State One Call of Florida (phone: 811).
- The performance of GHD's services is limited to full and unobstructed access to include but not limited to: mechanical rooms, manholes, hand holes, vaults, meter rooms, telecom rooms, fixtures (plumbing, electrical, communication), dispensers, fenced compounds, tanks and structures (if applicable). Full cooperation from the onsite personnel is necessary to perform a complete investigation.

Page Three Mr. Lyn December 22, 2014

ESTIMATED 2 (8hr) DAYS IN THE WORK AUTHORIZATION @ \$1475/DAY

COST ESTIMATE:

Electromagnetic, GPR Investigation

- Conduct a subsurface investigation to determine the presence of any detectable objects consistent with pipes/conduits and rebar using EM and GPR techniques.
- Mark selected targets on the ground surface as necessary with marking crayons, paint and/or marking flags

Electromagnetic & GPR Field Investigation	\$ 800.00
Mobilization \$75/hour @ one hour	\$ 75.00
Total Cost Estimate:	<u>\$ 875.00</u>

The above cost estimate is based on four hours minimum @ \$200 *per hour. An additional charge of* \$150 *per hour thereafter.*

The above cost is effective for 30 days from the date of this proposal. Price reflects EM and GPR investigation services on site. Costs are subject to change upon unforeseen condition, any changes will be negotiated accordingly. Mr. Lyn, thank you for allowing us to present this proposal. Should you have any questions, do not hesitate to contact us: 561-737-9800. If you wish to schedule this project to be worked, please sign and return via fax or email this last page.

Sincerely,

4C

Adam Smith Ground Hound Detection Services, Inc.

Accepted by

Title/Company

Print Name of Signer

Date

Re: GlobalTech "GPR and EM Investigation-PBC Lake Region WTP (WTP 11) - concrete slab"

BRIDGE DESIGN ASSOCIATES, INC.

CONSULTING ENGINEERS

January 20, 2015

BRIAN C. RHEAULT, P.E. President

GlobalTech, Inc. 1075 Broken Sound Parkway NW Suite 203 Boca Raton, Florida 33487

Attention: Troy Lyn

Regarding: PBCWUD WTP-11 Clearwell and Chemical Improvements

Dear Troy:

As requested, Bridge Design Associates, Inc. can provide the structural services and review of the Clearwell and Chemical Improvement proposed at Water Treatment Plant 11 Project. Our scope will include

Design Phase Services

- 1. Review and Comment for the Filter Hood and Filter Support Channels at the Degasifier Blowers
- 2. Structural Review of the new penetrations being made at the Clearwell Walls and details of structural reinforcement if required.
- 3. Structural Review of the new penetrations being made at the Degasifier Bay for the additional Lime application and mixing. Details of structural reinforcement will be developed if required.
- 4. Structural Review of the new penetrations being made at the Clearwell top deck for the ammonia injection and sampling Details of structural reinforcement will be developed if required.
- 5. Design and Construction Drawings for a 4' x15' Shield Awning
- 6. Included in our scope is four site visits for field review of the Project.

Our fee for Design and Structural Review is \$13,036.00

An hourly breakdown of our services is attached as Exhibit "A"

If you have any questions, please give me a call.

Respectfully. SIGN ASSOCIATES, INC. BP Betemann, P.E. #50159 tor Project Manager

5/2015-JDBS\PROPOSALS\PBCWU-WTP-11 GLOBAL TECH\01 ADMIN\PROPOSALS\WTP-11-GLOBAL TECH-PROPOSAL 01-07-15.DOCX

1402 Royal Palm Beach Boulevard • Building 200 • Royal Palm Beach, Florida 33411 (561) 686-3660 • Fax: (561) 791-1995

BRIDGE DESIGN ASSOCIATES, INC.

PBCWUD WTP 11 Clearwell and Chemical Improvements

20-Jan-15 HOURLY BREAKDOWN OF SERVICES EXHIBIT "A"

ACTIVITY	CHIEF ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER INTERN	CAD TECHNICIAN	TOTAL HOURS BY ACTIVITY	LABOR COST BY ACTIVITY
	\$195.00	\$185.00	\$92.00	\$80.00	\$93.00		
Design Phase Services						0.0	\$0.00
 Review and Comment for the Filter Hood and Filter Support Channels at the Degasifier Blowers 		4.0	8.0		12.0	24.0	\$2,592.00
Structural Review of the new penetrations being made at the Clearwell Walls and details of structural reinforcement if required		1.0	2.0		3.0	6.0	\$648.00
 Structural Review of the new penetrations being made at the Degasifier Bay for the additional Lime application and mixing. Details of structural reinforcement will be developed if required. 		1.0	2.0		3.0	6.0	\$648.00
Structural Review of the new penetrations being made at the Clearwell top deck for the ammonia injection and sampling Details of structural reinforcement will be developed if required.		1.0	2.0		3.0	6.0	\$648.00
5. 4'x15' Shield/ Awning for Panels		8.0	16.0		12.0	36.0	\$4,068.00
6, rour site visits for field review of the Project.		16.0	16.0			32.0	\$4,432.00
						0.0	\$0.00
						0.0	\$0.00
TOTAL MANHOURS	0,0	31.0	46.0	0.0	33.0	110.0	
DIRECT LABOR COST	\$0.00	\$5,735.00	\$4,232.00	\$0.00	\$3,069.00		\$13,036.00

ENGINEERING FEES

TOTAL

\$13,036.00

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\$13,036.00

Bruce Rahmani

From: Sent: To: Cc: Subject: Thein Win <twin@hillersee.com> Monday, January 19, 2015 5:14 PM Troy Lyn 'Paul Hillers' RE: PBC LRWTP - CO2 booster pumps

Troy, Do you need additional items from us to finish the scope of this Design-Build project to the County? Please put our design and construction service fee \$50k for this DB project. If you have any questions, please let me know. Thanks, Thein

1

From: Troy Lyn [mailto:tlyn@globaltechdb.com]
Sent: Friday, January 16, 2015 9:46 AM
To: Thein Win
Cc: Paul Hillers; Nico Shaner
Subject: PBC LRWTP - CO2 booster pumps

Thein. Can you make the booster pumps 30 hp instead of 25 hp.

Did you get the revised one-line to Nico/Rene?

Thanks.



WUD 14-073 / WTP 11 Degasifier and Clearwell Improvements / WA-01