

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date: July 22, 2014 Consent [X] Regular []
Public Hearing []

Department: Water Utilities Department

I. EXECUTIVE BRIEF


Motion and Title: Staff recommends motion to approve: Work Authorization No. 26 with Globaltech, Inc. for the Water Treatment Plant No. 11 (WTP #11) Variable Frequency Drive (VFD) Replacements for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2 in the amount of \$399,743.75.


Summary: On January 24, 2012, the Palm Beach County Board of County Commissioners (BCC) approved the contract for Water, Wastewater, and Reclaimed Water Improvements Design/Build Services (R2012-0159) with Globaltech, Inc. Work Authorization No. 26 will authorize the replacement of the VFD's for membrane feed pumps 1 and 4 and high service pumps 1 and 2. The existing VFD's are no longer manufactured. The VFD's for membrane feed pumps 2 and 3 were previously replaced due to failures and our spare part inventory has been depleted. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance is 15% overall. The contract with Globaltech, Inc. provides for SBE participation of 75% overall. This Work Authorization includes 99.24% overall SBE participation. The cumulative SBE participation, including this Work Authorization is 91.96% overall. Globaltech, Inc. is a Palm Beach County company. This project is included in the FY14-15 Capital Improvement plan adopted by the Board of County Commissioners. (WUD Project No. 14-061) District 6 (JM)

Background and Justification: Work Authorization No. 26 provides for Design-Build services to provide and install replacement VFD's for membrane feed pumps 1 and 4 and high service pumps 1 and 2. WTP #11 is the sole provider of potable water to the Cities of Belle Glade, Pahokee and South Bay therefore requiring replacement of critical assets prior to their failure. On January 24, 2012, the BCC approved a contract with Globaltech, Inc. for Water, Wastewater, and Reclaimed Water Improvements Design/Build Services (R2012-0159). Globaltech, Inc. will provide builders risk insurance prior to commencement of construction.

Attachments:

- 1. Location Map
- 2. Two (2) Original Work Authorization No. 26

Recommended By:  6/18/14
Department Director Date

Approved By:  7/1/14
Assistant County Administrator Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2014	2015	2016	2017	2018
Capital Expenditures	<u>\$399,744</u>	0	0	0	0
External Revenues	0	0	0	0	0
Program Income (County)	0	0	0	0	0
In-Kind Match County	0	0	0	0	0
NET FISCAL IMPACT	<u>\$399,744</u>	0	0	0	0
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

Budget Account No.: Fund 4011 Dept 721 Unit W026 Object 6541

Is Item Included in Current Budget? Yes X No

Reporting Category N/A

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

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

C. Department Fiscal Review: Debra M. West

III. REVIEW COMMENTS

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

[Signature]
OFMB
6/20/14

[Signature] 6/30/14
Contract Development and Control
6-23-14 [Signature]

B. Legal Sufficiency:

[Signature] 7/1/14
Assistant County Attorney

C. Other Department Review:

Department Director

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

ATTACHMENT - I

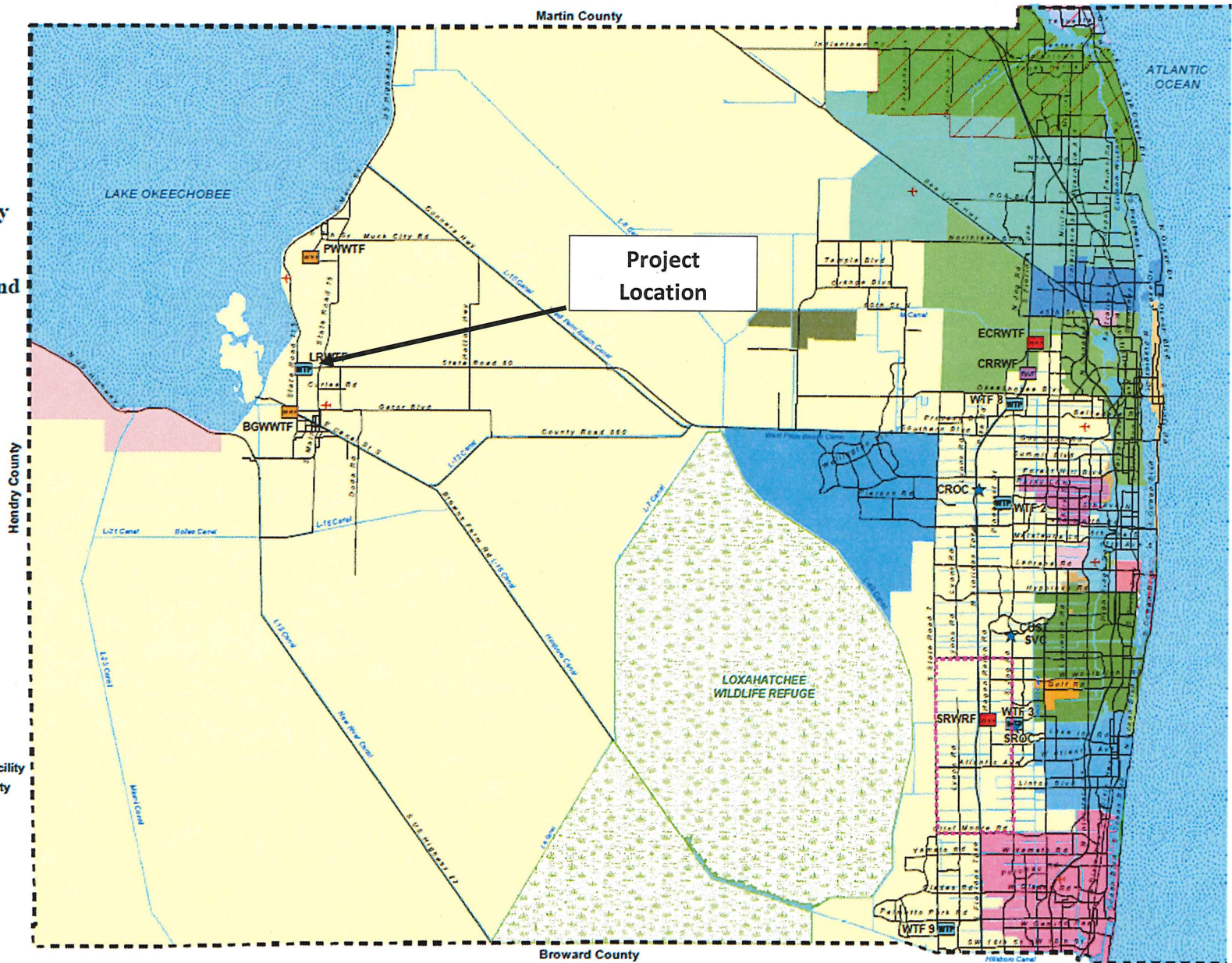


Palm Beach County Water Utilities Department Service Area (SA) and Major Facilities

Attachment 1

Legend

- ★ Administration
- WTF Water Treatment Facility
- RF Reclamation Facility
- WRF Wastewater Reclamation Facility
- WTF Wastewater Treatment Facility
- Mandatory Reclaimed SA
- Palm Beach County Limits
- P.B.C.W.U.D. Service Area



WUD 14-061 WTP 11 VFD Replacements for MFPs 1 and 4 and HSPs 1 and 2 (WA-26)

WORK AUTHORIZATION NO. 26

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

Project No.: WUD 14-061

District: 6

Budget Line Item No.: 4011-721-W026-6541

Project Title: WTP 11 – Variable Frequency Drive Replacement for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2

THIS AUTHORIZATION # 26 to the Contract for Water, Wastewater & Reclaimed Water Improvements Design/Build Services dated January 24, 2012 (R2012-0159), by and between Palm Beach County and the Contractor identified herein, is for the Design/Build Services of this Work Authorization. The Contract provides for 75% SBE participation overall. This Work Authorization includes 99.24 % overall participation. The cumulative proposed SBE participation, including this authorization is 91.96 % overall. Additional authorizations will be utilized to meet or exceed the stated overall participation goal.

1. Contractor: 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 Contractor:

See **ATTACHMENT - A.**

4. Services completed by the Contractor to date:

See **ATTACHMENT - G.**

5. Contractor shall begin work promptly or deliver ordered materials within the following calendar days from the approval date of the Work Authorization:

Substantial Completion 220 Calendar Days

Final Construction Completion 250 Calendar Days

Liquidated damages will apply as follows:

\$ 1,000 per day past substantial completion date.

\$ 500 per day past final completion date.

(For Liquidated Damages Rates see **ATTACHMENT - B**)

6. The compensation to be paid to the Contractor for providing the requested services in accordance with the Guaranteed Maximum Price is \$ 399,743.75.
7. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated January 24, 2012 remain in full force and effect.

Project No.: WUD 14-061

Project Title: WTP 11 – Variable Frequency Drive Replacement for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2

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

Palm Beach County,
Board of County Commissioners

ATTEST:

Signed: _____

Signed: _____
Priscilla A. Taylor, Mayor



Typed Name: _____
Deputy Clerk

Date

Approved as to Form and Legal
Sufficiency


Signed: _____

Typed Name: _____
County Attorney

CONTRACTOR: Globaltech, Inc.

ATTEST:


Witness


(Signature)

Richard D. Olson, P.E. / Proposal Manager
(Name and Title)

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

(CORPORATE SEAL)

May 30, 2014
Date

LIST OF ATTACHMENTS

WORK AUTHORIZATION NO. 26

**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. 26

Palm Beach County Water Utilities Department

Water, Wastewater & Reclaimed Water Services Design-Build Contract

SCOPE OF WORK FOR

WTP 11 – Variable Frequency Drive Replacements for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2

INTRODUCTION

Palm Beach County (County) entered into an agreement entitled Water, Wastewater & Reclaimed Water Improvements Design-Build Contract - Palm Beach County Water Utilities Department Project No. WUD 11-134 (CONTRACT) with Globaltech, Inc. (DESIGN BUILD ENTITY) to provide design-build services for various general activities on the Water, Wastewater & Reclaimed Water Services Design-Build Contract dated January 24, 2012, (R 2012-0159). This Work Authorization will be performed under that CONTRACT.

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

- Install new door with removable transom to accommodate installation of VFD Cabinets.
- Remove and Replace Membrane Feed Pump VFDs 1 and 4. Provide new RTD monitors within VFD cabinet. Extend concrete housekeeping pad as required. Provide Ethernet connection of VFDs to MCP1 in electrical room.
- Remove and Replace High Service Pump VFDs for 1 and 2. Provide additional conduit and wiring as necessary. Provide and install HSP VFDs 1 and 2 to Ethernet with converter and Ethernet switch.

SCOPE OF SERVICES

Design Build Entity shall perform the Scope of Services described in the Design-Build Criteria Report for WTP 11 – Variable Frequency Drive Replacements for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2 and as described herein:

WTP 11 is the sole provider of water supply to the Glades area and 3 membrane trains must be operable at all times. During the membrane feed pump VFD replacement the affected membrane train (1 or 4) will be inoperable once removal of the existing VFD commences and until the new VFD is installed and is operable therefore time is of the essence. If a membrane train is down due to a pump, motor or other problem the

schedule may be impacted unless the train which is down is the one scheduled for membrane feed pump VFD replacement. The high service pump VFD's shall be changed out one at a time so a functional high service pump with VFD is available at all times. All materials, tools etc. for a specific VFD must be delivered to WTP 11 before proceeding with that VFD replacement. Provide extended 5 year warranty for VFD's. Provide operations and maintenance manuals for VFD's

General Administrative

1. Establish staging areas with plant staff. Mobilize to facilities.
2. Prepare detailed construction schedule for review by construction manager and plant staff. Schedule will provide a sequence of work and scheduled filter shut-downs.
3. Review proposed materials with County staff. Prepare submittals for County review and approval.
4. Inventory Owner-provided materials and provide list of missing/required parts.
5. Dispose of existing VFDs in a legally acceptable manner.

Construction Services

1. Equipment to be replaced must be locked out and tagged out. Personnel shall have appropriate clothing and protective arc flash safety measures. Existing VFD's shall be removed and legally disposed by Design-build Contractor.
 2. Membrane Feed Pump VFD's shall be manufactured by Eaton or approved equal with output line reactors built in the same cabinet.
 - a. Provide new RTD monitors (relays) inside VFD cabinet and connect to motor temperature and bearings for monitoring the motor performance.
 - b. The new membrane feed pump VFD's have a larger foot print and the concrete housekeeping pad shall be extended.
 - c. Utilize plastic wire management as approved by VFD manufacturer to keep VFD area neat and free of loose wiring.
 - d. Provide Ethernet connection of VFD's to MCP1 in electrical room.
 - e. Furnish and install new door with removable transom to accommodate installation of VFD cabinets.
 3. High Service Pump VFD's shall be manufactured by Eaton or approved equal.
 - a. The HSP VFD's are not equipped with RTD's
 - b. The new high service pump VFD's must fit within the existing footprint.
 - c. Remove existing external output reactors, provide additional conduit and new wiring to motors as necessary.
 - d. Utilize plastic wire management as approved by VFD manufacturer to keep VFD area neat and free of loose wiring.
 - e. Furnish and install connection of VFD's to Ethernet with Ethernet converter and Ethernet switch.
-

SUBMITTALS

1. Provide 4 sets of shop drawings
2. Construction meetings will be held monthly.
3. Conform to the Water Utilities Minimum Design and Construction Standards, Engineering Design-Manual and security requirements.

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/Builder.

ASSUMPTIONS

1. No FDEP or Building Department Permits will be required.
2. County will make available all existing record drawings 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 Globaltech of status.
4. Globaltech shall provide a concrete slab under MFP VFDs. Concrete finish will be left with a "broom finish" and will not be tiled to match surrounding decking.
5. Neither design nor record drawings will be prepared for this project.
6. An O&M Manual will be provide for significant mechanical equipment provided.
7. An Allowance of \$19,600.00 is included in this Work Authorization. Access to the allowance shall be requested through an "Allowance Authorization Request" prior to spending any part of the Allowance.
8. 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**).
9. OWNER shall provide:
 - IP Addresses.
 - Programming of PLC and SCADA screens.

COMPENSATION

Compensation for this Work Authorization shall not exceed the Guaranteed Maximum Price of \$399,743.75 in accordance with the unit prices established in the Contract for construction services dated **January 24, 2012**, as approved by the Board of County Commissioners.

SBE/M-WBE PARTICIPATION

As described in the Contract (R2012-0159), 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).

ATTACHMENT - B

WORK AUTHORIZATION NO. 26

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

Rates for Liquidated Damages

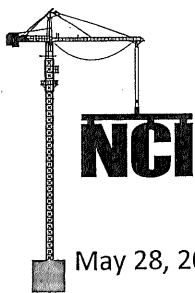
Palm Beach County Water Utilities Department shall establish liquidated damages rates for each Work Authorization based on the dollar amount and time sensitivity of the project. The rates shall be as follows according to a criticality rating of 1 through 3 assigned to each Work Authorization by the Department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

ATTACHMENT - C



NIELSON, ROSENHAUS & ASSOCIATES

May 28, 2014

Globaltech, Inc.
6001 Broken Sound Parkway NW, Ste. 610
Boca Raton, FL 33487

RE: Palm Beach County, as Obligee
Project: WTP No. 11 Variable Frequency Drive Replacements for Membrane Feed
Bond No. SU1122521

Dear Ladies and Gentlemen:

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

Executed Contract with Date: X

This letter is also giving Globaltech, Inc. as Principal and/ or Palm Beach County, 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.**

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

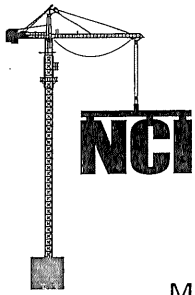
Thank you for your cooperation.

Sincerely,

Brett Rosenhaus,
FL Resident Agent

4000 South 57th Avenue
Suite 201
Lake Worth, FL 33463
P: 561.432.5550
F: 561.432.5442
www.nielsonbonds.com

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



NIELSON, ROSENHAUS & ASSOCIATES

May 28, 2014

Globaltech, Inc.
6001 Broken Sound Parkway NW, Ste. 610
Boca Raton, FL 33487

Project: WTP No. 11 Variable Frequency Drive Replacement for Membrane Feed

The attached bond we have executed for you is known as a Public Construction Bond. **IT NEEDS TO BE SIGNED AND SEALED.**

Since October 1, 1988 the Public Works Bonding Law requires that the recording of performance and payment bonds be filed at the local courthouses where the public construction is being performed. Any such bond written pursuant to Section 255.05 Florida Statute must be recorded by the contractor and should be filed before the commencement of the work.

Nielson, Rosenhaus & Associates

Builders Notice Corp.
708 S. Andrews Avenue
P O Box 457
Ft. Lauderdale FL 33302
Ph: (800) 432-1959

4000 South 57th Avenue
Suite 201
Lake Worth, FL 33463
P: 561.432.5550
F: 561.432.5442
www.nielsonbonds.com

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

**FRONT PAGE OF
PUBLIC PAYMENT BOND**
Florida Statute 255.05

Attached to and part of BOND NO. SU1122521

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, Ste. 610
Boca Raton, FL 33487
561-997-6433

SURETY: Arch Insurance Company
300 Plaza Three, 3rd Floor
Jersey City, NJ 07311
212-651-6500

AGENT: Nielson, Rosenhaus & Associates
4000 South 57th Avenue, Suite 201
Lake Worth, FL 33463
561-432-5550

OBLIGEE: Palm Beach County
8100 Forest Hill Boulevard
West Palm Beach, FL 33413
561-493-6000

PROJECT: WTP No. 11 Variable Frequency Drive Replacement for Membrane Feed

ATTACHMENT - C
PUBLIC CONSTRUCTION BOND

BOND NUMBER: SU1122521

BOND AMOUNT: \$399,743.75

CONTRACT AMOUNT: \$399,743.75

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, 3rd Floor
Jersey City, NJ 07311
212-651-6500

OWNER'S NAME: Palm Beach County

OWNER'S ADDRESS: 8100 Forest Hill Boulevard
West Palm Beach, FL 33413

OWNER'S PHONE: (561) 493-6000

DESCRIPTION OF WORK: Install new door to accommodate new VFD cabinets. Remove and replace membrane feed pump VFDs 1 and 4. Provide new RTD monitors. Extend concrete pad. Remove and replace HSP VFDs 1 and 2. Provide conduit and wiring. Provide Ethernet connection of VFDs.

COUNTY'S PROJECT No: WUD 14-061, WA-26

PROJECT LOCATION: PBCWUD Water Treatment Plant No. 11, 39700 Hooker Highway,
Belle Glade, FL 33430, PCN 00-37-43-19-00-000-3060

LEGAL DESCRIPTION: WTP No. 11 Variable Frequency Drive Replacements for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2 (WUD 14-061)

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

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 \$399,743.75

Three hundred ninety-nine thousand seven hundred forty-three dollars and seventy-five 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 No. 11 Variable Frequency Drive Replacements for Membrane Feed
Pumps 1 and 4 and High Service Pumps 1 and 2
Project No.: WUD 14-061
Project Description: Install new door to accommodate new VFD cabinets. Remove and
replace membrane feed pump VFDs 1 and 4. Provide new RTD monitors. Extend concrete
pad. Remove and replace HSP VFDs 1 and 2. Provide conduit and wiring. Provide
Ethernet connection of VFDs.
Project Location: PBCWUD Water Treatment Plant No. 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:

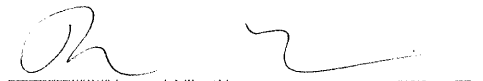
Name of Design Firm: Globaltech, Inc.
Location of Firm: 6001 Broken Sound Parkway NW, Ste. 610, Boca Raton, FL 33487
Phone: (561) 997-6433
Fax: (561) 997-5811

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 14-061, 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'
fees, including appellate proceedings, that County sustains because of a default by Principal under
the contract; and

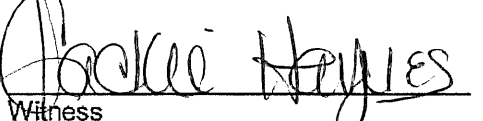
4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this bond is void; otherwise it remains in full force.
5. Any changes in or under the contract documents and compliance or noncompliance with any formalities connected with the 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.



Witness

Rebecca Koortz

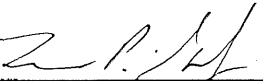
Print name



Witness

Jackie Haynes

Print name

Globaltech, Inc. 

Principal (Seal)

BERNARD P. GANOF

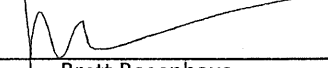
Print name

PRESIDENT

Title

Arch Insurance Company

Surety (Seal)



Print name Brett Rosenhaus,

Attorney in fact

Title

ATTACHMENT - D

ATTACHMENT - D

FORM OF GUARANTEE

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

We the undersigned hereby guarantee that the **WTP No. 11 Variable Frequency Drive Replacements for Membrane Feed Pumps 1 and 4 and High Service Pumps 1 and 2, WUD 14-061, WA-26**. 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)

By: [Signature]
(Signature)

BERNARD P. GANGLI
(Printed Name)

Arch Insurance Company
(Surety) _____ (Seal)

By: [Signature]
(Signature)

Brett Rosenhaus
(Printed Name)

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON BLUE BACKGROUND.

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Not valid for Mortgage, Note, Loan, Letter of Credit, Bank Deposit, Currency Rate, Interest Rate or Residential Value Guarantees.

POWER OF ATTORNEY

Know All Persons By These Presents:

That the Arch Insurance Company, a corporation organized and existing under the laws of the State of Missouri, having its principal administrative office in Jersey City, New Jersey (hereinafter referred to as the "Company") does hereby appoint:

Arthur Lawrence Colley, Audria R. Ward, Brett Rosenhaus, Charles D. Nielson, Charles J. Nielson, David R. Hoover, Edward J. Ward, F. Danny Gann, John R. Neu, Kevin Wojtowicz and Laura D. Mosholder of Miami Lakes, FL (EACH)

its true and lawful Attorney(s) in-Fact, to make, execute, seal, and deliver from the date of issuance of this power for and on its behalf as surety, and as its act and deed:

Any and all bonds, undertakings, recognizances and other surety obligations, in the penal sum not exceeding Ninety Million Dollars (\$90,000,000.00).

This authority does not permit the same obligation to be split into two or more bonds In order to bring each such bond within the dollar limit of authority as set forth herein.

The execution of such bonds, undertakings, recognizances and other surety obligations in pursuance of these presents shall be as binding upon the said Company as fully and amply to all intents and purposes, as if the same had been duly executed and acknowledged by its regularly elected officers at its principal administrative office in Jersey City, New Jersey.

This Power of Attorney is executed by authority of resolutions adopted by unanimous consent of the Board of Directors of the Company on September 15, 2011, true and accurate copies of which are hereinafter set forth and are hereby certified to by the undersigned Secretary as being in full force and effect:

"VOTED, That the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, or the Secretary shall have the power and authority to appoint agents and attorneys-in-fact, and to authorize them subject to the limitations set forth in their respective powers of attorney, to execute on behalf of the Company, and attach the seal of the Company thereto, bonds, undertakings, recognizances and other surety obligations obligatory in the nature thereof, and any such officers of the Company may appoint agents for acceptance of process."

This Power of Attorney is signed, sealed and certified by facsimile under and by authority of the following resolution adopted by the unanimous consent of the Board of Directors of the Company on September 15, 2011:

VOTED, That the signature of the Chairman of the Board, the President, or the Executive Vice President, or any Senior Vice President, of the Surety Business Division, or their appointees designated in writing and filed with the Secretary, and the signature of the Secretary, the seal of the Company, and certifications by the Secretary, may be affixed by facsimile on any power of attorney or bond executed pursuant to the resolution adopted by the Board of Directors on September 15, 2011, and any such power so executed, sealed and certified with respect to any bond or undertaking to which it is attached, shall continue to be valid and binding upon the Company.

ATTACHMENT - E

WORK AUTHORIZATION COST SCHEDULE



Takeoff Worksheet by Bid Item w/Tax & Markup

05/23/14

PBC Water Utilities Department
140441 PBC WTP 11 VFD Replacement

Assembly#	Description	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Job: 140441 PBC WTP 11 VFD Replacement								
Bid Item: 1 General Conditions								
1	Temporary Facilities	LOT	1.00	600.00				
	Sanitary	Month	4.00	95.00	380.00	6.00	1.1500	463.22
L	Waste Hauling	LOT	1.00	600.00	600.00	6.00	1.1500	731.40
2	General Conditions	LOT	1.00	12,497.00				
L	Submittal Labor	HR	16.0	61.51	984.16		1.2992	1,278.62
L	O&M	HR	24.0	60.51	1,452.24		1.2992	1,886.75
L	Progress Meeting	HR	30.0	87.79	2,633.70		1.2992	3,421.70
L	Scheduling Labor	HR	8.00	61.51	492.08		1.2992	639.31
L	Construction PM	HR	60.0	61.51	3,690.60		1.2992	4,794.83
L	Construction Superintendent	HR	30.0	58.59	1,757.70		1.2992	2,283.60
L	Punch Out Crew	CR-D	1.00	929.36	929.36		1.2992	1,207.42
L	Safety	HR	4.00	61.51	246.04		1.2992	319.66
L	Office Admin	HR	8.00	38.89	311.12		1.2992	404.21
Bid Item Totals:					13,477.00			17,430.72
Bid Item: 3 Concrete								
3300	Cast In Place Concrete	LOT	2.00	2,554.76				
L	Form & Materials	LOT	2.00	200.00	400.00	6.00	1.1500	487.60
L	Cast In Place Concrete	LOT	2.00	250.00	500.00	6.00	1.1500	609.50
L	3 man Crew	CR-D	4.00	929.36	3,717.44		1.2992	4,829.70
L	Construction PM	HR	8.00	61.51	492.08		1.2992	639.31
Bid Item Totals:					5,109.52			6,566.11

Takeoff Worksheet by Bid Item w/Tax & Markup

05/23/14

Continued...

Assembly#	Description	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Bid Item:	9 Coatings							
	Concrete Coating	LOT	1.00	500.00	500.00	6.00	1.1500	609.50
	Misc Application Material	LOT	1.00	100.00	100.00	6.00	1.1500	121.90
	2 Man Crew	CR-D	1.00	698.88	698.88		1.2992	907.98
Bid Item Totals:					1,298.88			1,639.38
Bid Item:	11 Equipment							
	Membrane Feed Pump VFD	LOT	1.00	132,300.00	132,300.00	6.00	1.1500	161,273.70
	HSP VFD	LOT	1.00	76,424.00	76,424.00	6.00	1.1500	93,160.86
	Ethernet Switch		1.00	500.00	500.00	6.00	1.1500	609.50
	Optical to Ethernet Converter		1.00	1,500.00	1,500.00	6.00	1.1500	1,828.50
	Construction PM (Electrical and I&C)	HR	8.00	50.52	404.16		1.2992	525.08
Bid Item Totals:					211,128.16			257,397.64
Bid Item:	15 Mechanical							
	VFD Room Entrance Door	LOT						
	Concrete Cutting	Ea	1.00	2,000.00	2,000.00		1.1000	2,200.00
	Form & Materials	LOT	1.00	1,000.00	1,000.00	6.00	1.1500	1,219.00
	3 man Crew	CR-D	4.00	929.36	3,717.44		1.2992	4,829.70
	Construction PM	HR	20.0	61.51	1,230.20		1.2992	1,598.28
	Door & Frame	Ea	1.00	5,000.00	5,000.00	6.00	1.1500	6,095.00
	Electrical Sub	LOT	1.00	1,000.00	1,000.00		1.1000	1,100.00
15900	Membrane Feed Pump VFD Install	LOT	2.00	2,350.80				
L	3 man Crew	CR-D	4.00	929.36	3,717.44		1.2992	4,829.70
L	Construction PM	HR	16.0	61.51	984.16		1.2992	1,278.62
15900	HSP VFD Install	LOT	2.00	2,350.80				
L	3 man Crew	CR-D	4.00	929.36	3,717.44		1.2992	4,829.70
L	Construction PM	HR	16.0	61.51	984.16		1.2992	1,278.62

Takeoff Worksheet by Bid Item w/Tax & Markup

05/23/14

Continued...

Assembly#	Description	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
				Bid Item Totals:	23,350.84			29,258.62
Bid Item: 16 Electrical								
	Electrical Sub	LOT	1.00	19,400.00	19,400.00		1.1000	21,340.00
	Construction PM (Electrical and I&C)	HR	20.0	50.52	1,010.40		1.2992	1,312.71
				Bid Item Totals:	20,410.40			22,652.71
Bid Item: 18 Rental Equipment								
	Low Mast Forklift	LOT	4.00	1,040.00	4,160.00	6.00	1.1500	5,071.04
	Misc Tools	LOT	1.00	300.00	300.00	6.00	1.1500	365.70
				Bid Item Totals:	4,460.00			5,436.74
Bid Item: 25 Allowance								
	Allowance	LOT	1.00	19,600.00	19,600.00		1.0000	19,600.00
				Bid Item Totals:	19,600.00			19,600.00
Bid Item: 50 Engineering								
	Engineering Sub (Electrical)	LOT	2.00	9,800.00	19,600.00		1.1000	21,560.00
	Construction PM (Electrical and I&C)	HR	20.0	50.52	1,010.40		1.2992	1,312.71
				Bid Item Totals:	20,610.40			22,872.71
Bid Item: 60 Insurance & Certification								
	General Liability & Workers' Comp Insurance	LOT	1.00	6,891.38	6,891.38		1.1500	7,925.09
	Bonds & Certifications	LOT	1.00	6,076.45	6,076.45		1.1500	6,987.92
	Builders Risk Insurance	LOT	1.00	1,718.36	1,718.36		1.1500	1,976.11
				Bid Item Totals:	14,686.19			16,889.12
				Grand Totals:	334,131.39			399,743.75

Takeoff Worksheet by Bid Item w/Tax & Markup

05/23/14

Continued...

Assembly#	Description	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
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* Materials = 15%, Subcontractors = 10%, Labor at Burden = 29.92% (12% G&A x 16% Profit & Overhead)

ATTACHMENT - F

SBE SCHEDULE 1 & 2

ATTACHMENT - F

SCHEDULE 1

LIST OF PROPOSED SBE-M/WBE PRIME/SUBCONTRACTORS

PROJECT NAME: WTP 11 - VFD Replacements for MFPs and HSPs

PROJECT No: WUD 14-061

NAME OF PRIME BIDDER Globaltech, Inc.

ADDRESS: 6001 Broken Sound Parkway NW, Suite 610

CONTACT PERSON: Bernard P. Gandy, President

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

BID OPENING DATE: N/A

DEPARTMENT: N/A

PLEASE IDENTIFY ALL APPLICABLE CATEGORIES

Name, Address and Telephone Number of Minority Contractor	(Check one or both Categories)		Dollar Amount					
	Minority Business	Small Business	Black	Hispanic	Women	Caucasian	Other (Please Specify)	
Globaltech, Inc., (561) 997-6433 6001 Broken Sound Parkway NW, Suite 610, Boca Raton, FL 33487	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$ -	\$ -	\$ -	\$ 357,743.75	\$ -	
Hillers Electrical Engineering Boca Raton, FL 33428, (561) 451- 9165	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$ -	\$ 19,600.00	\$ -	\$ -	\$ -	
Energy Efficient, Inc. Palm Beach, FL 33401, (561) 655- 7211	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$ -	\$ -	\$ -	\$ 19,400.00	\$ -	
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -	
	<input type="checkbox"/>	<input type="checkbox"/>	\$ -	\$ -	\$ -	\$ -	\$ -	
PRIME CONTRACTOR TO COMPLETE:	TOTAL		\$ -	\$ 19,600.00	\$ -	\$ 377,143.75	\$ -	

BID PRICE: \$ 399,743.75 Total Value of SBE Participation: \$ 396,743.75

- 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.

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 14-061

PROJECT NAME: WTP No. 11 – VFD Replacements

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):

Line Item/Lot No.	Item Description	Qty / Units	Unit Price	Total Price
1	General Conditions	N/A	N/A	\$ 17,430.72
2	Engineering	N/A	N/A	\$ 3,272.71
3	Mechanical Construction	N/A	N/A	\$ 300,551.20
4	Bonds & Insurance	N/A	N/A	\$ 16,889.12
5	Allowance	N/A	N/A	\$ 19,600.00

at the following price:

\$ 357,743.75 (Three hundred fifty-seven thousand seven hundred forty-three dollars and seventy-five 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

Globaltech, Inc.

(Print Name of SBE-M/WBE Subcontractor)

By: 

(Signature)

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

Date: May 27, 2014

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 14-061

PROJECT NAME: WTP No. 11 – VFD Replacements

TO: Hillers Electrical Engineers, 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: _____

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 No.	Item Description	Qty / Units	Unit Price	Total Price
1	Electrical Engineering	N/A	N/A	\$ 19,600.00
2		N/A	N/A	\$
3		N/A	N/A	\$
4		N/A	N/A	\$
5		N/A	N/A	\$

at the following price:

\$19,600.00 (Nineteen thousand six hundred 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

Hillers Electrical Engineers, Inc.
(Print Name of SBE-M/WBE Subcontractor)

By: 
(Signature)

Tom Doran / Vice President
(Print name/title of person executing on
behalf of SBE-M/WBE Subcontractor)

Date: May 27, 2014

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 14-061

PROJECT NAME: WTP No. 11 – VFD Replacements

TO: Energy Efficient Electric, 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: 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 No.	Item Description	Qty / Units	Unit Price	Total Price
1	Electrical Installation of VFDs (MFP)	N/A	N/A	\$ 9,700.00
2	Electrical Installation of VFDs (HSP)	N/A	N/A	\$ 9,700.00
3		N/A	N/A	\$
4		N/A	N/A	\$
5		N/A	N/A	\$

at the following price:

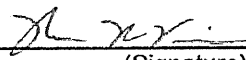
\$ 19,400.00 (Nineteen thousand four hundred dollars and no cents).
(Subcontractor's quote)

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

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

By: 
(Signature)

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

Date: May 27, 2014

ATTACHMENT - G

AUTHORIZATION STATUS REPORT
May 30, 2014

SUMMARY AND STATUS OF AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	Globaltech Project No.
	CONSULTANT SERVICE AUTHORIZATIONS					
CSA-1	WTP 8 Filter Media Replacement and Re-Rating	Approved	\$31,399.22	3/8/12	12-002	120291
CSA-2	Pump Station 5241 Improvements	Approved	\$11,451.79	6/14/12	12-061	120302
CSA-3	WTP 2 Wellfield Backup Power Improvements	Approved	\$49,975.00	7/9/12	12-005	120321
CSA-4	WTP 3 and SROC Security Upgrades	Approved	\$24,786.20	8/22/12	10-028	120334
CSA-5	WTP 9 Permeate Flushing System Modifications	Cancelled	\$0.00	-	-	120330
CSA-6	WTP 3 Membrane Cleaning System Modification	Approved	\$32,528.22	9/28/12	12-004	120331
CSA-6.1	WTP 3 Membrane Cleaning System Modification - Supplement 1 / Project Cancelation	Approved	-\$32,528.22	5/20/13	12-004	120331
CSA-7	SRPF Membrane Concentrate Bypass and PS 9S RPZ Installation	Cancelled	\$0.00	-	12-021	120340
CSA-8	LRWTP PW-5 Pump Conversion	Pending				120347
CSA-9	SROC DIW Blending System	Cancelled	\$0.00	-	-	120348
	Total CSAs		\$117,612.21			

ATTACHMENT - G

AUTHORIZATION STATUS REPORT
May 30, 2014

SUMMARY AND STATUS OF AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	Globaltech Project No.
	WORK AUTHORIZATIONS					
WA-1	SW Boca Diversion PS Sound Attenuation	Approved	\$16,814.95	7/5/12	12-067	120303
WA-2	WTP 8 Filters 4, 5 & 6 Media Replacement	Approved	\$592,611.00	8/14/12	12-002	120309
WA-3	South Bay Repump Station Improvements	Approved	\$290,022.00	9/11/12	12-030	120313
WA-3.1	South Bay Repump - BB Court Electrical	Approved	\$22,486.92	12/12/12	12-030	120313
WA-3.2	South Bay Repump - Isolation Valve	Approved	\$3,428.48	4/4/13	12-030	120313
WA-4	LRWTP MFP No. 3 VFD Replacement	Approved	\$149,985.36	8/29/12	12-074	120332
WA-5	Online Water Quality Monitoring System	Approved	\$399,844.00	9/11/12	10-072	120328
WA-5.1	Online Water Quality Monitoring System - Sup. 1	Approved	\$73,165.54	6/5/13	10-072	120328
WA-6	Pump Station 5241 Improvements	Approved	\$277,780.62	12/4/12	12-061	120336
WA-7	LRWTP PW-5 Pump Conversion	Pending			13-015	120338
WA-8	WTP 3 and SROC Security Upgrades	Approved	\$63,603.58	11/14/12	13-011	120341
WA-9	LRWTP Well 1 Generator Pad	Pending			13-016	120345
WA-10	WTP 2 Wellfield Backup Power Improvements	Approved	\$716,189.09	3/12/13	12-005	120343
WA-10.1	WTP 2 - Power Improvements - Time Extension	Approved	\$0.00	5/21/14	12-005	120343
WA-11	SRPF Membrane Concentrate Bypass	Approved	\$406,149.75	6/18/13	13-036	120357
WA-11.1	SRPF Membrane Concentrate Bypass - Sup. 1	Pending			13-036	120357
WA-12	WTP 3 Chemical Improvements	Approved	\$833,148.51	5/06/13	12-003	
WA-13	LRWTP Well Pump Repositioning	Approved	\$30,496.69	2/21/13	11-112	120358
WA-14	WTP 3 Membrane Concentrate RPZ	Approved	\$199,192.48	3/13/13	13-017	130362
WA-15	WTP 9 Membrane Concentrate RPZ's	Approved	\$198,407.37	3/13/13	13-018	130364
WA-16	SW Boca Diversion Intake Modifications	Approved	\$30,378.48	8/12/13	13-083	130370
WA-17	WTP 9 Permeate Flush System	Pending				130378
WA-18	WTP 8 - Filter Gallery Valve Replacement	Approved	\$178,536.90	9/11/13	12-002	130385
WA-19	WRWWTF - Effluent Strainer & Screen Bypass	Approved	\$182,163.55	11/06/13	13-093	130389
WA-19.1	WRWWTF - Effluent Strainer and Screen Bypass - Supplement 1	Pending	\$0.00		13-093	130389
WA-20	WTP 11 - Membrane Replacement for Train 3	Approved	\$111,015.20	3/05/14	14-039	
WA-21	WTP 8 - Hypo. Bldg. Generator Connection	Approved	\$53,591.07	3/13/14	14-023	
WA-22	WTP 8 - Generator Removal	Pending			14-023	
WA-23	SRWRF Digester Gas Improvements	Pending			14-051	
WA-24	WTP 8 - Filter Gallery Valve Replacement	Pending			12-002	140415
WA-25	LRWTP Degasifier Cleaning System	Pending				
WA-26	WTP 11 - VFD Replacements of MFPs & HSPs	Pending	\$399,743.75		14-061	
	Total WAs		\$5,228,755.29			
	Total CSAs + WAs		\$5,346,367.50			

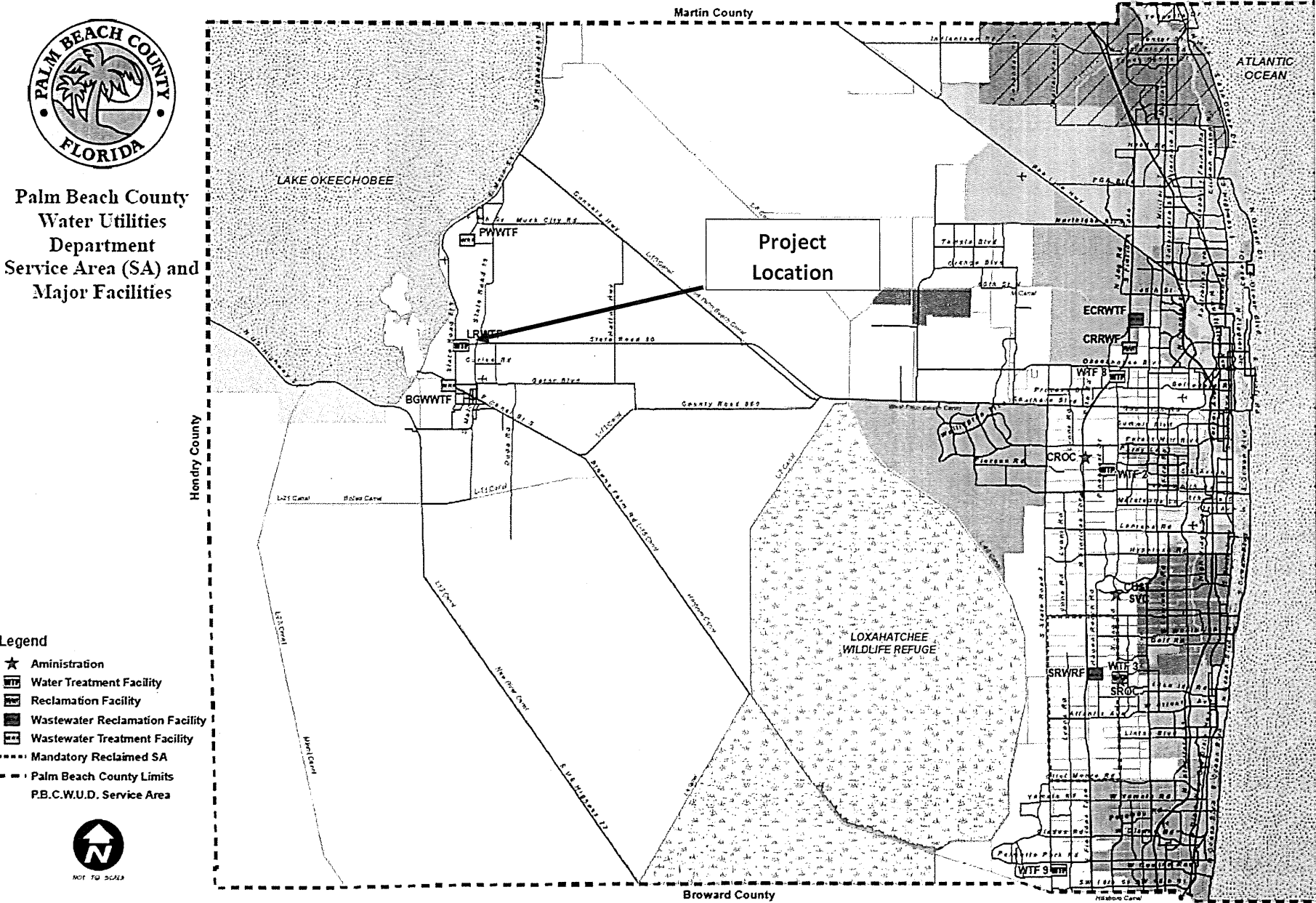
ATTACHMENT - H

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

SUMMARY of SBE/MWBE TRACKING

WUD 14-061: WTP 11 - Variable Frequency Drive Replacments of MFPs 1 and 4 and HSPs 1 and 2

Total	
Current Proposal	
Value of Consultant Service Authorization	\$0.00
Value of Work Authorization	\$399,743.75
Value of CSA and WA	\$399,743.75
Value of SBE Minority Letter of Intent	\$396,743.75
Actual Percentages	99.24%
Signed / Approved Authorizations	
Total Value of Approved Consultant Service Authorization	\$117,612.21
Total Value of Approved Work Authorization	\$4,829,011.54
Total Value of CSAs and WAs	\$4,946,623.75
Total Value of SBE Signed Subcontracts	\$4,520,300.75
Actual Percentages	91.38%
Signed Authorizations Plus Current Proposal	
Total Value of Approved CSAs Plus Current CSA Proposal	\$117,612.21
Total Value of Approved WAs Plus Current WA Proposal	\$5,228,755.29
Total Value of Approved and Proposed CSAs and WAs	\$5,346,367.50
Total Value of SBE Subcontracts and Letters of Intent	\$4,917,044.50
Actual Percentages	91.96%
GOAL	75%



WUD 14-061 WTP 11 VFD Replacements for MFPs 1 and 4 and HSPs 1 and 2 (WA-26)

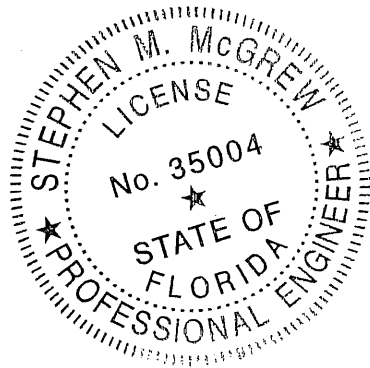
ATTACHMENT - J

Design-Build Criteria Report



6/2/2014

Stephen McGrew, P.E.
P. E. License #35004
Palm Beach County
Water Utilities Department
8100 Forest Hill Boulevard
West Palm Beach, FL 33413



**Design Build Criteria
Water Treatment Plant No. 11
Variable Frequency Drive Replacements for
Membrane Feed Pumps 1 and 4 and
High Service Pumps 1 and 2
Project No. WUD 14-061**

Part 1 General

1.1 Summary of Work

The proposed work to be performed as described below is located at the following facility: Water Treatment Plant No. 11, 39700 Hooker Highway, Belle Glade, FL 33430, PCN 00-37-43-19-00-000-3060.

The proposed work to be performed by the Design-builder generally includes furnish and install materials, labor, equipment and expertise to replace variable frequency drives (VFD's) for membrane feed pumps 1 and 4 and VFD's for high service pumps 1 and 2 including all necessary tools, supervision, and services required to design, construct, test, and startup the proposed work is described as follows:

The following design criteria shall be used:

1. WTP 11 is the sole provider of water supply to the Glades area and 3 membrane trains must be operable at all times. During the membrane feed pump VFD replacement the affected membrane train (1 or 4) will be inoperable once removal of the existing VFD commences and until the new VFD is installed and is operable therefore time is of the essence. If a membrane train is down due to a pump, motor or other problem the schedule may be impacted unless the train which is down is the one scheduled for membrane feed pump VFD replacement. The high service pump VFD's shall be changed out one at a time so a functional high service pump with VFD is available at all times. All materials, tools etc. for a specific VFD must be delivered to WTP 11 before proceeding with that VFD replacement. Provide extended 5 year warranty for VFD's. Provide operations and maintenance manuals for VFD's.
 2. Equipment to be replaced must be locked out and tagged out. Personnel shall have appropriate clothing and protective arc flash safety measures. Existing VFD's shall be removed and legally disposed by Design-build.
 3. Membrane Feed Pump VFD's shall be manufactured by Eaton or approved equal with output line reactors built in the same cabinet.
-

- a. Provide new RTD monitors (relays) inside VFD cabinet and connect to motor temperature and bearings for monitoring the motor performance.
 - b. The new membrane feed pumps VFD's have a larger foot print and the concrete housekeeping pad shall be extended.
 - c. Utilize plastic wire management as approved by VFD manufacturer to keep VFD area neat and free of loose wiring.
 - d. Provide Ethernet connection of VFD's to MCP1 on electrical room.
 - e. Furnish and install new door with removable transom to accommodate installation of VFD cabinets.
4. High Service Pump VFD's shall be manufactured by Eaton or approved equal.
 - a. The HSP VFD's are not equipped with RTD's
 - b. The new high service pump VFD's must fit within the existing footprint.
 - c. Remove existing external output reactors, provide additional conduit and new wiring to motors as necessary.
 - d. Utilize plastic wire management as approved by VFD manufacturer to keep VFD area neat and free of loose wiring.
 - e. Furnish and install connection of VFD's to Ethernet with Ethernet converter and Ethernet switch.
5. OWNER shall provide:
 - a. IP Addresses
 - b. Programming of PLC and SCADA screens.

1.2 Permits and Fees

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

1.3 Utility Services

The Design-builder 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-builder 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 piping and utilities are of critical importance in the installation or connection of proposed work, the Design-builder 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-builder shall employ a land surveyor registered in the State of Florida. The Design-builder shall locate and protect survey control and reference points. The Design-builder shall be responsible to establish elevations, lines, and levels, utilizing recognized engineering survey practices. The Design-builder shall provide all labor, instruments and stakes, templates, and other materials necessary for marking and maintaining all lines and grades. The Design-builder 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-builder shall confine his activities to the site(s) designated by Owner for the work or staging areas for materials storage. All debris, materials, piping, 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-builder shall be responsible for determining these regulations and shall bear all costs or retain any profit associated with disposal of these items.

The Design-builder shall protect his work throughout its length by the erection of suitable barricades and handrails, where required. The Design-builder 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-builder shall provide suitable safe walkways with hand railings. The Design-builder shall also comply with all laws or ordinances covering the protection of such work and the safety measures to be employed therein. The Design-builder 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 trenches or holes near walkways, in roadways or road shoulders are to be left open during night hours without the permission of the Owner.

1.7 Underground Utilities

All water pipes, storm drains, force mains, gas or other piping, 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-builder shall obtain permission from the Owner, or shall make suitable arrangements for their disconnection by the Owner. The Design-builder 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-builder. The Design-builder 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-builder.

All excavation activity shall comply with Florida Statute 553.851 regarding notification of existing gas and oil pipeline company Owners and shall also notify "SUNSHINE STATE" at 1(800)-432 4770 at least forty-eight (48) hours prior to excavating. Evidence of such notice shall be furnished to the Owner prior to excavating.

Design of all underground water, wastewater and reclaimed water shall comply with the Palm Beach County Water Utilities Department Minimum Design and Construction Standards (latest edition), 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-builder's activities or any partial plant shutdowns shall minimize disruption to the treatment facilities and conveyance. The Design-builder 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-builder to perform the proposed work, the Design-builder 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-builder's need for

any system or partial system shutdown. Additional notice may be required for certain shutdowns.

1.10 Project Coordination

Design-builder 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-builder 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-builder shall not be responsible for damage done by Design-builders not under his jurisdiction. Design-builder shall not be liable for any such loss or damage unless it is through the negligence of Design-builder. Design-builder shall also coordinate his work with the work of others to assure compliance with schedules.

Design-builder 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-builder shall provide and maintain a field office with telephone facilities where he or a responsible representative of his organization may be reached at any time while work is in progress.

Part 2 Acceptance Test Requirements

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

2.1 Starting and Placing Equipment in Operation

Design-builder shall initially start-up and place all equipment installed into successful operation according to manufacturer's written instructions and as instructed by manufacturer's field representative. Design-builder 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 piping which may put stress on pumping equipment; performing any adjustments; providing chemicals and lubricants and all other required operating fluids; providing fuel, electricity, water, filters, and other expendables required for start-up of equipment.

Owner shall provide sufficient personnel to assist Design-builder in the start-up, but the prime responsibility for proper mechanical operation shall belong to Design-builder. 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-builder shall clean strainers, drives, pockets, orifices, valve seats and headers in fluid system to assure freedom from foreign materials. He shall remove rust, scale and foreign materials from equipment and renew defaced surfaces. All visible leakage shall be repaired.
 - B. The Design-builder 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-builder 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-builder 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 and in accord with manufacturer's recommendations.
 - D. The Design-builder 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-builder 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-builder 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-builder 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-builder 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-builder shall be responsible for performance testing during startup of all mechanical, electrical, instrumentation, and piping equipment and systems.

- A. Provide a testing plan setting forth the sequence in which all testing work required for the proposed upgrades will be implemented.
- B. A documentation the results of all equipment and system tests and submit to the Owner. Provide calibration tags for all equipment certifying the date of calibration.

2.3. Instruction of Operations and Maintenance Personnel

Training shall be provided prior to turning the operation of a system, unit process or piece of equipment. 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-builder 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.

Training of plant's personnel shall commence only after acceptable preliminary operation and maintenance data have been provided and starting and placing equipment in operation and equipment and system startup and performance testing, has been completed. Provide written documentation and checklists outlining important training items. Provide spreadsheets needed to document new processes for input by operators.

Part 3 Technical Requirements

3.1. Plant Site / Civil Requirements

The Design-builder shall be responsible for becoming completely familiar with the site conditions.

3.2 Demolitions

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

Design-builder shall carry out operations so as to avoid interference with Owner's operations and work in the existing facilities. Design-builder 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-builder shall erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices. The Design-builder is responsible for repairing damage to the Owner's property or facilities.

Design-builder shall not bring explosives on site nor use explosives without written consent of authorities having jurisdiction. Design-builder 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-builder with the same or matching materials as the existing adjacent surface. Adjacent structures, facilities, and improvements of dust, dirt, and debris caused by demolition operations shall be cleaned and returned to pre-construction conditions.

Where piping that is to be removed passes through existing walls, the piping shall be cut off and properly capped on each side of the wall. When underground piping is to be altered or removed, the remaining piping shall be properly capped. Abandoned underground piping may be left in place and grouted under major structures/roadways, unless it interferes with the work. Any changes to potable water piping 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-builder, 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-builder so as not to be damaged, and shall be cleaned and stored in a protected location specified by the Owner.

Design-builder 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-builder 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 facilities required to complete the work in every respect.

Design-builder 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-builder shall be responsible for all field test data and shall submit to Owner copies of the following test reports from his testing laboratory.

Design-builder shall perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction. Design-builder shall obtain all necessary permits for work in roads, rights of way, etc. He 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-builder. 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-builder. Additional test borings and other exploratory operations may be made by Design-builder 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. It is not guaranteed to be correct or complete and is shown for the convenience of the Design-builder. Design-builder shall explore ahead of the required excavation to determine the exact location of all structures. They shall be supported and protected from damage by the Design-builder. If they are broken or damaged, they shall be restored immediately by the Design-builder at its expense.

Design-builder shall locate existing underground utilities in the areas of work. If utilities are to remain in place, Design-builder shall provide adequate means of protection during earthwork operations. If uncharted or incorrectly charted piping or other utilities are encountered during excavation, Design-builder shall consult

the Owner immediately for directions as to procedure. Design-builder shall cooperate with Owner and utility companies in keeping respective services and facilities in operation. Design-builder shall repair damaged utilities to the satisfaction of Owner.

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

3.4 Cast-In-Place Concrete

Design-builder 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-builder 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, piping, 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.

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 Valves and Piping Requirements

The Design-builder is responsible for the final sizing and selection of all equipment, piping, and materials. Design-builder shall provide all labor, materials, equipment, and incidentals to furnish and install valves, piping, and fittings complete and operational as required for the proposed work. Valves, piping, 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, piping, joints, fittings, gaskets, harnessing, 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, piping, joints, fittings, coatings, linings, sleeves, gaskets, harnessing, 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, piping, 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-builder's expense.

Pipe interiors shall be kept completely free from dirt and foreign matter. All piping shall be installed in complete accordance with the manufacturer's instructions and recommendations. If any piping 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 and the Palm Beach County Water Utilities Department Minimum Design and Construction Standards.

Part 4 Electrical Requirements

4.1 Basic Requirements

Design-builder 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 lightning 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.
3. 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-builder to act as guidance in fulfilling the operational intent of the conceptual documents. It shall be the Design-builder'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-builder shall not relieve Design-builder of their contractual responsibility to provide complete and successfully operating systems.

4.6 Raceway Systems

Design-builder shall furnish and install conduit and fittings to form complete, coordinated and grounded raceway systems. Design-builder 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-builder 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-builder 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-builder 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-builder 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-builder 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-builder 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-builder, 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 system including field sensors/transducers 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.

ATTACHMENT - K

Vendor Quotes

Attachment K
Summary of Vendor Quotes

Electrical Contracting

Dale C. Rossman, Inc.	\$ 18,550.00
Energy Efficient Electric, Inc.	\$ 19,400.00
Electron Corp of South Fla.	\$ 34,000.00

Energy Efficient Electric was selected based on the following criteria:

- Currently working on site
- SBE Contractor
- Included a more complete scope of work including additional items
(Wire rack organizer and Optical-Eithernet Converter and switch installation)

Corporate Office
502 County road 640 East
Mulberry, Florida 33860
863.428.9500
Fax 863.904.0356

Dale C. Rossman, Inc.

ELECTRICAL AND INSTRUMENTATION CONTRACTOR

West Palm Office
7231 Southern Blvd.
West Palm Beach, FL 33413
561.784.8877
Fax 561.784.8853

PROPOSAL

Proposal Submitted To:

GLOBAL TECH

Street:

6001 BROKEN SOUND PKWY.

NW, SUITE 610

City, State and Zip Code:

BOCA RATON, FL. 33487

Attention:

BRUCE RAHMANI

Request for Quotation:

VERBAL

Job Name:

BELLE GLADE WTP VFD
REPLACEMENT

Job Location:

BELLE GLADE, FL

Job Description:

ELECTRICAL

Date:

MAY 14, 2014

Proposal No:

10308 REV2

We are pleased to submit our quotation to furnish the necessary labor, material, tools, and equipment for the above referenced project in accordance with your request and as follows:

SEE ATTACHED SCOPE OF WORK

Price is based on a normal 40 hour workweek. Premium time is not included. Thank you for the opportunity to submit our proposal and we look forward to serving you.

Payment to be made as follows: PROGRESS PAYMENTS – MATERIALS STORED ON SITE – NET FIFTEEN (15) DAYS

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized
Signature

Edward G. Nickerson

Note: This proposal may be withdrawn if not accepted within
THIRTY (30) days.

(Edward G. Nickerson, Project Estimator)

Acceptance of proposal: The above prices, specifications and conditions are satisfactory and are hereby accepted. Dale C. Rossman, Inc., is authorized to do the work as specified. Payment will be as outlined above.

Signature: _____

Date of Acceptance: _____

Signature: _____

Lic. EC13002327

<http://dcrossman.com>

Dale C. Rossman, Inc.

SCOPE OF WORK

May 14, 2014

High Service Pump VFD Replacement

1. Perform lock-out tag-out with the assistance of local plant electrician.
2. De-term (1) existing 200 HP VFD with associated filter. Remove and turn over to owner.
3. Install new VFD in same foot print as existing and re-term existing conductors.
4. Proposal includes (4) hours start-up per VFD.
5. Repeat same sequence for second VFD.

Project Pricing

\$9,275.00

(nine thousand two hundred seventy-five and 00/100 dollars)

Membrane Service Pump VFD Replacement

1. Perform lock-out tag-out with the assistance of local plant electrician.
2. De-term (1) existing 200 HP VFD with associated filter. Remove and turn over to owner.
3. Install new VFD in same foot print as existing and re-term existing conductors.
4. Proposal includes (4) hours start-up per VFD.
5. Repeat same sequence for second VFD.

Project Pricing

\$9,275.00

(nine thousand two hundred seventy-five and 00/100 dollars)

Exclusion

1. Equipment and operator to remove and install VFD drives furnished by others.
2. Offloading and storing of VFD drives by others.
3. Labor and cost for Electrical permit.
4. Bond premiums and liquidated damages.
5. Proposal based on re-using existing power and control wiring.

Qualifications

1. Proposal based on our best interpretation of information provided with request for quotation.
2. Price is based on a 40-hour work week. We do not include premium time, unless otherwise noted.
3. Proposal based on installation of one owner furnished VFD drive at a time.
4. If modification to existing power and control wiring is needed, this work will be performed on a Time and Material bases as needed after approval.

Terms and Conditions

1. We guarantee all material to be as specified or equal.
2. Due to the unstable market prices of ferrous and nonferrous raw materials and the rapidly rising cost of finished goods and materials from our suppliers; all orders will be subject to escalation or de-escalation based on the revised CPI index.
3. All work will be completed in a workmanlike manner according to standard practices.
4. Any alteration or deviation from the above scope of work involving extra costs will be executed only upon written orders, and will become a change order to the Contract.
5. All agreements are contingent upon strikes, accidents or delays beyond our control.
6. Our workers are covered by Workmen's Compensation Insurance.

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

May 9, 2014

**Electrical Scope of Work
PBC WTP 11 HSP Bld VFD Replacement**

Quote # 30882

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 walk-through with Globaltech.

Included:

1. Lockout/tag out (2) existing VFD in the HSP building electric room, disconnect existing power and control wiring, remove and return VFD's and load reactors to the owner.
2. Assist with installation of (2) 200 HP VFD's furnished by owner on same footprint and terminate existing wiring.
3. Furnish and install Panduit wireway inside VFD door to dress up the control wiring.
4. Assist with startup.

Lump Sum **\$9,700**

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

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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

May 9, 2014

**Electrical Scope of Work
PBC WTP 11 RO Bld VFD Replacement**

Quote # 30881

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 walk-through with Globaltech.

Included:

1. Lockout/tag out (2) existing VFD in the RO building electric room, disconnect existing power and control wiring, remove and return VFD's to the owner.
2. Assist with installation of (2) 500 VFD's furnished by owner on same footprint and terminate existing wiring.
3. Furnish and install Panduit wireway inside VFD door to dress up the control wiring.
4. Assist with startup.

Lump Sum **\$9,700**

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

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Electron Corp of South Fla.

Electrical Contractor

127 RENAISSANCE CIRCLE Jupiter, FL 33458

Tel. (561) 744-1388 Fax (561) 744-5777

May 18, 2014

Lake Region Water Treatment

Electron Corp. of South Florida Proposes to Furnish and install the following sections complete with the exceptions as listed:

1. Install four Variable Frequency Drives;
2. Remove four existing Variable Frequency Drive;
3. Start up;
4. Electrical Permit;
5. Dispose on site;

Exceptions:

Bid \$34,000.00

Please feel free to call me should you have any questions.



Albert Laessig
President

Howard Woodrow & Associates, Inc.

255 Bermuda Beach Drive
Fort Pierce, FL 34949-1527
772-461-6227
Fax 772-461-6231

Price Quote

DATE	QUOTE #
4/24/2014	5293

NAME/ ADDRESS
Globaltech, Inc. Attention: Bruce Rahmani 1075 NW Broken Sound Pkwy, Ste 103 Boca Raton, FL 33487

TERMS	FOB	PROJECT
Net 30		Lake Region FP VFD...

DESCRIPTION	QTY	PER UNIT	TOTAL
(Qty 2) Eaton Adjustable Frequency Drives: : CPX Series (18 Pulse Clean Power) 500HP, 480V, 590A, (Variable Torque) mounted in a NEMA 1 Enclosure. 1 (P1) - Circuit Breaker 6 (LW) - Miscellaneous Push-To-Test Light 22mm 1 (K6) Start-Stop Pushbuttons 22mm 1 (K4) HOA Switch 7 (SB) Standard Control Relay (D2) 1 (KA) 115V Control Transformer - 250VA 1 (K7) Black Reset Pushbutton 22mm 1 (KM) Miscellaneous Pushbutton - 22mm 2 (SE) On-Delay Timer Relay 2 (SD) Terminal Blocks (4 Points) 1 (KO) Standard Elapsed Time Meter 1 (CQ) Ethernet IP 1 (B4) I/O Expander-Analog Input, 2 Analog Output 1 (KV) MP3000 URDT RTD Monitor 1 (PG) MotorRx dv/dt Output Filter 1 Note: reference No 1 control schematic provided 5 Year Parts and Labor Warranty.	1	127,800.00	127,800.00T
Start Up and Training.	1	3,000.00	3,000.00
Shipping & Handling	1	1,500.00	1,500.00
	Subtotal		\$132,300.00

All Prices Valid for 60 Days.
FOB Factory.

Sales Tax (6.0%)	\$7,668.00
TOTAL	\$139,968.00



Detail Bill of Material

Project Name:	Lake Region HSP 1&2	Negotiation No:	
General Order No:		Alternate No:	0000

Item No.	Qty	Product	Description
	2	Adjustable Frequency Drives	CPX Series, 480VAC, 200 HP, FLA: 245 IH, Enclosure: CPX NEMA Type 1 Filtered, High Overload (IH)

Designation Custom HSP Package

Qty	List of Materials
1	CPX 200HP IH, 480V, NEMA Type 1 Filtered (NEMA 12)
1	(SB) - Standard Control Relay (D2)
1	(PG) - MotoRx dv/dt Filter
1	(P1) - Circuit Breaker
1	(CQ) - Ethernet IP
1	(SD) - Terminal BloCKs (4 Points)
1	(SE) - On-Delay Timer Relay
1	(K7) - BlaCK Reset Pushbutton 22mm
1	(K6) - Start-Stop Pushbuttons 22mm
1	(LW) - Miscellaneous Push-To-Test Light 22mm
1	(KO) - Standard Elapsed Time Meter
1	(K8) - Red E-Stop Pushbutton 22mm
1	(K2) - Speed Pot with HOA Switch

\$78,424.00

Pricing includes Equipment, Five Year Warranty, Freight to Jobsite, Start Up & Training + (\$2,000 Owner Training @ Eaton*).

* \$2,000 price reflects training class cost for two "students" only. Travel expenses not included in this price: various locations available.

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 thereof for the time the shipment is delayed.

HOWARD WOODROW & ASSOCIATES, INC.
255 Bermuda Beach Drive Fort Pierce, FL 34949
Phone: 772-461-6227 Fax: 772-461-6231