Agenda Item # 3K- 5

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date:	**July 12, 2016**	**Consent [X]** **Public Hearing [ ]**	**Regular [ ]**
Department:	**Water Utilities Department**		

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Work Authorization (WA) No. 6 for Water Treatment Plant (WTP) No. 11 Odor Control Improvements Project (Project) with Globaltech, Inc. in the amount of $1,536,373.

Summary: On March 10, 2015, the Board of County Commissioners (BCC) approved the Water Utilities Department (WUD) Contract for Optimization and Improvements Design-Build with Globaltech, Inc. (R2015-0315). WA No. 6 provides for the replacement of the existing wet-chemical odor scrubber at WTP No.11 with a biological odor scrubber system. The Project is necessary to improve treatment efficiency and will significantly reduce odor and operating costs at WTP No. 11. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The Contract with Globaltech, Inc. provides for SBE participation of 75%. WA No. 6 includes 97.9% overall SBE participation. The cumulative SBE participation including this work authorization is 97.23% overall. Globaltech, Inc. is a Palm Beach County company. This project is included in the FY16 Capital Improvement Plan adopted by the BCC. (WUD Project No. 16-057) District 6 (MJ)

Background and Justification: The proposed improvements are necessary to rectify deficiencies in the existing wet-chemical odor scrubber system. Field testing has shown that the existing wet-chemical odor scrubber operates inefficiently. Operations and Maintenance (O&M) staff have reported accelerated corrosion of equipment surrounding the existing odor scrubber. There is no redundancy in the existing single stage scrubber to provide odor control during maintenance. The odor control improvements include the installation of two (2) biological odor scrubbers that will properly treat air from the existing degasification towers. Unlike the existing wet-chemical odor scrubber, the biological odor scrubbers do not rely on hazardous chemicals to treat the odorous air, effectively eliminating the risks associated with handling hazardous chemicals and therefore creating a safer work environment for plant O&M staff. WA No. 6 provides for professional design, permitting and construction services during the WTP No. 11 Odor Control Improvements Project. Globaltech, Inc. will provide builders risk insurance prior to commencement of construction.

Attachments:

1. Location Map
2. Two (2) Original Work Authorization No. 6

Recommended By: Jim Stiles 6-22-16
Department Director **Date**

Approved By: Shanna R. Bz 7-7-16
Assistant County Administrator **Date**

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	**2016**	**2017**	**2018**	**2019**	**2020**
Capital Expenditures	**$1,536,373**	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	**$1,536,373**	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 expenditure from user fees, connection fees, and balance brought forward.

C. Department Fiscal Review: Della M West

III. REVIEW COMMENTS

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

6/29/16
OFMB Ex 6/27 A 6/28

6/30/16
Contract Development and Control
6/30/16 TW

B. Legal Sufficiency:

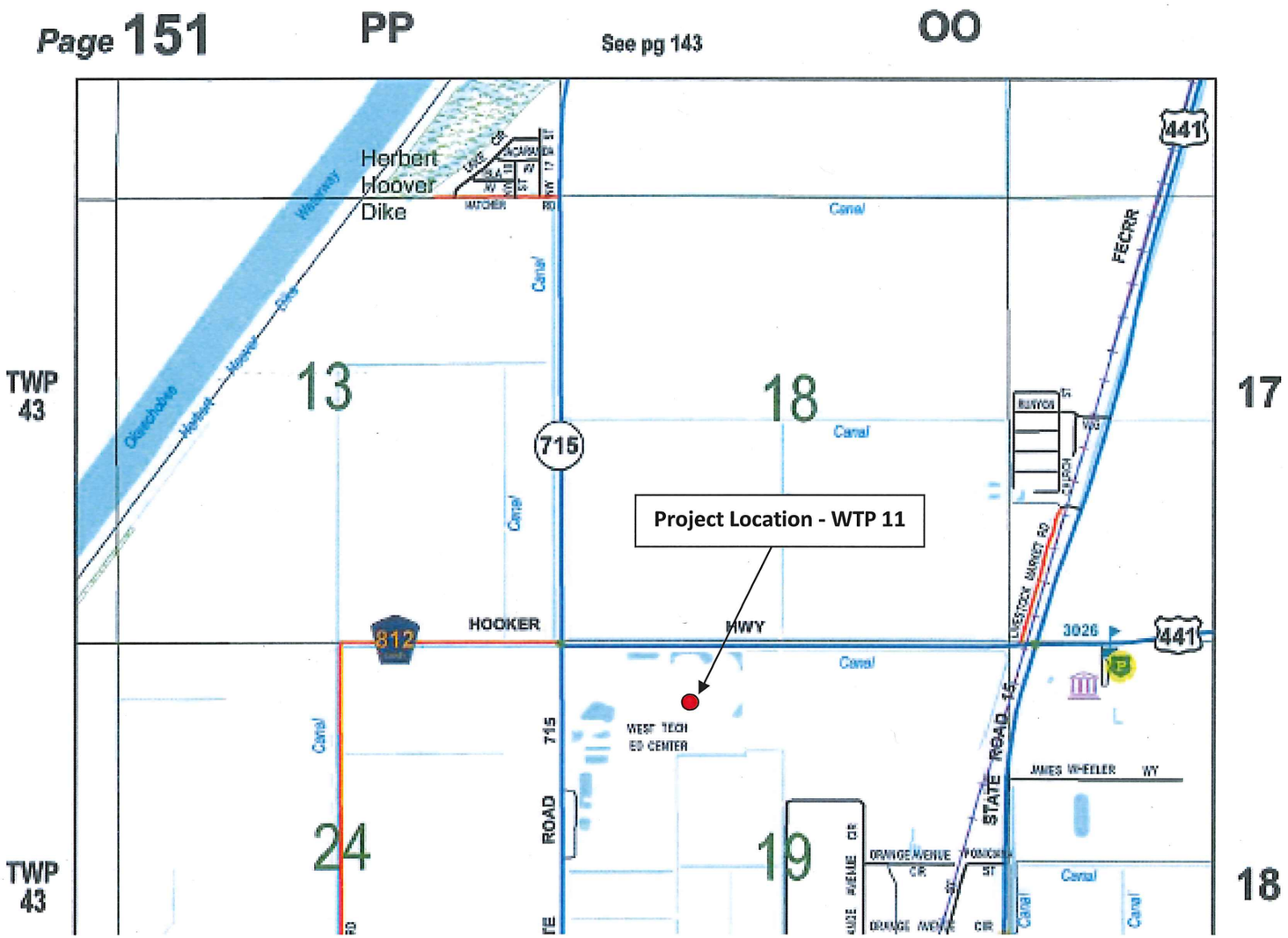
7/6/16
Assistant County Attorney

C. Other Department Review:

Department Director

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

ATTACHMENT 1
Location Map



WUD 16-057: Water Treatment Plant No. 11 – Odor Control Improvements

WORK AUTHORIZATION NO. 06

Palm Beach County Water Utilities Department
Optimization and Improvements Design-Build Contract

Project No.: WUD 16-057
District: 6
Budget Line Item No.: 4011-721-W026-6541
Project Title: Water Treatment Plant No. 11 – Odor Control Improvements

THIS AUTHORIZATION # 06 to the Contract for Optimization and Improvements Design-Build Services dated March 10, 2015 (R 2015-0315), by and between Palm Beach County and the Design-Build Entity identified herein, is for the Design/Build Services of this Work Authorization. The Design-Build Entity provides for 75% SBE participation overall. This Work Authorization includes **97.90** % overall participation. The cumulative proposed SBE participation, including this authorization is **97.23** % overall. Additional authorizations will be utilized to meet or exceed the stated overall participation goal.

1. Design-Build Entity: Globaltech, Inc.

2. Address: 6001 Broken Sound Parkway NW, Suite 610, Boca Raton, FL 33487

3. Description of Services (Scope of Work) to be provided by the Design-Build Entity:

   See **ATTACHMENT - A**.

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

   See **ATTACHMENT - G**.

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

   Substantial Completion **365** Calendar Days
   Final Construction Completion **425** 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 Design-Build Entity for providing the requested services in accordance with the Guaranteed Maximum Price is **$ 1,536,373.00.** The Guaranteed Maximum Price includes a Not to Exceed fee of $5,000.00 for site survey.

7. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated March 10, 2015 remain in full force and effect.

WORK AUTHORIZATION NO. 06

Project No.: WUD 16-057

Project Title: Water Treatment Plant No. 11 – Odor Control Improvements

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

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

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

ATTEST:

Signed:_____

Typed Name: _____
Deputy Clerk

Approved as to Form and Legal Sufficiency

Signed: _____

Typed Name: _____
County Attorney

Palm Beach County,
Board of County Commissioners

Signed:_____
Mary Lou Berger, Mayor

_____
Date

JCS

CONTRACTOR: Globaltech, Inc.

ATTEST:
Richard D. Olson
Witness

(Signature)

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

Troy L. Lyn, P.E. / Vice President
(Name and Title)

(CORPORATE SEAL)

May 18, 2016
Date

LIST OF ATTACHMENTS

WORK AUTHORIZATION NO. 06

Palm Beach County Water Utilities Department
Optimization and 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. 6

Palm Beach County Water Utilities Department

Optimization and Improvements Design-Build Contract

SCOPE OF WORK
FOR

WTP No. 11 – Odor Control Improvements
Project No. WUD 16-057

INTRODUCTION

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

This Work Authorization encompasses providing services related to the following tasks at WTP No. 11:

Installation of three 50 hp blowers to replace existing 25 hp blowers in existing sound enclosures. Installation will also include replacement of the three existing blower control panels.

- Installation of three actuators on the existing blower discharge dampeners for each blower.

- Construction of a 30' x 35' slab for two biological odor control scrubbers and a 4' wide x 50' long concrete sidewalk connecting to the existing degasifer clearwell sidewalk.

- Installation of two biological odor control scrubbers and associated appurtenances (nutrient tank, water control panel, control panel) capable of treating hydrogen sulfide laden air from the existing degasifier towers with an average removal efficiency of 99%. Each scrubber shall treat 14,000 cfm.

- Installation of interconnecting odor control ductwork, dampeners and supports to connect the existing degasifier towers and existing wet-chemical odor control scrubber to the two new biological odor scrubbers.

- Installation of a new 48" elbow to the existing wet-chemical scrubber discharge.

- Installation of a 4" PVC waste line from the biological odor control scrubber to the existing plant site process lift station.

- Installation of a drop bowl inside the process lift station wetwell to blend the waste from the biological odor control scrubber with the waste from the plant.

- Installation of the concentrate line to scrubber waste line. Tap existing 12" HDPE concentrate line and install 2" PVC line with isolation valve to process lift station. Tie into process lift station above grade with air gap. Concentrate to be routed to the drop bowl inside the lift station.

- Installation of a 3" PVC water line and backflow preventer connected to the plant existing 8" water main to provide irrigation water for scrubber towers.

SCOPE OF SERVICES

Design-Build Entity shall perform the Scope of Services described in the ***Design-Build Criteria for WTP 11 Odor Control Improvements*** (PBCWUD, May 10, 2016) and as described herein:

The below scope of work represents the overall modifications needed to achieve the improvements as described in the Design-Build Criteria.

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

Furnish and install a biological odor control scrubber system consisting of two FRP towers downstream of the hydrogen sulfide degasifiers with associated appurtenances.

The following is the scope of services:

Task 1 – Administrative and Engineering Services

1. Meet with the County to review project scope.
2. Conduct utility locates using ground penetration radar and electromagnetic technologies.
3. Conduct two soil borings in the location where new scrubbers will be located.
4. Develop subcontracts with structural and electrical engineers, utility locator, electrical contractor and other entities as may be required.
5. Prepare a preliminary (60%) design.
6. Submit five (5) half-size copies of the 60% design to the County. Meet with the County to review the design.
7. Incorporate the County comments and proceed to 90% and final design stages in accordance with the PBCWUD Water Utilities Minimum Design and Construction Standards, Engineering Design-Manual and security requirement.
8. Submit FDEP/Palm Beach County Health Department and building department permit applications.
9. Prepare detailed construction schedule to include as a minimum; engineering and permitting services, site mobilization, detailed construction activities, scheduled shutdowns and durations, equipment/material delivery times, testing, startup and commissioning.

10. Prepare submittals (or confirmation of compliance with County design standards), administer and track submittal process.
11. Schedule meetings, inspections, and testing with County staff.
12. Provide Engineer's site visits during construction to confirm construction is being performed in conformance with the Design Drawings and Specifications.
13. Prepare Record Drawings, Operation and Maintenance Manuals, and closeout permits.

Task 2 – Construction Services

1. Replacement of three existing degasifier blowers:
    a. Furnish and install three new 50 hp blowers. Each blower shall be capable of providing 14,000 cfm with the biological odor control towers connected in parallel. This assumes the existing chemical scrubber has been isolated. Blowers will be equipped with heaters and anti-spin break.
    b. One blower at a time shall be taken off line and be replaced as to allow the plant to operate with the other two blowers in operation.
    c. Each blower housing shall be removed to allow for the replacement of the 25 hp blower with new 50 hp blower. Once the new blower has been set, the existing blower housing shall be reinstalled.
    d. Each existing blower control panel will be replaced with a new blower panel. New wire shall be installed from the new blower panel to the blower utilizing the existing conduits. New breakers shall be installed in the existing MCC. New feeder wires shall be installed from breakers to new blower panels.
    e. Furnish and install three new actuators on each blower discharge dampener.
    f. Furnish and install a pressure transmitter on the existing blower discharge manifold. Pressure exceeding a pressure set point shall open the existing scrubber bypass actuated dampeners and alarm the plant.

2. Installation of biological odor control system.
    a. Construct a new 30' x 35' x 2' concrete pad to house the biological odor control towers. The pad will also have an 18" containment curb with water stop. The concrete pad will be placed on top of the existing 12" HDPE membrane concentrate line and an existing duct bank that supplies power to the process lift station. The 12" HDPE line shall be protected by a 4" thick x 30" wide concrete pad placed above the line in the area where the new concrete pad for the scrubbers are located. The existing concrete duct bank will not be modified and is assumed to below the slab.
    b. Furnish and install two biological odor control towers, two water panels, system control panel, and nutrient tank on the concrete pad. Each water panel shall have a nutrient feed pump. An irrigation flow meter shall be provided to monitor the irrigation instantaneous and total flow rate by each water panel. The towers will each be capable of receiving 14,000 cfm of air from the degasifiers. A treated exhaust air sampling system shall also be installed, consisting of tubing and vacuum pump located at ground level to facilitate obtaining grab samples of representative treated exhaust air.
    c. Furnish and install 48" FRP ductwork from the existing chemical scrubber to the two biological odor control towers. Remove 48" FRP elbow at

chemical scrubber and install new FRP 48" x 48" tee with new 48" FRP damper on chemical scrubber. Extend from 48" tee reducing down to 36" FRP ductwork at each biological odor control scrubber. Each biological scrubber shall be equipped with a FRP dampener on inlet.

d. Install a new 48" discharge elbow on the existing chemical scrubber.
e. Connect 3" PVC water main to existing 8" process water line with tapping saddle. Install 3" RPZ backflow preventer at odor control tower for water supply irrigation line.
f. Install 4" PVC waste line from odor control tower slab to tie into existing 4" PVC sanitary waste line. A new 6" PVC waste line from the combined flow from sanitary waste and tower waste line will be installed into the existing plant site process lift station. Add a PVC drop bowl below the 6" PVC waste line in the lift station to have the water discharge at the bottom of the lift station. Damaged coating will be repaired with aluminum silicate material.
g. Install a 2" PVC concentrate dilution line from existing 12" HDPE concentrate to the plant site process lift station to be used for diluting the waste from the biological scrubber as a secondary source. The 12" HDPE will be tapped utilizing a saddle and a 2" PVC line extended to biological odor scrubber pad to discharge into the new 4" PVC drain line for the towers. The line flow will be controlled by a manual 316 SS ball valve placed above grade.
h. Furnish and install two new eyewash/showers. One is to be located on the biological scrubber pad and the other off the pad.
i. Furnish and install thermal flow meter in common ductwork.

3. Electrical:

a. Furnish and install three new NEMA 4X SST local blower control panels to replace existing panels. Local control panels to have 100 amp minimum breaker. Panel shall be 480 volt, 3-phase and shall be powered from the existing motor control center. The wires from the new local blower control panels to the new blowers shall be replaced in the existing conduit.
b. Furnish and install new blower breaker in existing MCC to replace existing breakers. Furnish and install new wire from new breakers to new local blower control panes in existing conduit.
c. Furnish and install flow switches for two new eyewash/showers.
d. Install new light pole with receptacle at biological odor control scrubber system.
e. Connect odor control system panel and water panels.
f. Connect thermal flow meter located in ductwork.
g. Furnish and install new conduit and wire for new instruments.
h. Furnish and install lightning protection and grounding grid for new biological odor control scrubber system. Lightning protection to be connected to odor control towers, light pole, and grounding grid. New ground grid to be tied into existing grounding grid around existing degasifier clearwell.
i. Furnish and install digital and analog I/O required for system functionality. Connect existing blower signals to existing ControlLogix RIO-8 and any new additional signals to RIO-9.
j. PLC programming.

4. Restore site to existing conditions.

5. Provide O&M manuals supplied with new equipment.

Permits and Fees

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

SALVAGED MATERIALS

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

ASSUMPTIONS

1. Costs are based on providing a BioAir system (EcoFilter® reactors with EcoBase® structured synthetic media). This system was selected from three biological odor control system based on lowest cost to meet the design build criteria.
2. A Not-to-Exceed fee of $5,000.00 has been reserved to conduct the site survey. Should the subcontracted services be performed for a fee less than $5,000.00, the unused portion will be returned to the County.
3. No permit changes to Deep Injection Well UIC permit is assumed to be made by the Design-Build Entity. Should permit changes be required or needed to the UIC permit, they will be made by the County or by others.
4. The site is assumed to have been demucked and compacted based on the original construction at the site. No pilings were assumed to be required. Soil boring(s) will be conducted during the design portion of the project to confirm that this is the case where the bioscrubber slab will be located.
5. County will make available all existing record drawings and surveys as may be required to coordinate and complete this scope of services.
6. County will make available construction photographs of associated areas as may be required to coordinate and complete this scope of services.
7. County will review all submittals and provide comments within one calendar week and notify Design-Build Entity of status.
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. COUNTY shall provide:
    - IP Addresses where required
    - Programming of SCADA screens.

COMPENSATION

Compensation for this Work Authorization shall not exceed the Guaranteed Maximum Price of **$1,536,373.00** in accordance with the unit prices established in the Contract for construction services dated March 10, 2015, as approved by the Board of County Commissioners. Guaranteed Maximum Price includes $5,000.00 Not to Exceed fee for site survey.

SBE/M-WBE PARTICIPATION

As described in the Contract (R 2015-0315), SBE/M-WBE participation is included in ATTACHMENT F under this Authorization. The attached Schedule 1 defines the SBE/M-WBE applied to this Authorization/Contract and Schedule 2 establishes the SBE/M-WBE contribution from each subcontractor (Letter of Intent to perform as an SBE/M-WBE).

ATTACHMENT - B

WORK AUTHORIZATION NO. 06

Palm Beach County Water Utilities Department
Optimization and 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

Public Construction Bond

NIELSON, ROSENHAUS & ASSOCIATES
A NIELSON HOOVER GROUP COMPANY

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

May 19, 2016

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

RE: Palm Beach County, as Obligee
Project: Water Treatment Plant No. 11 – Odor Control Improvements, WUD 16-057
Bond No. SU1129869

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

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

ATTACHMENT - C

PUBLIC CONSTRUCTION BOND

BOND NUMBER:	SU1129869
BOND AMOUNT:	$1,536,373.00
CONTRACT AMOUNT:	$1,536,373.00
CONTRACTOR'S NAME:	Globaltech, Inc.
CONTRACTOR'S ADDRESS:	6001 Broken Sound Parkway NW Suite 610 Boca Raton, FL 33487
CONTRACTOR'S PHONE:	(561) 997-6433
SURETY COMPANY:	Arch Insurance Company
SURETY'S ADDRESS:	300 Plaza Three Jersey City, NJ 07311
OWNER'S NAME:	Palm Beach County
OWNER'S ADDRESS:	8100 Forest Hill Boulevard West Palm Beach, FL 33413
OWNER'S PHONE:	(561) 493-6000
DESCRIPTION OF WORK:	Installation of three 50 HP blowers to replace existing 25 HP blowers in existing sound enclosures. Installation will also include replacement of the three existing blower control panels.
COUNTY'S PROJECT No:	WUD 16-057, WA-06
PROJECT LOCATION:	PBCWUD Water Treatment Plant No. 11 (WTP 11), 39700 Hooker Highway, Belle Glade, FL 33430-5934, PCN 00-37-43-19-00-000-3060.
LEGAL DESCRIPTION:	PCN 00-37-43-19-00-000-3060

PUBLIC CONSTRUCTION BOND

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

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

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

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

Dollars $1,536,373.00

One million five hundred thirty six thousand three hundred seventy three dollars and zero 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: Water Treatment Plant No. 11 – Odor Control Improvements
Project No.: WUD 16-057
Project Description: Installation of three 50 HP blowers to replace existing 25 HP blowers in existing sound enclosures. Installation will also include replacement of the three existing blower control panels.
Project Location: PBCWUD Water Treatment Plant No. 11 (WTP 11), 39700 Hooker Highway, Belle Glade, FL 33430-5934, 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 16-057, 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.

Globaltech, Inc.
Principal (Seal)

Rebecca Thomas
Witness

Troy L. Lyn
Print name

Rebecca Thomas
Print name

Troy L. Lyn, Vice President
Title

Arch Insurance Company
Surety (Seal)

Jackie Haynes
Witness

Brett Rosenhaus
Print name

Jackie Haynes
Print name

Brett Rosenhaus, Attorney-in-Fact
Title

AIC 0000175046

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 of Charlotte, NC
Brett Rosenhaus of Lake Worth, FL
Charles D. Nielson, Charles J. Nielson and David R. Hoover of Miami Lakes, FL (EACH)
F. Danny Gann, Edward T. Ward and Audria R. Ward of Atlanta, GA (EACH)
John R. Neu and Kevin Wojtowicz of St. Petersburg, FL (EACH)
Laura D. Mosholder of Orlando, FL

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.

In Testimony Whereof, the Company has caused this instrument to be signed and its corporate seal to be affixed by their authorized officers, this 8th day of January, 2016.

Attested and Certified

Patrick K. Nails, Secretary

Arch Insurance Company

David M. Finkelstein, Executive Vice President

STATE OF PENNSYLVANIA SS

COUNTY OF PHILADELPHIA SS

I, Helen Szafran, a Notary Public, do hereby certify that Patrick K. Nails and David M. Finkelstein personally known to me to be the same persons whose names are respectively as Secretary and Executive Vice President of the Arch Insurance Company, a Corporation organized and existing under the laws of the State of Missouri, subscribed to the foregoing instrument, appeared before me this day in person and severally acknowledged that they being thereunto duly authorized signed, sealed with the corporate seal and delivered the said instrument as the free and voluntary act of said corporation and as their own free and voluntary acts for the uses and purposes therein set forth.

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
HELEN SZAFRAN, Notary Public
City of Philadelphia, Phila. County
My Commission Expires October 3, 2017

Helen Szafran, Notary Public
My commission expires 10/03/2017

CERTIFICATION

I, Patrick K. Nails, Secretary of the Arch Insurance Company, do hereby certify that the attached Power of Attorney dated January 8, 2016 on behalf of the person(s) as listed above is a true and correct copy and that the same has been in full force and effect since the date thereof and is in full force and effect on the date of this certificate; and I do further certify that the said David M. Finkelstein, who executed the Power of Attorney as Executive Vice President, was on the date of execution of the attached Power of Attorney the duly elected Executive Vice President of the Arch Insurance Company.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seal of the Arch Insurance Company on this _____day of _____, 20_____.

Patrick K. Nails, Secretary

This Power of Attorney limits the acts of those named therein to the bonds and undertakings specifically named therein and they have no authority to bind the Company except in the manner and to the extent herein stated.

PLEASE SEND ALL CLAIM INQUIRIES RELATING TO THIS BOND TO THE FOLLOWING ADDRESS:

Arch Insurance – Surety Division
3 Parkway, Suite 1500
Philadelphia, PA 19102

ATTACHMENT – D

Form of Guarantee

ATTACHMENT - D

FORM OF GUARANTEE

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

We the undersigned hereby guarantee that the **Water Treatment Plant No. 11 – Odor Control Improvements, WUD 16-057, WA-06.** 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: _____ Travis L. Lyn
(Signature) (Printed Name)

Arch Insurance Company (Seal)
(Surety)

By: _____ Brett Rosenhaus, Attorney-in-Fact
(Signature) (Printed Name)

ATTACHMENT - E

Work Authorization Schedule of Bid Items

Globaltech
A DESIGN - BUILD COMPANY

Takeoff Worksheet

05/26/16

PBC Water Utilities Department
162005 PBCWUD WTP 11 Odor Control Imp

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
1 General Conditions								
Temporary Facilities		LOT						
Trailer Pick up/Delivery		EA	2	400.00	800.00	6.00	1.1500	975.20
Container Rental		EA	12	200.00	2,400.00	6.00	1.1500	2,925.60
Sanitary		MONTH	12	120.00	1,440.00	6.00	1.1500	1,755.36
Job Site Office Supplies		LOT	2	100.00	200.00	6.00	1.1500	243.80
Waste Hauling		LOT	4	600.00	2,400.00	6.00	1.1500	2,925.60
General Conditions		LOT						
Submittal Labor		HR	30	71.08	2,132.40		1.2992	2,770.41
O&M		HR	30	71.08	2,132.40		1.2992	2,770.41
Progress Meeting		HR	60	71.08	4,264.80		1.2992	5,540.83
Scheduling Labor		HR	40	71.08	2,843.20		1.2992	3,693.89
Construction PM		HR	180	71.08	12,794.40		1.2992	16,622.48
Construction Superintendent		HR	140	62.13	8,698.20		1.2992	11,300.70
Purchasing & Subcontracts		HR	40	71.08	2,843.20		1.2992	3,693.89
Safety Coordination		HR	8	71.08	568.64		1.2992	738.78
Safety Equipment		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Building Permit Coordination		HR	12	71.08	852.96		1.2992	1,108.17
Office Admin		HR	40	38.89	1,555.60		1.2992	2,021.04
				Bid Item Totals:	**46,925.80**			**60,305.16**
2 Sitework								
Mobilization		LOT						
Construction PM		HR	8	71.08	568.64		1.2992	738.78
Construction Superintendent		HR	8	62.13	497.04		1.2992	645.75
3 man Crew		CR-D	2	962.88	1,925.76		1.2992	2,501.95

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Locates		DAY	1	1,800.00	1,800.00		1.1000	1,980.00
Survey (NOT TO EXCEED FEE)		LOT	1	5,000.00	5,000.00		1.1000	5,500.00
Prep Site & Grade for Slab		CR_D	5	1,166.16	5,830.80		1.2992	7,575.38
Stone/Fill		LOT	1	6,000.00	6,000.00	6.00	1.1500	7,314.00
Seed, Sod & Restoration		LOT	1	4,000.00	4,000.00	6.00	1.1500	4,876.00
Installation		CR_D	3	1,166.16	3,498.48		1.2992	4,545.23
Startup Crew		CR-D	2	962.08	1,924.16		1.2992	2,499.87
Punch Out Crew		CR-D	2	962.08	1,924.16		1.2992	2,499.87
Demob		LOT						
Construction PM		HR	8	71.08	568.64		1.2992	738.78
Construction Superintendent		HR	8	62.13	497.04		1.2992	645.75
3 man Crew		CR-D	2	962.88	1,925.76		1.2992	2,501.95
				Bid Item Totals:	**35,960.48**			**44,563.31**
3 Concrete								
Scrubber Pad								
Form & Materials		LOT	1	5,000.00	5,000.00	6.00	1.1500	6,095.00
Cast In Place Concrete		YARD	100	185.00	18,500.00	6.00	1.1500	22,551.50
Concrete Pump		LOT	1	700.00	700.00	6.00	1.1500	853.30
Installation		CR_D	10	1,166.16	11,661.60		1.2992	15,150.75
Duct Piping Support								
Form & Materials		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Cast In Place Concrete		YARD	6	185.00	1,110.00	6.00	1.1500	1,353.09
Concrete Pump		LOT	1	700.00	700.00	6.00	1.1500	853.30
Installation		CR_D	8	1,166.16	9,329.28		1.2992	12,120.60

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
HDPE Pipe Concrete Cap								
Excavate and Prep Area		CR-D	2	962.88	1,925.76		1.2992	2,501.95
Cast In Place Concrete		YARD	4	185.00	740.00	6.00	1.1500	902.06
Installation		CR-D	1	962.88	962.88		1.2992	1,250.97
Backfill & Compaction		CR-D	1	962.88	962.88		1.2992	1,250.97
Calcium Aluminate Repair Mortar		LOT	1	300.00	300.00	6.00	1.1500	365.70
Concrete Core		Ea	1	500.00	500.00	6.00	1.1500	609.50
Installation		CR-D	1	962.88	962.88		1.2992	1,250.97
RPZ & Shower Pad								
Form & Materials		LOT	1	200.00	200.00	6.00	1.1500	243.80
Cast In Place Concrete		LOT	1	500.00	500.00	6.00	1.1500	609.50
3 man Crew		CR-D	2	962.88	1,925.76		1.2992	2,501.95
Walkway								
Form & Materials		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Cast In Place Concrete		YARD	6	185.00	1,110.00	6.00	1.1500	1,353.09
Concrete Pump		LOT	1	700.00	700.00	6.00	1.1500	853.30
Installation		CR_D	2	1,166.16	2,332.32		1.2992	3,030.15
Testing Services		LOT	1	3,000.00	3,000.00		1.1000	3,300.00
				Bid Item Totals:	**65,123.36**			**81,439.45**
5 Misc Metals								
Duct Piping Strap		LOT	6	800.00	4,800.00	6.00	1.1500	5,851.20
SS Unistrut		LOT	8	120.00	960.00	6.00	1.1500	1,170.24
SS Unistrut Hardware		LOT	1	2,000.00	2,000.00	6.00	1.1500	2,438.00
SS Unistrut Pipe Clamp		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Misc Metals & Fasteners		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Blower Mods		LOT	1	5,000.00	5,000.00	6.00	1.1500	6,095.00
Sunshield		LOT	1	6,000.00	6,000.00	6.00	1.1500	7,314.00

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Ramp		LOT	1	3,000.00	3,000.00	6.00	1.1500	3,657.00
Pipe Support Systems (RPZ)		LOT	2	500.00	1,000.00	6.00	1.1500	1,219.00
				Bid Item Totals:	**24,760.00**			**30,182.44**
9 Finishes								
Pipe & Duct Coating		LOT	1	6,000.00	6,000.00	6.00	1.1500	7,314.00
Misc Application Material		LOT	1	200.00	200.00	6.00	1.1500	243.80
Installation		CR-D	6	962.88	5,777.28		1.2992	7,505.84
Scrubber Pad Coating								
Containment Coating		LOT	1	4,224.04	4,224.04	6.00	1.1500	5,149.10
Misc Application Material		LOT	1	1,000.00	1,000.00	6.00	1.1500	1,219.00
Installation		CR_D	4	1,166.16	4,664.64		1.2992	6,060.30
Labels		LOT	1	1,500.00	1,500.00	6.00	1.1500	1,828.50
				Bid Item Totals:	**23,365.96**			**29,320.54**
11 Equipment								
Scrubber System	BioAir	LOT	1	464,540.00	464,540.00	6.00	1.1500	566,274.26
Blower Motor Anti-Spin	BioAir	EA	3	2,541.00	7,623.00	6.00	1.1500	9,292.44
Scrubber Duct Piping	Indusco	LOT	1	66,965.79	66,965.79	6.00	1.1500	81,631.30
Freight		LOT	1	3,000.00	3,000.00		1.1500	3,450.00
				Bid Item Totals:	**542,128.79**			**660,648.00**
13 I&C								
Blower Control Panel	C.C. Control	EA	3	7,000.00	21,000.00	6.00	1.1500	25,599.00
Freight		EA	1	500.00	500.00		1.1500	575.00
Fiber Cable & Termination		LOT	1	3,000.00	3,000.00	6.00	1.1500	3,657.00
Pressure Transmitter & Accessories		EA	1	2,000.00	2,000.00	6.00	1.1500	2,438.00
Programming	Hillers	LOT	1	9,895.76	9,895.76		1.1000	10,885.34
				Bid Item Totals:	**36,395.76**			**43,154.34**

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
15 Mechanical								
Eyewash/Shower & Accessories		EA	2	3,000.00	6,000.00	6.00	1.1500	7,314.00
SCH 80 PVC Pipe, Ftgs & Valves		LOT	1	8,000.00	8,000.00	6.00	1.1500	9,752.00
Stainless Steel Pipe, Ftgs & Valves		LOT	1	10,000.00	10,000.00	6.00	1.1500	12,190.00
Tubing & Ftgs		LOT	1	1,500.00	1,500.00	6.00	1.1500	1,828.50
Drop Bowl		LOT	1	500.00	500.00	6.00	1.1500	609.50
3" RPZ & Accessories		EA	1	2,000.00	2,000.00	6.00	1.1500	2,438.00
Flowmeter & Accessories		Ea	2	2,500.00	5,000.00	6.00	1.1500	6,095.00
Tapping Saddle & Corp Stop		LOT	3	500.00	1,500.00	6.00	1.1500	1,828.50
Flexible Couplings		LOT	1	13,389.00	13,389.00	6.00	1.1500	16,321.19
Flange Kits & Misc Materials		LOT	1	3,000.00	3,000.00	6.00	1.1500	3,657.00
Installation		CR_D	55	1,166.16	64,138.80		1.2992	83,329.13
Blower Dampener Actuator	Harold Beck & Sons	Ea	3	5,775.00	17,325.00	6.00	1.1500	21,119.18
Actuator Support & Modification		LOT	1	2,000.00	2,000.00	6.00	1.1500	2,438.00
Installation		CR-D	6	962.88	5,777.28		1.2992	7,505.84
				Bid Item Totals:	**140,130.08**			**176,425.84**
16 Electrical								
Electrical Sub	Energy Efficient	LOT	1	105,205.00	105,205.00		1.1000	115,725.50
Construction PM (Elec/I&C)		HR	50	50.52	2,526.00		1.2992	3,281.78
				Bid Item Totals:	**107,731.00**			**119,007.28**
18 Rental Equipment								
Crane - 40 Ton		Day	4	1,200.00	4,800.00	6.00	1.1500	5,851.20
Articulating Manlift 60 ft		WEEK	2	1,200.00	2,400.00	6.00	1.1500	2,925.60
Traversing Fork Lift		Month	3	4,850.00	14,550.00	6.00	1.1500	17,736.45
Backhoe w/ forks		Month	4	2,400.00	9,600.00	6.00	1.1500	11,702.40
Compactor 5000-7000LB		WEEK	2	450.00	900.00	6.00	1.1500	1,097.10
Stainless Steel Pipe Threader		WEEK	2	650.00	1,300.00	6.00	1.1500	1,584.70
Misc Tools & Equipment		LOT	1	2,000.00	2,000.00	6.00	1.1500	2,438.00

Description	Quote/Vendor	Unit	Quantity	Cost	Ext. Cost	Tax (%)	Markup*	Ext. Price
Dewatering		LOT	1	5,000.00	5,000.00	6.00	1.1500	6,095.00
Equipment Fuel		LOT	200	4.00	800.00	6.00	1.1500	975.20
				Bid Item Totals:	**41,350.00**			**50,405.65**
50 Engineering/Record Drawing								
Engineering		LOT	1	203,780.98	203,780.98		1.0000	203,780.98
				Bid Item Totals:	**203,780.98**			**203,780.98**
60 Bonds, Insurance & Certifications								
Bonds & Certifications		LOT	1	26,033.64	26,033.64		1.1500	29,938.69
Builders Risk Insurance		LOT	1	6,262.02	6,262.02		1.1500	7,201.32
				Bid Item Totals:	**32,295.66**			**37,140.01**
				Grand Totals:	**1,299,947.87**			**1,536,373.00**

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

ATTACHMENT - E

WA-06: WTP No. 11 - Odor Control Improvements

Engineering Fee Summary

Task	Task Description	E6 $77.33	E5 $65.24	E4 $57.37	E3 $42.97	Tech III $32.99	OS $35.43	Total Labor	*Sub-Consultant Services	Sub-Consultant
1	**Project Coordination**									
	Project Management/Coordination		40	20			20			
	Site visit to review project/collect info		12							
	Structural		4				4		$ 1,912.00	WGI
	Electrical/I&C		4				4		$ 1,239.84	HEE
	PBCHD Permit		12		4		2			
	Prepare design/construction schedule			2	4					
	Subtotal Task 1	**0**	**72**	**22**	**8**	**0**	**30**	**$ 7,366.08**	**$ 3,151.84**	
3	**60% Design**									
	Geotechnical (Soil Borings)		2		8		2		$ 5,000.00	Terracon
	Mechanical Design		64		32	120				
	Structural Design		4			4	2		$ 7,648.00	WGI
	Electrical/I&C Design		8			4	2		$ 12,272.12	HEE
	Equipment Selection/Coordination		24		8					
	Meet with staff and review		8	4						
	Address review comments		10	4						
	Subtotal Task 3	**0**	**120**	**8**	**48**	**128**	**6**	**$ 14,785.62**	**$ 24,920.12**	
4	**90% Design**									
	Mechanical Design		40	2	24	48				
	Structural Design		2			2	2		$ 3,824.00	WGI
	Electrical/I&C Design		8	4		2	2		$ 9,195.48	HEE
	Meet with staff and review		8	4						
	Address review comments		6	4						
	Subtotal Task 4	**0**	**64**	**14**	**24**	**52**	**4**	**$ 7,867.02**	**$ 13,019.48**	
5	**100% Design**									
	Mechanical Design		16		20	24				
	Structural Design		2			2	2		$ 1,912.00	WGI
	Electrical/I&C Design		2			2	2		$ 1,021.72	HEE
	Meet with staff and review		6	4						
	Address review comments		6	4						
	Subtotal Task 5	**0**	**32**	**8**	**20**	**28**	**4**	**$ 4,471.48**	**$ 2,933.72**	
6	**SDC**									
	Submittal Reviews		30		8		4			
	Site Visits (6 visits)		30	24	12					
	Structural						2		$ 3,824.00	WGI
	Electrical/I&C		8				4		$ 14,969.92	HEE
	Record Drawings		6		20	24				
	Meetings (6 visits)		30		12					
	Permit Closeout		12		4					
	Subtotal Task 6	**0**	**116**	**24**	**56**	**24**	**10**	**$ 12,497.10**	**$ 18,793.92**	
	Labor Hours	0	404	76	156	232	54			
	Labor Costs	$0.00	$26,356.96	$4,360.12	$6,703.32	$7,653.68	$1,913.22	$46,987.30		
	Labor Multiplier	3.00	3.00	3.00	3.00	3.00	3.00	3.00		
	Labor Total	$0.00	$79,070.88	$13,080.36	$20,109.96	$22,961.04	$5,739.66	**$140,961.90**		
	Subconsultant Total								$ 62,819.08	
	TOTAL ENGINEERING FEE								$ 203,780.98	

Subconsultants: HEE-Hillers Electric Engineering, GH - Ground Hound, Terricon, WGI-Wantman Group Inc,

Terracon Total	$5,000.00	
HEE Total	$38,699.08	SBE
WGI Total	$19,120.00	
Sub Total	$62,819.08	

ATTACHMENT - F

SBE Schedule 1 & Schedule 2

ATTACHMENT - F

SCHEDULE 1

LIST OF PROPOSED SBE-M/WBE PRIME/SUBCONTRACTORS

PROJECT NAME: Water Treatment Plant No. 11 - Odor Control Improvements PROJECT No: WUD 16-057

NAME OF PRIME BIDDER: Globaltech, Inc.
CONTACT PERSON: Bernard P. Gandy, President
BID OPENING DATE: N/A

ADDRESS: 6001 Broken Sound Parkway NW, Suite 610
PHONE NO.: 561-997-6433 FAX NO.: 561-997-5811
DEPARTMENT: N/A

PLEASE IDENTIFY ALL APPLICABLE CATEGORIES

Name, Address and Telephone Number of Minority Contractor	(Check one or both Categories) Minority Business	Small Business	Dollar Amount Black	Hispanic	Women	Caucasian	Other (Please Specify)
Globaltech, Inc., (561) 997-6433 6001 Broken Sound Parkway NW, Suite 610, Boca Raton, FL 33487	☐	☑	$ -	$ -	$ -	$ 1,348,653.16	$ -
Energy Efficient Electric, Inc. 1600 Mercer Avenue, Suite 6 West Palm Beach, FL 33401 (561) 655-7211	☐	☑	$ -	$ -	$ -	$ 105,205.00	$ -
Hillers Electrical Engineers, Inc. 23257 State Road 7, Suite 100 Boca Raon, 33428 (561) 451-9165	☐	☑	$ -	$ 48,594.84	$ -	$ -	$ -
Ground Hound Detection Services, In 2930 NW Commerce Park Dr. #1 Boynton Bch., FL 33426 (561) 737-9800	☐	☐	$ -	$ -	$ -	$ 1,800.00	$ -
	☐	☐	$ -	$ -	$ -	$ -	$ -
	☐	☐	$ -	$ -	$ -	$ -	$ -
PRIME CONTRACTOR TO COMPLETE:		TOTAL	$ -	$ 48,594.84	$ -	$ 1,455,658.16	$ -

BID PRICE: $ 1,536,373.00 Total Value of SBE Participation: $ 1,504,253.00

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 16-057 PROJECT NAME Water Treatment Plant No. 11 – Odor Control Improvements

TO: Globaltech, Inc.
(Name of Prime Bidder)

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

Small Business Enterprise XX Minority Business Enterprise _____

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

Date of Palm Beach County Certification: November 24, 2015

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	Engineering	1	N/A	$ 103,470.60
2	Services During Construction	1	N/A	$ 37,491.30
3	Mechanical Construction	1	N/A	$ 1,170,551.25
4	Bonds & Certifications	1	N/A	$ 37,140.01

at the following price:
$ 1,348,653.16 (one million three hundred forty-eight thousand six hundred fifty-three dollars and sixteen 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)

Troy L. Lyn, P.E. / Vice President
(Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

Date: May 19, 2016

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 16-057

PROJECT NAME Water Treatment Plant No 11 – Odor Control Improvements

TO: Globaltech, Inc.
(Name of Prime Bidder)

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

Small Business Enterprise XX Minority Business Enterprise _____

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

Date of Palm Beach County Certification: September 4, 2015

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 Subcontracting	1	N/A	$ 105,205.00

at the following price:

$ 105,205.00 (One hundred five thousand two hundred five 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 11, 2016

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 16-057

PROJECT NAME Water Treatment Plant No. 11 – Odor Control Improvements

TO: Globaltech, Inc.
(Name of Prime Bidder)

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

Small Business Enterprise XX Minority Business Enterprise _____

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

Date of Palm Beach County Certification: October 17, 2015

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	Engineering	1	N/A	$ 23,729.16
2	Services During Construction	1	N/A	$ 14,969.92
3	PLC Programming	1	N/A	$ 9,895.76

at the following price:
$48,594.84 (Forty-eight thousand five hundred ninety-four dollars and eighty-four 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 Engineering, Inc.
(Print Name of SBE-M/WBE Subcontractor)

By: _____
(Signature)

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

Date: May 11, 2016

ATTACHMENT - F

SCHEDULE 2

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

PROJECT NO. WUD 16-057 PROJECT NAME Water Treatment Plant No. 11 – Odor Control Improvements

TO: Globaltech, Inc.
(Name of Prime Bidder)

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

Small Business Enterprise XX Minority Business Enterprise _____

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

Date of Palm Beach County Certification: August 18, 2014

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	Utility Location Services	1	N/A	1,800.00

at the following price:

$ 1,800.00 (One thousand eight 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

Ground Hound Detection Services, Inc.
(Print Name of SBE-M/WBE Subcontractor)

By: _____
(Signature)

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

Date: May 11, 2016

ATTACHMENT - G

AUTHORIZATION STATUS REPORT
May 19, 2016

SUMMARY AND STATUS OF AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	Globaltech Project No.
	CONSULTANT SERVICE AUTHORIZATIONS					
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
			$0.00			
	Total CSAs		$0.00			
	WORK AUTHORIZATIONS					
WA-1	WTP 11 Degasifier Cleaning System	Approved	$1,051,189.81	4/21/15	WUD 14-073	
WA-1.1	WTP 11 Degasifier Cleaning System - Supplement 1	Approved	$135,714.04	2/09/16	WUD 14-073	
WA-2	WRWWTF Power Improvements - Phase 1	Approved	$598,998.02	9/01/15	WUD 14-050	
WA-2.1	WRWWTF - Alternative Power Improvements Phase 2 - Supplement 1	Pending	$0.00		WUD 14-050	
WA-3	Improvement to the Pahokee 0.5 MG Elevated Water Storage Tank	Approved	$504,301.41	9/01/15	WUD 15-073	
WA-3.1	Improvement to the Pahokee 0.5 MG Elevated Water Storage Tank - Supplement 1	Pending	$0.00		WUD 15-073	
WA - 4	WTP 9 - Permeat Flush	Pending	$0.00			
WA - 5	WTP 3 - Chemical Imrprovements	Pending	$0.00		WUD 16-054	
WA - 6	WTP 11 - Odor Control Improvements	Pending	$1,536,373.00		WUD 16-057	
	Total WAs		$3,826,576.28			
	Total CSAs + WAs		**$3,826,576.28**			

ATTACHMENT - H

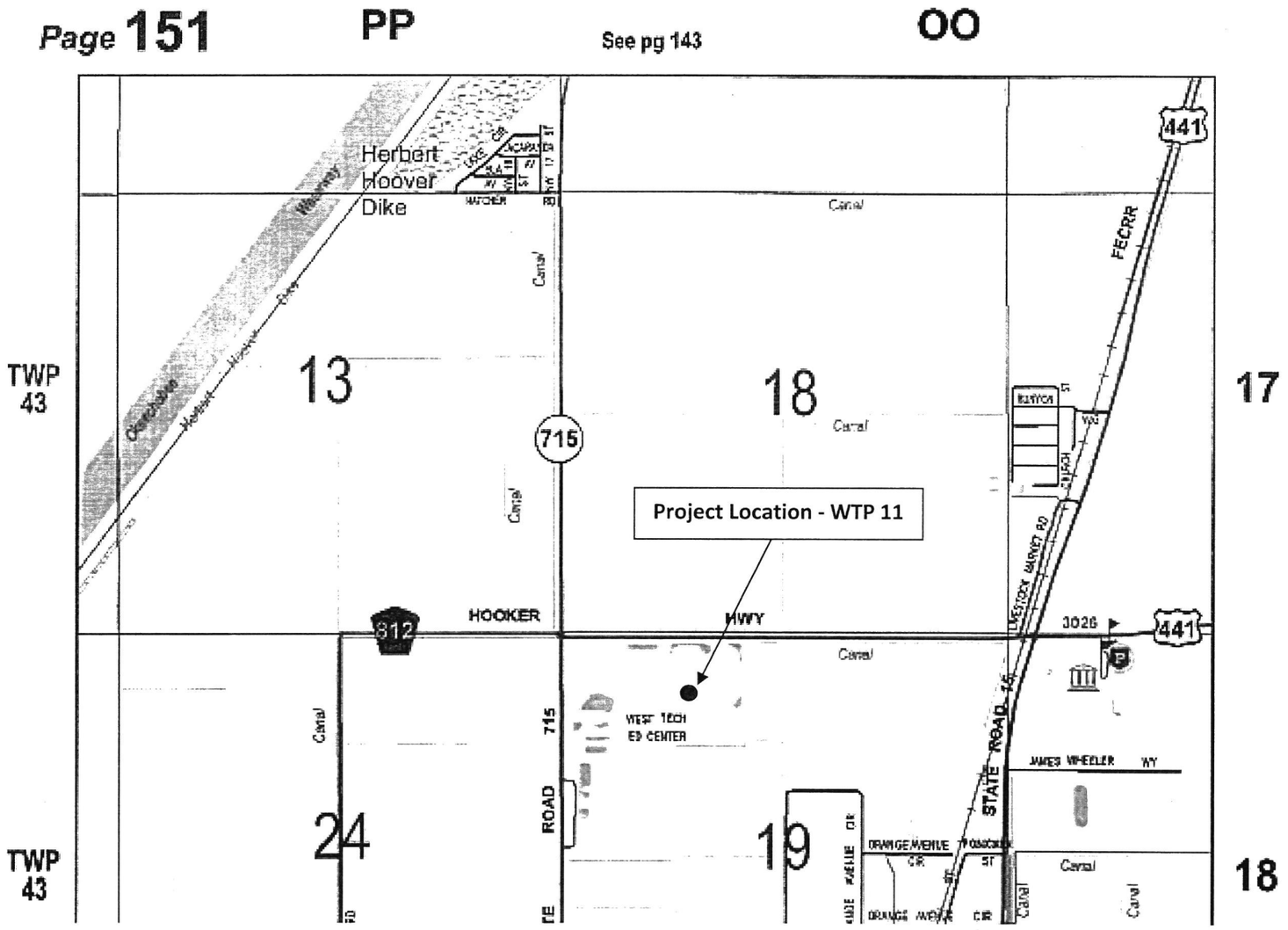
AUTHORIZATION STATUS REPORT
OPTIMIZATION AND IMPROVEMENTS DESIGN-BUILD CONTRACT

SUMMARY of SBE / M/WBE TRACKING

WUD 16-057 - WTP No. 11 Odor Control Improvements

	Total
Current Proposal	
Value of Consultant Service Authorization	$0.00
Value of Work Authorization	$1,536,373.00
Value of CSA and WA	$1,536,373.00
Value of SBE Minority Letter of Intent	$1,504,253.00
Actual Percentages	97.90%
Signed / Approved Authorizations	
Total Value of Approved Consultant Service Authorization	$0.00
Total Value of Approved Work Authorization	$2,290,203.28
Total Value of CSAs and WAs	$2,290,203.28
Total Value of SBE Signed Subcontracts	$2,216,608.28
Actual Percentages	96.78%
Signed Authorizations Plus Current Proposal	
Total Value of Approved CSAs Plus Current CSA Proposal	$0.00
Total Value of Approved WAs Plus Current WA Proposal	$3,826,576.28
Total Value of Approved and Proposed CSAs and WAs	$3,826,576.28
Total Value of SBE Subcontracts and Letters of Intent	$3,720,861.28
Actual Percentages	97.23%
GOAL	75%

Location Map

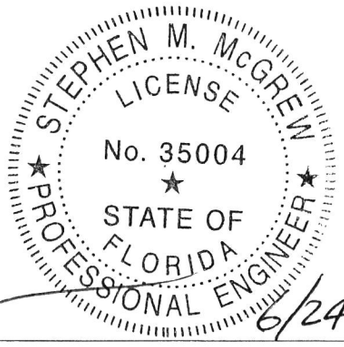


WUD 16-057: Water Treatment Plant No. 11 – Odor Control Improvements

ATTACHMENT - J

Design – Build Criteria Report

Design-Build Criteria
Water Treatment Plant No. 11
Odor Control Improvements
Project No. WUD 16-057



6/24/2016

Stephen M. McGrew, P.E., **Date**
Palm Beach County Water Utilities
8100 Forest Hill Blvd.
West Palm Beach, FL 33413

Design-Build Criteria
Water Treatment Plant No. 11
Odor Control Improvements
Project No. WUD 16-057

PART 1 GENERAL REQUIREMENTS

1.1 Overview Information:

1.1.1. Location: Water Treatment Plant No. 11 (WTP 11), 39700 Hooker Highway, Belle Glade, FL 33430-5934, PCN 00-37-43-19-00-000-3060.

1.1.2. Survey information concerning the site: Owner will provide recent survey from WTP 11 Master Record Drawings (WUD 14-102). Refer to Section 1.5 Site elevations, Lines, and Grades for Design-Build Entity requirements.

1.1.3. Interior space requirements: This project is related to equipment in existing buildings.

1.1.4. Material quality standards: Adhere to current version of Palm Beach County Water Utility Department (PBCWUD) Minimum Design Standards and Approved Material List.

1.1.5. Schematic layouts: none

1.1.6. Cost or budget estimates: $1,700,000.00.

1.1.7. Design and construction milestones:

1.1.7.1. 60% Design Completion 100 days after receipt of executed Work Authorization and notice to proceed with design. Procurement of large lead time equipment shall start after 60% design.

1.1.7.2. 100% Design Completion 160 days after receipt of executed Work Authorization and notice to proceed with design.

1.1.7.3. Substantial Construction Completion 365 Calendar Days after receipt of executed Work Authorization and notice to proceed with construction.

1.1.7.4. Final Construction Completion 60 Calendar Days after Substantial Construction Completion.

1.1.7.5. Liquidated damages for design and construction will apply as follows:

1) $1,000 per day past substantial completion date.
2) $500 per day past final completion date.

1.1.8. The following items must be complete (at a minimum) to achieve substantial completion:

1.1.8.1. Existing systems in place and operating as intended.
1.1.8.2. Commissioning and Testing of all new equipment completed.
1.1.8.3. O&M Manuals have been delivered to the Owner and equipment training is completed.
1.1.8.4. PLC programming work complete (PBC WUD will perform HMI SCADA screens on IFIX).
1.1.8.5. Release of applicable permits required to operate the facility.

1.1.9. Site development requirements: Not Applicable.

1.1.10. Provisions for utilities: Refer to Sections 1.3 Utilities and 1.7 Underground Utilities for Design-Build Entity requirements.

1.1.11. Storm water retention and disposal: Provide siltation barriers for all existing storm drainage catch basins impacted by construction activities.

1.1.12. Parking requirements: Only current Palm Beach County security badge holders can park inside the plant gate. Do not disrupt traffic flow for chemical deliveries. Project material deliveries shall be between 7:00 AM to 3:00 PM Monday through Friday excluding public holidays.

1.1.13. Staging Area: Staging areas will be south of the existing clearwell.

1.1.14. Coordination: Design-Build Entity will need to coordinate its work activities with the Owner and other construction contractors performing work activities at this facility.

1.1.15. A shutdown plan, developed in conjunction with the OWNER must be prepared by the Design-Build Entity for any planned plant or process shutdowns shall be submitted to the Owner for review and approval at least 30 days prior to commencing any of these work activities.

1.1.16. Reference Documents: The following documents shall be used to develop signed and sealed Construction Documents.

1.1.14.1. Palm Beach County Water Utility Department (PBCWUD) General Electrical Design Requirements

1.1.14.2. Palm Beach County Water Utility Department (PBCWUD) Minimum Design Standards

1.1.14.3. Palm Beach County Water Utility Department (PBCWUD) Approved Materials List

1.2 Summary of Work

1.2.1 The proposed work to be performed by the Design-Build Entity generally includes furnishing and installing materials, labor, equipment and expertise including all necessary tools, supervision, and services required to design, permit, purchase, construct, train, test, and startup the proposed work to: furnish and install a biological odor control scrubber system capable of treating hydrogen sulfide laden air from the existing WTP11 degasifier towers with an average removal efficiency of 99% and no less than 97% on an individual sample following the 30-day commissioning period to establish the biomass, furnish and install interconnecting odor control ductwork, dampeners and supports to connect the existing degasifier towers to the proposed biological odor scrubber system and the existing wet-chemical odor scrubber; and furnish and install reverse osmosis concentrate dilution line and drain lines to the existing plant process lift station, furnish and install water lines to the nutrient tank and odor scrubbers. The proposed installation shall not interfere with the footprint for the future clearwell. The Design-Build Criteria for the proposed work to be performed is further described below.

1.3 Design-Build Criteria

The following design criteria shall be used:

1.3.1. Biological Odor Control System

1.3.1.1. The Design-Build Entity shall furnish and install, commission, start-up and place into service a biological odor scrubber system, complete and operable. The biological odor scrubber system shall consist of two parallel biotrickling filter towers designed to accept equal flow from the existing WTP11 degasifiers. Each biotrickling filter tower shall have a capacity of 14,000 scfm (28,000 scfm system total) and be capable of continuously providing a treated exhaust air stream having a hydrogen sulfide (H_2S) of not greater than 0.1 ppm or 99% removal efficiency of H_2S, whichever is greater, assuming an average inlet H_2S concentration of 150 ppm and 200 ppm as a

maximum H_2S concentration. Air from the existing degasifiers will also contain carbon dioxide (CO_2). The biological odor control system shall employ equipment which utilizes a biological process for removal of H_2S. The system shall be capable of introducing either potable water or low pH recirculation water to spray nozzles over both beds contained within each biotrickling filter tower either one at a time or simultaneously. The biological odor scrubber system shall limit consumption of potable water for spray or make up water to an average rate of no more than 35 gallons per minute (gpm) per biotrickling filter tower and no more than 70 gpm for the biological odor system as a whole.

The equipment shall consist of a biological odor scrubber system, including, but not limited to:

a. Biotrickling filter towers two (2) duty. Biotrickling filter tower structures may be constructed of either reinforced concrete with an internal coating resistant to the service environment satisfying a design life of ten (10) years for the coating system or fiber-reinforced plastic (FRP).
b. The air flow through the existing two (2) degasification towers shall not be reduced by the addition of the biological odor control system components. Currently each existing degasifier receives approximately 14,000 scfm. Air flow measurements to each existing degasifier shall be taken prior to the start of any construction activities, to establish a baseline for air flow through each degasifier. Once the biological odor control system has been successfully commissioned and achieving the required H_2S treatment, a second set of air flow measurements through each existing degasifier will be performed and compared against the baseline measurements. If a reduction in air flow through each degasifier is observed through these measurements the Design-Build Entity shall make the necessary improvements to match the pre-construction baseline air flow to each degasifier. This remedial work will be at no additional cost to the Owner.
c. Footprint: The biological odor control system inclusive of ancillary equipment, interconnecting piping and base slab shall fit within a thirty (30) foot wide by thirty-five (35) foot long footprint. The biological odor control system shall be located to the south, adjacent to the existing wet-chemical scrubber foundation slab. Refer to FIGURE 1 in this Design Build criteria.
d. Media Irrigation system. A media irrigation system is required for each for biotrickling filter tower. The media irrigation system shall assist in controlling the overall moisture throughout the media bed. The media irrigation system shall consist of piping,

equipment and a liquid distribution system that maintains the required moisture level throughout the media beds in each biotrickling filter tower to a level that is sufficient to achieve the required biological destruction of H_2S in the air stream. The biological odor scrubber system shall limit consumption of potable water for the media irrigation system to an average rate of no more than 35 gallons per minute (gpm) per biotrickling filter tower and no more than 70 gpm for the biological odor system as a whole. The irrigation system shall utilize potable water for the media irrigation system. Potable water is available at the site at a pressure of approximately 65 psi. If recirculation pumps form part of the media irrigation system the pumps shall be furnished as follows; one (1) duty pump per biotrickling filter tower and one (1) common standby/swing pump for a total of three (3) recirculation pumps. If required, the recirculation pumps shall be provided with, but not limited to, the following: non-return valves, isolation valves, local pressure gauge on discharge, low pressure switch on the pump suction. The recirculation pumps shall be manifolded together to allow each pump to be isolated and while maintaining operation of the other pump(s).

e. Water control cabinet containing valves (of all types) strainers, flow meters, nutrient feed pumps and interconnecting piping.
f. Mist eliminators
g. Air control and isolation dampers
h. Flexible connectors
i. Valves, fittings, expansion joints
j. Liquid distribution piping for biotrickling filters
k. Appurtenant controls and instrumentation to allow proper operation and monitoring through the existing plant wide control system
l. Necessary foundations and supports for equipment and piping
m. Blowdown drain connection (buried) from the Biotrickling Filter Towers to the existing Plant Process Lift Station
n. Service water connections from the potable water system necessary for the proper operation of the Biological Odor Scrubbers and emergency eyewash and showers
o. Base slab with containment curb sized to retain 110% of the largest tank volume complete with appropriate coatings and drainage to the Plant Process Lift Station
p. Adequate power supply for proper operations
q. Control system integration with WTP11 plant wide control system allowing proper operations and monitoring of the biological odor scrubber system through WTP11's existing plant wide control system. The following signals, at a minimum will be integrated with WTP11's existing plant wide control system and

displayed on HMI screens: make up water flow rate, blowdown pH, recirculation pump status (run, fail, hand, auto), nutrient flow rate, nutrient pump status (run, fail, hand, auto) and any other process monitoring recommended by the biotrickling filter manufacturer

r. Instrumentation allowing proper operations and monitoring of the biological odor scrubber system including but not limited to the following parameters at each biotrickling filter: blowdown pH, makeup water flow rate totalized and instantaneous, nutrient flow rate totalized and instantaneous, recirculation pump discharge pressure, recirculation pump suction pressure and any other process monitoring recommended by the biotrickling filter manufacturer

s. Treated exhaust air sampling system which shall include tubing and vacuum pump located at ground level to facilitate obtaining grab samples of representative treated exhaust air. Also provide for mounting bracket for data logger installation

t. Provide one (1), shoe box LED lighting pole complete with 10' long 6" square Emco bronze aluminum pole located adjacent to recirculation pumps

u. Lightning protection shall be required for both biotrickling filter towers

v. Sliding solid covers over viewing hatches and exhaust stack to mitigate against the UV deterioration of biotrickling filter tower internals

w. Provide two (2) emergency eyewash and safety showers, one within the containment area and one outside the containment area. Water from eyewash and safety showers shall remain tepid at all times.

x. Facilities shall be provided to allow the loading and unloading of nutrient tank or for the safe transfer of nutrient into a permanently installed nutrient storage tank.

y. After completion of successful start-up and the initial performance test, the manufacturer shall provide a twelve (12) month service contract to the COUNTY to maintain optimum performance of the odor control system and additional training and knowledge transfer to County staff. The services provided under this contract shall include the following:

   A. All recommended routine maintenance of the odor control system, including adjustment of any system settings, valves, instrumentation set points, etc.

   B. The routine recalibration, repair, and any other required maintenance of all instrumentation equipment.

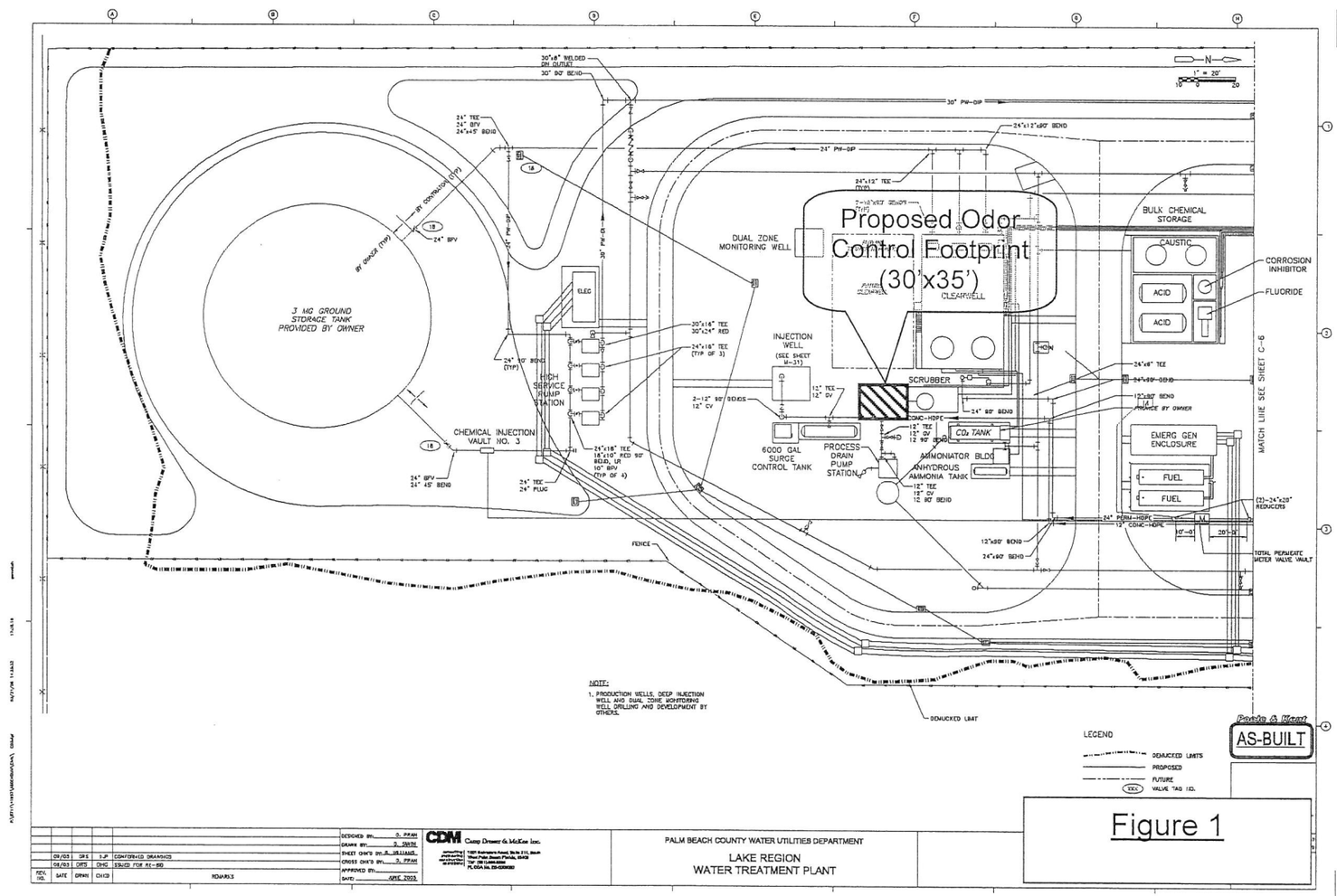
C. All of the above shall be completed on a monthly basis.

1.3.1.2. Quality Assurance: The products furnished by the Design-Build Entity for the biological odor control system shall from a single manufacturer who has been regularly engaged in the design of biological odor control equipment for a minimum of ten (10) years and have a minimum of ten (10) reference sites for biological odor control systems within the state of Florida. In addition, the manufacturer shall have a service company or representative knowledgeable in troubleshooting and proper operation of the system. The Service Company or representative shall be located in the state of Florida and have a minimum of five (5) years of experience working with this type of equipment. The service company or representative shall be certified to operate and maintain this type of system.

1.3.1.3. Reference Standards and Specifications: The materials employed in items fabricated of fiberglass reinforced plastic (FRP) shall be capable of withstanding maximum calculated stresses that may occur during fabrication, installation, and continuous operation, with allowance for an adequate safety factor. To confirm materials properties, a recent test result documenting the FRP properties shall be provided from the factory representative in accordance with the latest revision of ASTM standards.

ASTM C 581	Practice for Determining Chemical Resistance of Thermosetting Resins Used in Glass Fiber Reinforced Structures, Intended for Liquid Service
ASTM C 582	Contact-Molded Reinforced Thermosetting Plastic Laminates for Corrosion Resistant Equipment
ASTM D 638	Test Method for Tensile Properties of Plastics
ASTM D 679	Practice for Determination of Odor and Taste Thresholds by a Forced Choice Ascending Concentration Series Method of Limit
ASTM D 695	Test Method for Compressive Properties of Rigid Plastics\
ASTM D 746	Test Method for Brittleness Temperature of Plastics and Elastomers by Impact
ASTM D 790	Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D 883	Definitions of Terms Relating to Plastics
ASTM D 1505	Test Method for Density of Plastics by the Density Gradient Technique

ASTM D1693	Test Method for Environmental Stress Cracking of Ethylene Plastics
ASTM D 2310	Machine Made Reinforced Thermosetting Resin Pipe
ASTM D 2563	Recommended Practice for Classifying Visual Defects in Glass-Reinforced Plastic Laminate Parts
ASTM D 2583	Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impresser
ASTM D 2584	Test Method for Ignition Loss of Cured Reinforced Resins
ASTM D 2996	Filament Wound, Reinforced Thermosetting Polyester Chemical Resistant Tanks
ASTM D 3299	Filament-Wound Glass Fiber Reinforced Thermoset Resin Chemical-Resistant Tanks
ASTM D 4097	Contact Molded Fiber Reinforced Thermoset Chemical Resistant Tanks
NFPA 255	Method of Test for Surface Burning Characteristics of Building Material
NFPA 820	Fire Protection in Waste Water Treatment and Collection Systems
NFPA 704	Standard System for the Identification of the Hazards of Materials for Emergency Response
NBS PS 15-69	Voluntary Product Standard PS15-69 Custom Contact Molded Reinforced-Polyester Chemical-Resistant Process Equipment
SMACNA	Thermoset FRP Duct Construction Manual
IEEE	Institute of Electrical and Electronic Engineers
ICEA	Insulated Cable Electric Association
NEC	National Electric Code
NEMA	National Electrical Manufacturers Association
UL	Underwriters' Laboratory
OSHA	Occupational Safety and Health Administration


Proposed Odor Control Footprint (30'x35')
3 MG GROUND STORAGE TANK PROVIDED BY OWNER
HIGH SERVICE PUMP STATION
CHEMICAL INJECTION VAULT NO. 3
DUAL ZONE MONITORING WELL
INJECTION WELL
6000 GAL SURGE CONTROL TANK
PROCESS DRAIN PUMP STATION
SCRUBBER
CO2 TANK
AMMONIATOR BLDG
ANHYDROUS AMMONIA TANK
BULK CHEMICAL STORAGE
CAUSTIC
ACID
ACID
CORROSION INHIBITOR
FLUORIDE
EMERG GEN ENCLOSURE
FUEL
FUEL
FENCE
MATCH LINE SEE SHEET C-6
AS-BUILT
LEGEND
DEDUCED LIMITS
PROPOSED
FUTURE
VALVE TAG NO.
PALM BEACH COUNTY WATER UTILITIES DEPARTMENT
LAKE REGION
WATER TREATMENT PLANT
Figure 1

1.3.1.4. Wind Loading: System components shall be designed to meet or exceed the Florida Building Code (FBC) High Velocity Hurricane Zone (HVHZ) requirements supplemented by ASCE 7-10 wind loading requirements using a an ultimate wind speed of 186 mph and exposure C and seismic loads 2012 IBC/ASCE 71-0 Ss=0.049g SI=0.025G shall comply with Design Code ASTM D3299 and ASTM D4097.

1.3.1.5. The system shall be designed to meet NFPA 820 requirements.

1.3.1.6. Materials of Construction and Construction Details for Biotrickling Filter Towers:

a. The fiber glass resin shall be shall be a premium vinyl ester type such as Hetron FR922 by Ashland Chemicals, Derakane 510C by Dow Chemical, or approved equal. The resin shall be reinforced with an inner veil of a suitable synthetic organic fiber such as Nexus 111-00010 and an exterior continuous even-tensioned fiberglass filament wound reinforcement according to ASTM D-3299. The fiber glass resin shall be flame retardant and shall be coated with a low smoke fire retardant gel coat suitable for outdoor applications.
b. The scrubber tower shall be one piece construction with no cell joints. A final gel coat is required such that no glass fiber is exposed. Final gel coat shall be pigmented. The color of the gel coat shall be as selected by the Owner. Provide sample chips of colors for approval. The fiberglass shall contain an ultraviolet absorbent to protect the resin from ultraviolet degradation. The resin shall be suitable for continuous chemical scrubbing and exposure to saturated hydrogen sulfide gas, sulfuric acid and anticipated service conditions. Any fabrication by hand lay-up shall not be acceptable. Any system made of PVC, polypropylene, or any other material shall not be acceptable. A 10-to-1 safety factor shall be used for internal pressure loadings and a 5-to-1 safety factor shall be used for external and vacuum loadings. Contact molded components and accessories, including scrubber baffles, shall be fabricated in accordance with ASTM D 4097 and PS 15-69.
c. The minimum wall thickness of the tower shall be ¼-inch and the skirt thickness not less than ½-inch. Surfaces shall be smooth with no exposed fiber, sharp projections, foreign inclusions, air bubbles, pinholes, or delaminations. The structural section of the tower shall not include the internal veil and shall have an ultimate tensile strength of not less than 30,000 pounds per square inch. The scrubber tower shall be designed with no stiffeners.

d. Reinforcement: Glass fiber reinforcement used shall be commercial grade corrosion resistance borosilicate glass.
   A. All glass fiber reinforcement shall be Type C, chemical grade, Type E electrical grade.
   B. Surfacing veil shall be 10 mil Nexus 111-00010, or equal.
   C. Mat shall be Type "E" (electrical grade) glass, 1½ oz. per sq. ft with a nominal fiber length of 1.25 + 0.25 inches, with a silane finish and styrene soluble binder
   D. Continuous glass roving, used in chopper gun spray-up applications shall be type "E" grade with chrome or silane coupling agent.
   E. Woven roving used for reinforcement shall be 24 oz. per sq. yard type "E" glass and have a 5 × 4 plain weave.

e. The laminate shall consist of a single resin rich layer, with Nexus 111-00010 reinforcement followed by two 1½-ounce layers of random chopped strand glass, fully wetted out with resin. This interior surface shall yield a minimum 100-mil thick corrosion barrier. Filament wind over this to the required thickness.
   A. Minimum glass content – 35 percent
   B. Tensile strength – 17,000 psi
   C. Tensile modulus – 1,400,000 psi
   D. Flexural strength – 27,000 psi
   E. Flexural modulus – 1,000,000 psi

f. Tower components shall be preassembled at the point of fabrication. Preassembly will not require all joints to be factory assembled, but all joints shall be prepared for field fabrication and square within plus or minus 3/16 inch. Each matched piece shall then be numbered correspondingly. All FRP work shall be protected from atmospheric or otherwise induced conditions of adverse temperatures, moisture, wind, or blowing dust and sand and other contaminants that would adversely affect the laminate or joint construction. The protective means shall be provided during the construction and curing period. Other than those associated nozzles, couplings, and top heads, the towers shall be filament wound in one piece with no more than one joint. No tank bottom attachment joint or seam inside or outside is allowed within the first 7'-0" of the tank elevation.

g. Miscellaneous:

   A. Stainless Steel: Unless otherwise specified, all fasteners, and metal attachments, such as anchors, brackets etc. shall be 316SS
   B. Gaskets: Unless otherwise specified, all gaskets shall be EPDM

1.3.1.7. Media Support: Media support plates shall be VINYL ESTER FRP GRID type. Free area shall be a minimum of 95 percent of the cross-sectional area of the tower. Packing support plates and mid span supports shall be suitable to support weight of the packing specified plus entrained recirculation solution. Opening size shall not allow passage of packing media in any random orientation. Furnish MANUFACTURER instructions for placement and removal of the packing support in and out of the tower

1.3.1.8. Biological Media: The media material shall be resistant to the corrosive attack of acids. The media configuration shall promote thorough mixing and good contact between the gas and irrigation solution. Organic material, clay, or mineral media shall not be allowed. The media shall have a minimum design life of ten (10) years.

1.3.1.9. Liquid Distributor: A liquid distribution header shall be provided to uniformly distribute the scrubbing liquid onto the packing material/media bed. Internal spray piping shall have flanged connection for easy removal. The liquid spray distributor system shall be Schedule 80 PVC or FRP. Full cone, 150° non-clog spray nozzles shall be attached to the header. The spray nozzles shall have a minimum free passage diameter of 0.25 inch and shall be specifically designed to be clog resistant. Pressure loss across the nozzle at design capacity shall be no more than 10 psi. The spray nozzles shall be Teflon, polypropylene or PVC. The spray nozzles shall be installed in such a way that they may be easily removed for cleaning, repair, or replacement. The spray nozzles shall be tested at the site to ensure even distribution of irrigation water over the media. Connection to spray nozzle shall be in accordance with the manufacturer's published recommendations. Pipe outlets shall be flanged. Screwed outlets shall not be acceptable. The pipe outlet size for the atomizer spray nozzles shall be as recommended by the manufacturer. A 24-inch diameter access hatch shall be provided adjacent to each spray nozzle to facilitate its removal for cleaning. All interconnecting piping associated with the liquid distribution system shall be free draining to facilitate shutdown and maintenance activities.

1.3.1.10. Biotrickling Filter Tower Bottom Section: The bottom, sump or reservoir section of the biotrickling filter tower shall include air inlet connection, makeup water connection, recirculation pump suction connection, drain, overflow, and sump water level indicator fabricated of Schedule 80 clear PVC pipe. The scrubber shall have a minimum 2-inch diameter connection

piped to the recirculation pump with a tee and a 2" straight pipe pointing upwards for seeding. The scrubber shall have a minimum 4-inch diameter drain connection at the bottom of the vessel. The bottom of the scrubber vessel shall be slightly sloped to the drain line to allow complete draining of the sump via gravity.

1.3.1.11.

1.3.1.12. All metal hardware shall be 316 Stainless Steel

1.3.1.13. Flanged nozzles, double flanged gusseted nozzles, bottom drain nozzle, and threaded full couplings shall be provided as required. Flanged nozzles with 1/8-inch thick EPDM full-face gaskets of 60 durometer shall be provided by the MANUFACTURER. Press-molded flanges are not acceptable. Threaded full couplings shall be PVC.

1.3.1.14. Each bioscrubber sump shall be equipped with a grounding rod of a material that is suitable for the intended service. The grounding rod will provide an earth ground for the bioscrubber solution. The CONTRACTOR shall install a grounding rod adjacent to the bioscrubber for connection to the grounding rod.

1.3.1.15. The following accessories, at a minimum, shall be provided as part of a biotrickling filter tower vessel:

a. Mist Eliminator: A high efficiency, mist eliminator shall be provided at the discharge of the system. The mist eliminator shall remove 99% of all mist particles 40 microns and larger and 90% of all mist particles 10 microns and larger.

b. Mist Eliminator Wash System: A non-potable water line with nozzle and manually operated ball valve shall be provided to spray wash water over the mist eliminator

c. Piping: All recycle, non-potable water, drain, and blowdown piping shall be SCH 80 PVC

d. Pressure differential gauges one for each biotrickling filter tower.

e. Flexible connectors at the inlet of the biotrickling filter towers.

f. Anchor lugs

g. Lifting lugs

1.3.1.16. Identification Tag: Vessel shall be provided with a permanently attached, 16-gauge stainless steel equipment identification plate or label laminated into the final fiberglass coat. The label shall state the following in ¼-inch die-stamped lettering for the plate or 1-inch lettering for the laminated label:

a. Equipment identification number and vessel name "BIOLOGICAL SCRUBBER No.X."

b. Resin type, inner surface reinforcement, and resin manufacturer's name

c. Date of manufacture

d. Design conditions

e. Manufacturer's name and address

f. Design pressure (vacuum)

g. Operating Weight

1.3.1.17. Neoprene Pad: A ¼" thick, 60 durometer neoprene rubber sheet must be placed underneath the scrubber vessel as provided by manufacturer.

1.3.1.18. Flow Meter: Insertion style thermal mass flow meters shall be provided on the inlet ductwork to odor control scrubber system.

1.3.1.19. Water Control Cabinet: General: As a minimum, the water control cabinet shall contain valves (of all types), strainers, flow meters, nutrient feed pumps, and necessary interconnecting piping. The water control cabinet shall be NEMA 4X rated 316 SS, pedestal mounted, with all internal piping SCH 80 PVC. The cabinet shall contain the following components:

a. Pressure Gauges: 1) Nutrient pump discharge pressure gauges, 2) Make-up water pressure gauge, and 3) Recirculation pump discharge line pressure gauges.

b. Pressure Switches: 1) Potable water line pressure switch, 2) Recirculation pump discharge line pressure switch, and 3) Recirculation pump suction line pressure switch.

c. Rotameters: 1) Potable water line, 2) nutrient discharge lines

d. Nutrient Feed Pumps: A total of two nutrient feed pumps, one for each biotrickling filter, shall be installed. The pumps shall be of

corrosion-resistant construction, and diaphragm and seals shall be of a suitable material for the nutrient solution at a maximum temperature of 125 degrees F. Each pump shall be complete with pump base, solenoid; diaphragm; a 3-function valve that provides back-pressure relief, prevents siphoning and allows manual removal of air from the pumphead; and allows draining of the discharging line. Pumps shall be sized and selected by the manufacturer to meet performance requirements. The pumps shall be solenoid metering pump, diaphragm type, with an adjustable stroke control range of 10:1 with accuracy of 5% of the full-scale range.

1.3.1.20. Nutrient Storage Tank: The nutrient solution shall be stored in a permanently installed tank suitable for direct sunlight. The nutrient storage tank shall have a minimum capacity providing at least a thirty day supply of nutrients based on design load conditions. The nutrient storage tank shall have 2-inch overflow line, drain line with 2-inch ball valve, outlet, inlet, pressurized water connection and vent. The piping connections shall be flanged. An overflow drain shall be incorporated to allow the tank to prevent overfilling. A 2-inch non-potable water line with a manually operated ball valve shall be provided to facilitate tank filling. The non-potable water line shall feed into the top of the nutrient tank with an air gap for backflow prevention. A ¼" thick, 60 durometer neoprene rubber sheet must be placed underneath the nutrient tank as provided by manufacturer.

1.3.1.21. Recirculation System: A permanent recirculation system shall be provided (if necessary) complete with recirculation pumps, valves, piping, instrumentation, supports and all necessary appurtenances for a complete and operable recirculation system. A minimum of one (1) duty and one (1) standby recirculation pump shall be provided for each biotrickling filter tower. The recirculation system shall be capable of operating in complete recycle mode from the sump in the base of the biotrickling filter scrubber. The recirculation pumps shall be capable of running continuously, or on a timed irrigation mode. The recirculation system shall be controlled by the WTP11 control system through the HMI. Pumps shall be centrifugal, non-metallic magnetic drive, seal-less, provided to deliver low pH recirculation water to the scrubber vessel. The recirculation pump shall utilize an encapsulated inner rotating assembly including a set of inner magnets within a containment shell or rear casing. Inner magnets shall be magnetically coupled or driven by outer magnet ring or drive magnet coupled to a conventional drive motor. Non-contact bearing/magnet system

shall include an oversized drive and driven magnet set positioned such that reverse axial thrusting is reduced during adverse operating conditions minimizing contact of reverse axial thrust collars. Front casings shall be single piece, injection molded designs with male NPT suction and discharge connections. Impeller shall be splined and/or pinned to inner magnet assembly allowing for individual replacement of impeller, inner magnet or driven magnet assembly. Recirculation pumps shall be suitable for 24 hours per day operation under the necessary operating conditions to provide for the optimum performance of biotrickling scrubber filter. Recirculation pumps shall each discharge into a separate header through a check valve. The header shall contain a strainer, a blowdown connection (a tee with a ball valve for draining the line) and pipes with valves to each scrubber vessel spray nozzles. All recirculation piping shall be Schedule 80 PVC. PVC piping exposed to sunlight shall be painted, as required.

1.3.1.22. Odor Ductwork: Ductwork shall be inclusive of necessary supports and foundations are required to connect the existing odor control system to the proposed biotrickling filters shall be provided by the Design-Build Entity. The ductwork shall allow foul air to be directed from the existing degasifiers to the proposed biotrickling odor towers or the existing wet chemical scrubber. Ductwork and appurtenances shall be from the same manufacturer. Duckwork shall be designed and braced for wind load and seismic loads stated in 1.3.1.4. Bracing, straps and anchors shall be 316 SS. Testing and balancing of the odor control system foul air ductwork shall be conducted by the Design-Build Entity. After balancing throttling valves shall be marked and labeled to record their position. Ductwork shall be designed, fabricated and installed to carry warm, moisture-laden air containing carbon dioxide and hydrogen sulfide associated with off-gas from existing degasifiers with the exterior being exposed to sunlight. Ductwork shall be designed in accordance with ASHRAE Handbook, the SMACNA Manual and the International Mechanical Code. For ductwork, transitions and expansion joints the following should be used: 1) internal positive pressure = 20 inches wc, 2) Internal vacuum pressure = 20 inches wc, and 3) Temperature range = 0 – 180 degrees Fahrenheit. For Dampeners the following should be used: 1) Differential pressure = 10 inches wc, and 2) Temperature range = 0 – 180 degrees Fahrenheit. Round ductwork shall have a safety factor of 10-to-1 for pressure and 4-to-1 for vacuum service with a minimum wall thickness of 0.139 inches. The maximum allowable deflection for any size ductwork shall be

less than 0.5 inches between supports. After installation the maximum sag of horizontal round ductwork shall not exceed 2 percent of the duct diameter. The ductwork shall have a corrosion resistant layer, an intermediate structural layer, an exterior corrosion layer, and a UV-resistant coating where installed outdoors. Cast pipe with no reinforced internal corrosion barrier or press molded fittings will not be accepted. The interior corrosion barrier shall consist of one layer of "C" veil and one layer of synthetic veil, such as Burlington Industries Type 1012 Nexus, or equal with an overall thickness of 0.020 inches and shall contain a minimum of 90 percent resin. The balance of the corrosion resistant layer shall consist of 2 layers of 1½-ounce per square foot, Type E glass, with a ratio of approximately 75 percent resin to 25 percent glass. The overall thickness, including the corrosion barrier, shall be a minimum of 0.090 inches. The intermediate structural layer shall use Type E glass with contact-molded structural layer to include layers of chopped strand mat and woven roving. A layer of chopped strand mat or spray chop shall precede the filament wound structural layer. The structural layer shall consist of two complete cross-hatched layers of continuous filaments applied in a helix angle of 55 to 65 degrees for aboveground ductwork. The chopped mat shall consist of Type E glass, minimum 1.5-ounce per square foot mats and 24-ounce per square foot with 5-by-4 weave. The lamination sequence shall conform to Tables 5-1 and 5-2 in SMACNA. Ducts with a wall thickness less than 0.182 inches shall use Type I laminates and ducts with a wall thickness greater than 0.182 inches shall use Type II laminates. The exterior layer shall consist of a single layer of "A" or "C" veil followed by a UV-resistant white resin-based gel paint with UV inhibitors applied to the exterior of the ductwork.

1.3.1.23. Ductwork fittings shall be provided with a minimum of two mitered joints (3-piece) for elbows greater than 45 degrees and shall be compatible with the ductwork, shall be as chemically resistant as the ductwork and comply with SMACNA.

1.3.1.24. Ductwork flanges shall comply with SMACNA and have 316SS nuts, bolts and washers. Flange gaskets shall be full-face neoprene/EPDM 3/16-inch or greater thickness and have a hardness of Durometer 50 to 70 when tested according to ASTM D 2240. Provide butt and strap joints in accordance with NBS PS 15-69.

1.3.1.25. Ductwork dampeners shall be for isolation, and be butterfly type, with a maximum leakage of 1.0 percent of flow at 1 inch wc.

Dampeners shall bear the AMCO seal and be manufactured from the same material as the ductwork. Dampeners shall be flanged and be supplied with a 316SS screen. Dampeners will be provided with manual actuators and be able to be actuated from ground level.

1.3.1.26. Safety signage shall be as in accordance with applicable guidelines, codes and standards having jurisdiction.

1.3.1.27. Equipment shall be mounted to a specifically designed equipment pad. If an equipment pad is not feasible a 1-inch layer of grout shall be provided under the equipment baseplate. Mounting equipment baseplates directly to the concrete base slab is not permitted.

1.3.1.28. Electrical/Instrumentation components mounted outdoors shall be housed in a NEMA 4X 316 stainless steel enclosure with sunshield, except where components are located within the NFPA defined classified area in which case components shall be NEMA 7. Equipment and components installed in the electrical room shall be housed in NEMA 12 enclosures. Electrical equipment and gear shall be provided in accordance with the NEC latest edition and County pre-approved materials list and shall bear a UL 913 label. The Electrical/Instrumentation panel shall include at a minimum the following:

a. 460/3/60vac supply for recirculation pumps (if required), complete with lockable door and interlocked non-fused disconnect
b. Power step-down transformer(s) as required
c. Hand/Off/Auto switch for recirculation pumps (if required)
d. Allen Bradley 800E door mounted operators as follows: 1) System "Start" push button, 2) System "Stop" push button, 3) Recirculation pump Suction "Low Pressure" alarm pilot light
e. Terminals for field connections
f. Surge suppressors (TVSS)
g. One (1) 120 volt GFCI single phase electrical outlet rated at 20 amperes, 125 volts NEMA 5-20R. Outlet to have a vapor–tight and weatherproof housing/cover.
h. Blowdown pH probe transmitters one (1) for each biotrickling filter tower
i. Make up water flow meter indicator/transmitter
j. Nutrient flow meter indicator/transmitter

1.3.1.29. The County shall be given access to the biotrickling filter manufacturer's manufacturing facilities to observe the manufacturing process.

1.3.1.30. A representative from the biotrickling filter manufacturer shall be present during the media installation process.

1.3.1.31. The Design-Build Entity shall properly take delivery and store system components in accordance with the manufacturer's instructions.

1.3.1.32. A Certificate of Proper Installation (COPI) from the system manufacturer will be provided to the County, by the Design-Build Entity, a minimum of fourteen (14) calendar days prior to any start-up and commissioning activities. The COPI will certify that the system manufacturer has inspected the installation of the system components individually and as a whole and that the system has been installed in accordance with the design documents and the manufacturer's recommendations.

1.3.1.33. Startup, Testing, Commissioning and Training: Design-Build Entity shall provide on-site support services from manufacturer's representative for a minimum of 6 days (assumed 8-hour work days) over three (3) separate occurrences. The Design-Build Entity shall start-up the biotrickling filter towers in accordance with the manufacturer's written instructions. During start-up the manufacturer's representative will on site to perform start-up activities and make necessary system adjustments. Effort shall be made by the Design-Build entity to limit the fugitive H_2S emissions during start-up of the biological odor control system. A start-up plan shall be prepared and submitted to the County for review and acceptance a minimum of fourteen (14) days prior to system start-up. Two (2) performance tests shall be conducted by the Design-Build Entity and the manufacturer. A performance test shall be performed following start-up and prior to final acceptance. In addition, the system shall be performance tested within one (1) year of final acceptance at a time specified by the County. The biotrickling filter manufacturer shall supply all personnel, consumables and equipment (such as instrumentation, recording devices, flow meters, hardware, software, chemicals, and fuel) required to conduct the performance tests. The Design-Build Entity shall provide a written health and safety plan to the County one week prior to testing. The performance tests shall consist of a twenty-four (24) hour test in which the following parameters are monitored continuously or at 2-hour intervals if continuous monitoring is not possible, to determine compliance of the system with the performance requirements set forth in this Design Build criteria document:

a. Inlet air stream H_2S gas concentration into each biotrickling filter tower,
b. Outlet air stream H_2S gas concentration into each biotrickling filter tower,
c. pH of each biotrickling filter tower blowdown.

During the performance test the manufacturer shall be allowed to adjust the system for up to an hour before testing is started. After the initial adjustment period the system shall operate in automatic mode without any intervention. The performance test will be deemed successful if the exhaust H_2S concentration meets the performance requirements listed within this Design Build criteria document. If the test con not be completed due to equipment failure(s), the system manufacturer shall correct the failure(s) and re-start the performance test. If the system fails to meet the performance requirements listed in this Design Build criteria, the system shall be altered, modified or necessary corrective action taken by the manufacturer and/or the Design-Build Entity at no additional expense to the County until such time as the system meets the performance requirements set forth in this Design Build criteria. If a successful performance test is not accomplished within thirty (30) calendar days from the start of the first failed performance test, the system shall be judged to be in noncompliance and subject to full replacement. Costs associated with replacement shall be solely born by the Design-Build Entity and the system manufacturer. A report summarizing the data and results of each performance test (successful or failed) shall be submitted to the County prior to starting a subsequent performance test.

1.3.1.34. Prior to substantial completion the following shall have been completed:
a. Transfer warranty and Operation & Maintenance Manuals to the County
b. Conduct training

1.3.1.35. Existing Chemical Scrubber Modifications: Perform the following modifications:
a. Install chamfered 90 degree bend complete with insect mesh on outlet of the existing chemical scrubber, with the mesh material uitable for the service environement.

1.3.1.36. Existing Ductwork Modifications: Perform the following modifications:
a. Install a pressure indicator transmitter on the existing blower header ductwork to measure air pressure. The function of this pressure sensor is twofold; (1) measure and report header pressure to the HMI and (2) if the high pressure set point is

detected an alarm will be indicated at the HMI and the plant wide control system will automatically open the existing electrically actuated bypass baffles to avoiding over pressurization of the .

1.4 Owner Furnished Equipment

1.4.1. None

1.5 Permits and Fees

It shall be the Design-Build Entity's responsibility to secure all permits required to complete the work under this contract. The Design-Build Entity shall be responsible for all inspections and requirements to close-out the completed permits. The Owner shall pay all permit fees. The Design-Build Entity shall be responsible for all Business tax fees for work within Palm Beach County or Municipalities. The Design-Build Entity shall notify the County of the permit fees and allow three (3) weeks for a check for the permit fee(s) to be issued to the Design-Build Entity.

1.6 Utility Services

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

1.7 Tests

The Design-Build Entity shall pay for all required tests. Labor, equipment and consumables for tests and testing shall be the responsibility of the Design-Build Entity. Water required for pressure/leakage tests shall be furnished by the Owner.

1.8 Site elevations, Lines, and Grades

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

in Florida State plane coordinates are in conformance with the contract documents and will reference geodetic datum NAD83. All elevations shall refer to North American Vertical Datum of 1988 (NAVD88) and include conversion from National Geodetic Vertical Datum of 1929 (NGVD29) as required.

1.9 Work Area

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

The Design-Build Entity shall protect their work. When required to complete the work, the Design-Build Entity shall maintain of suitable lighting to maintain a safe working environment. Work performed outside of the established working hours requires the permission from the owner. The Design-Build Entity shall also comply with all laws or ordinances covering the protection of such work and the safety measures to be employed therein. The Design-Build Entity shall carry out his work so as not to deny access to private property. All utility access manholes, valves, and fire hydrants shall be kept accessible at all times. No trenches or holes near walkways, in roadways or road shoulders are to be left open during night hours without the permission of the Owner, and proper protection. The Design-Build Entity is responsible for the security of their work, equipment, and material at all times.

1.10 Underground Utilities

All water pipes, storm drains, force mains, gas or other pipe, telephone or power cables or conduits, and all other obstructions, whether or not shown, shall be temporarily removed from or supported across pipeline excavations. Before disconnecting any pipes or cables, the Design-Build Entity shall obtain permission from the Owner, or shall make suitable arrangements for their disconnection by the Owner. The Design-Build Entity shall be responsible for any damage to any such pipes, conduits or cables, and shall restore them to service promptly as soon as the work has progressed past the point involved. Approximate locations of known water, sanitary, drainage, power, and telephone installations along route of new pipelines or in vicinity of the work are shown on as-built drawings, but must be verified in the field by the Design-Build Entity. The Design-Build Entity shall uncover these pipes, ducts, cables, and other buried infrastructure, carefully, by hand, to verify location and depth of cover. Any discrepancies or differences found shall be brought to the attention of the Owner in order that necessary changes may be made. Where fences, walls, or other

man made obstructions exist illegally in the public right-of-way, the Owner will have them removed upon adequate prior notice by the Design-Build Entity.

The Design-Build Entity shall notify "SUNSHINE STATE" at 1 (800)-432 4770 at least forty-eight (48) hours prior to performing any excavating activities. Evidence of such notice shall be furnished to the Owner prior to excavating. Design-Build Entity is responsible for all utility locates within the project site and will provide an independent locate service for all PBC WUD buried pipelines and electrical.

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

1.11 Maintenance of Operations

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

1.12 Plant Shutdowns

Owner shall approve all shutdowns. If, in the opinion of Owner, a shutdown is not required in order for the Design-Build Entity to perform the proposed work, the Design-Build Entity shall use alternative methods to accomplish the work. All shutdowns shall be coordinated with and scheduled at times suitable to Owner. Owner shall be provided a minimum of 14 calendar days notice of Design-Build Entity's need for any system or partial system shutdown. Additional notice may be required for certain shutdowns.

A shutdown work plan shall be prepared by the Design-Build Entity and submitted to the Owner for review 7 calendar days prior to the start of the shutdown event. The shutdown work plan shall include descriptions of the following at a minimum:

- Facilities to be shutdown,
- Duration of shutdown,
- Work to be conducted during shutdown (work sequence and activity descriptions),
- Special requirements and constraints (night work, temporary works, confined space etc.),

- Startup sequencing for facilities that have been shutdown.

1.13 Project Coordination

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

Design-Build Entity shall cooperate with and coordinate his work with the work of any other contractor, utility service company, or Owner's employees performing additional work related to the project at the site. Design-Build Entity shall not be responsible for damage done by other contractors on site who are not under the Design-Build Entity's jurisdiction except where such loss or damage is caused by the negligence of Design-Build Entity. Design-Build Entity shall also coordinate his work with the work of others to assure compliance with schedules.

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

1.14 Project CPM Schedule

Design-Build Entity must prepare and maintain a project schedule using Primavera P6 software (P6) and the Critical Path Method (CPM) of scheduling. The following outlines the minimum schedule requirements. The schedule must be updated each month at a minimum and will be reviewed by the Owner to determine design and construction progress.

1.14.1 Design Schedules

The Design-Build Entity shall develop a detailed design schedule reflecting work elements at a package level by discipline. An estimate of the construction duration and staging be developed and linkages to other work packages will be clearly indicated. It will be updated at least monthly and at a minimum, milestones shall be depicted for:

- Notice-to-Proceed
- 60 percent submittal
- 90 percent submittal
- Issue for Construction submittal
- Each required permitting submittal

1.14.2 Construction Schedules

The basics of the construction schedule submittals are outlined below.

Baseline Requirement: The Construction Schedule shall use P6 and follow the Critical Path Method of scheduling, and shall reflect how the Design-Build Entity will build the project. The schedule shall show the duration of each activity so that the Project Manager can accurately monitor the progress of the work. Schedule activities must be consistent with work items listed in the Schedule of Values and be cost-loaded such that schedule updates provide an independent check on the amounts shown in the Design-Build Entity's monthly progress payment request.

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

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

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

- The Plan of Operation for the initial 30-day period of the contract
- An initial draft of the P6 Baseline CPM schedule

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

- Production rates for reasonableness
- Appropriate level of detail
- Satisfaction of contractual constraints

- Accurately reflecting submittals, procurements, training and start-up tasks
- Conforms with approved schedule of values
- Complies with industry scheduling practices
- Schedule risk and critical path discussion

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

Construction Schedule: The P6 Baseline schedule will be included in all subsequent schedule updates and will be the basis for measuring progress and performance. Schedule updates and other reporting requirements will be detailed in the schedule specifications. The construction schedule will provide information on major construction milestones and allow for quantity tracking. Related interface activities pertinent to facilities start-up and commissioning will also be shown. The associated Schedule of Values will delineate information related to quantity unit rate reporting, labor wage rates, bulk materials pricing and other costing/pricing information as requested. Specific schedules (e.g., 90 days to Completion, 4-week look-ahead) shall be provided.

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

The Contractor's Progress Schedule, at a minimum, shall identify significant interim milestones that relate to the Project's Summary Schedule, in addition to:

- Notice-to-Proceed
- Mobilization
- Substantial Completion
- Commissioning Startup and Performance Testing
- Final Completion

1.14.3 Schedule Updates

On a regular basis, and not less than monthly, summary schedules should be updated to track and monitor progress of activities, completion of contract deliverables, interim milestone achievement, start and completion

dates, and other related aspects of scheduling. Additionally, any approved changes to the scope of work will be reflected in the schedules.

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

PART 2 ACCEPTANCE TEST REQUIREMENTS

The Design-Build Entity shall be responsible for coordinating and completing all commissioning activities including but not limited to the overall system startup and testing. The Design-Build Entity shall coordinate with the Owner and is responsible for providing all labor, equipment, and materials for conducting commissioning activities including but not limited to individual systems startup and testing.

2.1 Starting and Placing Equipment in Operation

Design-Build Entity shall initially start-up and place all installed equipment into successful operation according to manufacturer's written instructions and as instructed by manufacturer's field representative. Design-Build Entity shall provide all material, labor, tools, equipment, chemicals, lubricants, and expendables required to complete start-up. No system or subsystem shall be started up for continuous operation unless all components of that system or subsystem, including instrumentation, have been tested and proven to be operable as required for proposed work.

General system startup activities are anticipated to include but not be limited to cleaning; removing temporary protective coatings; flushing and replacing greases and lubricants as required by manufacturers; 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 equipment; performing any adjustments; providing chemicals and lubricants and all other required operating fluids; providing fuel, electricity, water, filters; and, other expendables required for startup of equipment.

Owner shall provide sufficient personnel to assist Design-Build Entity in the start-up, but the prime responsibility for proper mechanical operation shall belong to Design-Build Entity. Manufacturer's representatives shall be present during initial start-up and operation. Owner shall assume responsibility for operation of the equipment upon completion of start-up and placing equipment in operation.

2.2 Minimum Start-Up Requirements

2.2.1. The Design-Build Entity shall perform the following engine generator pre-start up checklist in accordance with manufacturer guidelines: Generator set equipment installation/mounting, engine oil level, engine coolant system level, engine radiator shroud installation, day tank fuel level (if applicable), fuel system installation, mechanical and electrical connections, battery installation, battery voltage, battery charger operations and installation, engine sensors and controls, all equipment interface interconnects, interface wiring with new main switchboard, remote annunciation/communication interface wiring, exhaust system installation and connections and all other fluids. Checklist is not limited to items listed above, others shall be performed as required by manufacturer.

2.2.2. The Design-Build Entity shall check each electrical control circuit to assure that operation complies with regulations and requirements of proposed work and to provide desired performance.

2.2.3. The Design-Build Entity shall inspect for cleanliness, and clean and remove all foreign materials, verify alignment, replace defective bearings and those, which run rough or noisy, and grease as necessary in accordance with manufacturer's recommendations.

2.2.4. After system has been placed in operation the Design-Build Entity shall clean strainers, drives, pockets, orifices, valve seats and headers in fluid system to assure freedom from foreign materials. He shall remove rust, scale and foreign materials from equipment and renew defaced surfaces. All visible leakage shall be repaired.

2.2.5. The Design-Build Entity shall vent gasses trapped in any part of systems and verify that liquids are drained from all parts of gas or air systems.

2.2.6. The Design-Build Entity shall adjust tension in V-belt drives, and adjust varipitch sheaves and drives for proper equipment speed, adjust drives for alignment of sheaves and V-belts, and clean and remove foreign materials before starting operation.

2.2.7. The Design-Build Entity shall check each motor for comparison to amperage nameplate value and correct conditions which produce excessive current flow and exist due to equipment malfunction.

2.2.8. The Design-Build Entity shall check glands and seals for cleanliness and adjustment before running pump; inspect shaft sleeves for scoring; inspect mechanical faces, chambers, and seal rings, and replace if defective; and verify that piping system is free of dirt and scale before circulating liquid through the pump.

2.2.9. The Design-Build Entity shall inspect both hand and automatic control valves, clean bonnets and stems; tighten packing glands to assure no leakage, but permit valve stems to operate without galling; replace packing on any valve that continues to leak; remove and repair bonnets that leak; and coat packing gland threads and valve stems with a surface preparation of "Moly-Cote" or "Fel-Pro" after cleaning. The Design-Build Entity shall verify that control valve seats are free from foreign material and are properly positioned for intended service.

2.2.10. System start-up and operational testing procedures shall not be limited to those specified herein. Others shall be performed as required to prove that the system functions and performs as described and required by this Design-Build Criteria Package.

2.3. Equipment Startup and Performance Testing

2.3.1. The Design-Build Entity shall be responsible for performance testing during startup of all mechanical, electrical equipment and systems.

2.3.2. Provide a testing plan setting forth the sequence in which all testing work required for the proposed upgrades will be implemented.

2.3.3. Documentation of the results of all equipment and system tests shall be submitted to the Owner. Provide calibration tags for all Design-Build Entity furnished and installed equipment certifying the date of calibration.

2.3.4. The Design-Build Entity shall also be responsible for providing a Certificate Of Proper Installation (COPI) for equipment from the applicable equipment supplier/manufacturer. COPIs will be provided to the Owner or the Owner's Representative prior to commencing any commissioning, startup and testing activities. COPIs will be included in the O&M Manual.

2.4. Instruction of Operations and Maintenance Personnel

Training shall be provided prior to turning over the operation of the new generator, main switchboard and A/C units to the Owner. 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 the Owner.

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

Training of Owner's personnel shall commence only after acceptable preliminary operation and maintenance data has been provided and, equipment has been started and placed into operation, equipment and system startup and performance testing has been completed. The Design-Build Entity shall provide written documentation and checklists outlining important training items, and provide spreadsheets needed to document new processes for input by operators.

PART 3 TECHNICAL REQUIREMENTS

3.1. Plant Site / Civil Requirements

The Design-Build Entity shall be responsible for becoming completely familiar with the site conditions in connection with developing the final site plan including all site investigations. If analysis of subsurface conditions, geotechnical conditions, and soil borings are required to complete the work, it shall be the responsibility of the Design-Build Entity to perform this work.

3.2 Demolitions and Equipment Removal (See Summary of Work)

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

Design-Build Entity shall carry out operations so as to avoid interference with Owner's operations and work in the existing facilities. Design-Build Entity shall perform all demolition and removal work so as not to interfere with the use and safe passage to and from adjacent structures and shall prevent damage or injury to structures, occupants, and adjacent features, which might result from falling

debris or other causes. Design-Build Entity shall erect and maintain barriers, lights, sidewalk sheds, and other necessary protective devices. The Design-Build Entity is responsible for repairing damage to the Owner's property or facilities, caused by the Design-Build Entity's activities.

Design-Build Entity shall not bring explosives on site or use explosives without written consent of authorities having jurisdiction. Design-Build Entity shall use water sprinkling, temporary enclosures, and other suitable methods for dust control within the lowest practical level in compliance with governing regulations.

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

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

3.3 Trenching, Excavation and Backfill

The Design Build Entity will adhere to all OSHA and PBC regulations when performing all excavating activities, including but not limited to cabling system and generator pad. Written documentation shall be provided indicating compliance with Florida Trench Safety Act.

All remaining spoil piles shall be removed from site.

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

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

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

Design-Build Entity shall perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction. Design-Build Entity shall obtain all necessary permits including but not limited to work in roads and rights of way. Design-Build Entity shall also obtain permits as required by local, state and federal agencies for discharging water from excavations.

The use of explosives will not be permitted.

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

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

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

respective services and facilities in operation. Design-Build Entity shall repair damaged utilities to the satisfaction of Owner.

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

3.4 Cast-In-Place Concrete

Where required for wall penetrations, pipe supports, and other repair or replacements required to complete the work, the Design-Build Entity shall be responsible for providing concrete consisting of portland cement, fine and coarse aggregate, water, and approved admixtures; then combined, mixed, transported, placed, finished and cured to accommodate the proposed work. All admixtures, curing compounds, and related products 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 and the nuts shall be coated to prevent galling. All anchor bolts shall be 316 stainless steel. Stanchions, pipe supports, equipment bases, braces, unistrut and straps shall be 316 stainless steel or aluminum. Dissimilar metal protection shall be shall be provided through use of appropriate dielectric materials where required.

3.6 Painting and Coating

Design-Build Entity shall provide all labor, materials, tools, equipment, and incidentals as required to furnish and apply coating systems for surface preparation and coating of all new and existing interior and exterior surfaces identified as part of the work. Manufacturer's recommendations including surface preparation, cure times, application thickness, application method, applicability of selected paintings and coatings for their intended use shall be strictly followed. Items to be coated shall include but not be limited to walls, floors, piping, equipment, supports and other pertinent accessory items or area damaged by construction activity.

Owner's approval shall be required for all components of the surface preparation, selection of colors, and paint system application before the 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-Build Entity is responsible for the final sizing and selection of all equipment, pipe, supports, and associated materials. The Design-Build Entity shall conform to the current version of the Palm Beach County Water Utilities Minimum Design Standards and Approved Materials List.

At a minimum, the following information shall be submitted to the Owner for review and approval prior to installation:

- Detailed drawings and manufacturer's data for valves, pipe, fittings, gaskets, harnessing, supports, bolt kits, couplings, and all other pertinent materials required to complete the work.;
- Certificates of compliance with applicable referenced standards and any provisions for valves, pipe, joints, fittings, coatings, linings, sleeves, gaskets, harnessing, and all other appurtenances;
- Field pressure testing;
- Flushing and disinfection plans; and
- Signed and sealed calculations for pipe support systems.

Materials shall be delivered to the site to ensure uninterrupted progress of the work. Pipe, fittings, valves and associated other materials 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 damage to the packaging or materials. If such damage is found, damaged materials shall be rejected and immediately removed from the site. If in the process of manufacture, transportation, storage or handling, any valves, pipe, fittings, or associated other materials are damaged, such material shall be rejected and replaced at the Design-Build Entity's expense.

Pipe interiors shall be kept completely free from dirt and foreign matter. All pipe shall be installed in strict accordance with the manufacturer's instructions and recommendations. When pipe must be cut to fit in the field, the work shall be

performed using tools and equipment specifically designed for cutting the pipe, so as to avoid damage to the pipe and to leave a smooth end. Improperly cut and/or fitted pipe will be rejected and replaced at the Design-Build Entity's expense.

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 installation.

3.8 Electrical Requirements

3.8.1. Basic Requirements

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

3.8.2. 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.

3.8.3. Area Classifications

3.8.3.1. Wet Locations: The following areas shall be considered wet locations:

3.8.3.1.1. All outdoor areas.

3.8.3.1.2. All indoor areas below grade unless otherwise specified.

3.8.3.1.3. 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.

3.8.3.2. 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 coated aluminum and enclosures shall meet NEMA 4X requirements. Conduits shall be terminated at enclosures with watertight hubs. Independent supports shall be 316 stainless steel struts.

3.8.4. 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.

3.8.5. Schematic Diagrams

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

3.8.6. Raceway Systems

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

3.8.6.1. PVC coated rigid aluminum conduit for exposed indoor conduit runs in non-corrosive areas and PVC coated rigid aluminum at all other sites.
3.8.6.2. PVC Schedule 80 for individual conduit runs direct buried in earth .
3.8.6.3. Schedule 40 PVC for conduit runs embedded in or under structural concrete slabs or in concrete ductbanks (all sites).
3.8.6.4. PVC schedule 80 conduit for exposed indoor and outdoor runs in corrosive areas.
3.8.6.5. Flexible conduit for connections to motors and equipment.

3.8.7. Inspections, Testing and Adjustments

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

3.8.7.1. Connections: All circuits are properly connected in accordance with the drawings and applicable approved shop drawings.
3.8.7.2. Operation: All circuits and devices are operable.

3.8.7.3. 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. Megger testing reports shall be submitted and included in O&M Manual.

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.

Generators shall be tested under load for 24 hours without failure or shutdown.

3.9 Instrumentation and Control Requirements

3.9.1. General

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

terminations. Tag number, equipment number, and description shall match the Owners numbering convention standards.

3.9.2. 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.

3.9.3. System Check-Out and Start-Up Responsibilities

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

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

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

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

3.9.4. Instrumentation and Control System Field Test

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

3.9.5. 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.

3.9.6. 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.

PART 4 SUBMITTALS

4..1 Design-Build Entity submittals shall include but not be limited to:

- 4.1.1. Utility Locate Plan
- 4.1.2. Demolition Plan
- 4.1.3. Biological Odor Control System
- 4.1.4. Shutdown Plan
- 4.1.5. Commission Plan for startup and testing activities
- 4.1.6. Tank Closure Report
- 4.1.7. 60% Drawings and Calculations
- 4.1.8. 90% Drawings and Calculations

4.1.9. Shop Drawings
4.1.10. O&M Manual
4.1.10.1. Certificate of Proper Installation (COPI)
4.1.10.2. Testing reports (e.g. megger testing)
4.1.11. Spare Parts and Tools
4.1.12. 90-day Operating Supplies
4.1.13. Schedules
4.1.15.1. Baseline Schedule
4.1.15.2. Initial 30-day Plan of Operation
4.1.15.3. Four week Look Ahead Schedules
4.1.15.4. Minimum monthly schedule updates
4.1.15.5. Lightning Protection System
4.1.15.6. 90-days to Completion Schedule
4.1.14. Permits
4.1.15. Warranty

ATTACHMENT - K

Vendor Quotes

WGI™

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

Attn: Troy Lyn [tlyn@globaltechdb.com]

RE: PBCWUD WTP-11 Odor Control Structural Design Services

Wantman Group, Inc., (WGI) is pleased to provide this scope of services and fee proposal to GLOBALTECH for Structural Engineering Services associated with The **PBCWUD WTP-11 Odor Control Design-Build Project.**

Our scope of services includes:

TASK 1
Design Phase Services $19,120.00

1. Foundation for the Option 1 or Option 2 Bio-Trickling Filters
2. FRP Duct Concrete Pedestal Supports
3. Structural Review of option 1 or 2 anchorage for the vessels
4. Surge Tank replacement anchorage and cradle review
5. Demo and design of new OSG housekeeping slab
6. Misc. Structural evaluation/details for building coring and pull boxes
7. Pump Skid Design
8. Modification of equipment supports in Ammonia housing
9. 100% Construction Document Preparation and Associated Meetings

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

Respectfully,

WANTMAN GROUP, INC

Jeffrey Bergmann, P.E.
Senior Project Manager

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WANTMAN GROUP, INC.

PBCWUD WTP 11 Odor Control Phase 1 and 2

22-Apr-16
HOURLY BREAKDOWN OF SERVICES
EXHIBIT "A"

ACTIVITY	CHIEF ENGINEER	SENIOR ENGINEER	PROJECT ENGINEER	ENGINEER INTERN	CAD TECHNICIAN	TOTAL HOURS BY ACTIVITY	LABOR COST BY ACTIVITY
	$275.00	$210.00	$170.00	$100.00	$100.00		
Design Phase Services							
Foundation for the Option 1 or Option 2 Bio-Trickling Filters		4.0	12.0		16.0	32.0	$4,480.00
FRP Duct Concretre Pedestal Supports		2.0	4.0		8.0	14.0	$1,900.00
Structural Review of option 1 or 2 anchorage for the vessels		2.0	6.0			8.0	$1,440.00
Surge Tank replacement anchorage and cradle review		2.0	6.0			8.0	$1,440.00
Demo and design of new OSG housekeeping slab		2.0	6.0		8.0	16.0	$2,240.00
Misc. Structural evaluation/details for building coring and pull boxes		2.0	4.0		6.0	12.0	$1,700.00
Pump Skid Design		2.0	4.0		6.0	12.0	$1,700.00
Modification of equipment supports in Ammonia housing		2.0	4.0		6.0	12.0	$1,700.00
30-100% Construction Document Preparation and Meetings		12.0				12.0	$2,520.00
Bidding Phase Services						0.0	$0.00
TOTAL MANHOURS	0.0	30.0	46.0	0.0	50.0	126.0	
DIRECT LABOR COST	$0.00	$6,300.00	$7,820.00	$0.00	$5,000.00		$19,120.00

ENGINEERING FEES $19,120.00

TOTAL $19,120.00

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 5, 2016

Revised Electrical Scope of Work
PBC WTP 11 Odor Control Mods.

Quote # 31090

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 the drawings prepared by Hillers dated April 2016.

Included:

1. Demo shall consist of taking out the existing blower control panels with the assistance of GT. Pull out existing conductors from existing blower control panels back to the MCC buckets,
2. Furnish and install (1) new light pole and (3) new 150 amp breaker buckets.
3. Assist with the installation of (3) blower control panels furnished by GT.
4. Assist with the installation of (1) FIT and (2) AIT with supports furnished by GT.
5. Assist with the installation of LCP-2010 and water control panels with supports furnished by GT.
6. Furnish and install a concrete encased ductbank with conduit and 4/0 ground wire from existing PPD panel and RIO-9 to LCP-2010.
7. Furnish and install conduit and wire as indicated on the drawings. Excavate and backfill to a rough grade. Final restoration by GT.
8. Install fiber optic furnished by others. Terminations by others.
9. Explosion proof sealoffs required within 3 feet of biological tanks.

Excluded:

1. Permit fees.
2. Aluminum ramps.
3. Concrete and asphalt cutting and patching by GT.
4. Concrete pads by GT.

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

Adder:

1. Furnish and install conduit and wire from existing MPZ-D to the (3) added blower discharge valves for power per Hillers drawings.
2. Furnish and install 1 motor rated switch and support for each of the three blower discharge valve actuators.
3. Furnish and install conduit and wire from existing RIO-9 to the (3) added discharge valves for controls per Hillers drawings.
4. Furnish and install conduit and wire from the existing RIO-9 to the new PIT-2044 on the common blower discharge manifold per Hillers drawings.
5. Furnish and install conduit and wire from the new odor control panel to each of the new water panels for flow indicator transmitters per Hillers drawings.

Base Bid	**$ 95,500**
Adder	**$ 9,705**
Lump Sum	**$105,205**

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

HILLERS ELECTRICAL ENGINEERING, INC.

May 18, 2016

Rick Olson, P.E.
Globaltech, Inc.
6001 Broken Sound Parkway
Suite 610
Boca Raton, Florida 33487

Subject: Palm Beach County WTP 11 Odor Control Improvements (Design-Build)

Dear Rick,

Hillers Electrical Engineering, Inc. (HEE) is pleased to provide Globaltech, Inc. a proposal for the electrical and instrumentation design and construction services as well as PLC programming service for the above referenced subject. Our project scope consists of the following:

- Site Visit and Field Data Collection
- 60% and 100% Design Phase Drawings and Specifications
- Attend Design Review Meeting and provide responses to comments
- Building Depart Permitting Service and incorporate into the Construction documents
- Electrical and I&C Design consists of the design/upsize of the electrical feeder for the Degasifier Blowers and design new local starter panels; coordinate with Odor Control System Supplier for electrical and I&C requirements of the new Odor Control Panel, water panels; design electrical and I&C related items associated with the new Odor System including eyewash and showers, light pole, etc.; design of Lightning and Grounding system; design schematic for Degasifier Blower Local Control Panel, etc.
- Construction services include shop drawing review, RFI's and field change directives, periodic site visits, field inspections, assist with loop-check, start-up, and testing, etc.
- Record Drawings
- PLC programming services and interfacing with PBCWUD SCADA groups as well as with the Odor Control System Supplier

The following drawings are anticipated:

E-1 ELECTRICAL LEGEN AND NOTES
E-2 ELECTRICAL SITE PLAN
E-3 NEW ODOR SYSTEM – ELECTRICAL PLAN
E-4 MCC-3 ONE LINE DIAGRAM – DEMOLITION
E-5 MCC-4 ONE LINE DIAGRAM – DEMOLITION
E-6 MCC-3 MODIFIED ONE LINE DIAGRAM
E-7 MCC-4 MODIFIED ONE LINE DIAGRAM
E-8 ONE LINE AND RISER DIAGRAMS

23257 State Road 7, Suite 100, Boca Raton, Florida 33428 561-451-9165 Fax: 561-451-4886

E-9 ELECTRICAL DETAILS – SHEET 1
E-10 ELECTRICAL DETAILS – SHEET 2
E-11 ELECTRICAL DETAILS – SHEET 3
E-12 CLEARWELL BLOWERS – ELECTRICAL PLAN
E-13 HIGH SERVICE PUMP BUILDING – ELECTRICAL PLAN
I-1 INSTRUMENTATION LEGEND AND SYMBOLS
I-2 P&ID DIAGRAM
I-3 BLOWER CONTROL PANEL SCHEMATIC
I-4 EXISTING RIO-8 MODIFICATION
I-5 EXISTING RIO-9 MODIFICATION
I-6 INSTRUMENTATION DETAILS

Our proposed electrical and instrumentation design, construction, and PLC programming services fee is $ 48,594.84, as shown in attached spreadsheet.

HEE wishes to thank Globaltech, Inc. for the opportunity to provide this proposal. Please do not hesitate to call me if you have any questions regarding this proposal or any other matter.

Sincerely,

Thein Win, P.E., LEED AP
GT88-WTP11-ODOR

From: Thein Win
To: Troy Lyn
Subject: WTP 11 Odor Control Design and Construction Fee
Date: Thursday, April 21, 2016 2:38:12 PM
Attachments: GTXX - WTP11-Odor Control-attachment E.pdf

Troy,

Attached is the our fee for WTP11 Odor Control project. There are still a few drawings missing in my draft drawings set and I will create them at a later date after you have the background and when we know what type of instruments the BioAir is providing.

For Design, add task 1 thru 3: $23729.16

For Construction Service: add task 4 thru 6: $14969.92

For PLC programming, loop check and start-up: $9895.76

Total: $48594.84

If you have any questions or need to adjust anything, please let me know.

Thanks,

Thein Win, P.E., LEED AP
Hillers Electrical Engineering, Inc.
561-451-9165 x225

ATTACHMENT - E

BUDGET SUMMARY

Task Number	Task Description	Labor Classification and Hourly Rate: Project Manager	Project Engineer	Engineer	Construction Coordinator	Secretarial	Total Labor	Total Cost per Task
	WTP11 Biological Odor Control Improvements							
	Task 1 - Data Collection and Survey		8		0		8	$1,239.84
	Task 2 - 60% Design	6	68		4		78	$12,272.12
	Task 3 - 100% Design	8	52		4		64	$10,217.20
	Task 4 -Permitting	2	4				6	$1,044.68
	Task 5 - Construction Services	2	50		42		94	$12,995.36
	Task 6 - Project Close Out	0	6		0		6	$929.88
	PLC Programming, Loop Check, Start-up	4	48		14		66	$9,895.76
	Subtotal Task 1 thru Task 6 + PLC Progrmm	**22**	**236**		**64**	**0**	**$48,594.84**	**$48,594.84**
	Labor Subtotal Hours	22	236	0	64	0	**322**	
	Labor Raw Costs	$74	$54	$40	$40	$22		
	Labor Multiplier	2.87	2.87	2.87	2.87	2.87		
	Labor SubTotal	$ -	$ -	$ -	$ -	$ -		
	Labor Total	**$ 4,672.36**	**$ 36,575.28**	**$ -**	**$ 7,347.20**	**$ -**	**$ 48,594.84**	
	Subcontract Total						0	
	Project Total						**$ 48,594.84**	

GROUND HOUND DETECTION SERVICES, INC.™ A Professional Utility Locating Service

May 10, 2016

Mr. Rick Olson
Globaltech
6001 Broken Sound Pkway
Suite 610
Boca Raton, FL 33487
rolson@globaltechdb.com

Re: "WTP No. 11- 39700 Hooker Highway, Belle Glade"

Mr. Olson,

Ground Hound Detection Services, Inc. (GHD) is pleased to provide the following proposal for utility locating services. Electromagnetic induction (EM) and Ground Penetrating Radar (GPR) methods will be used to identify any detectable utilities within to be determined areas on an as needed basis.

DESCRIPTION OF SERVICES:

Ground Penetrating Radar (GPR) method transmits electromagnetic waves, which are pulsed at discrete distance/time intervals. The transmitted pulse radiates through the earth whereby a portion of the energy is reflected from interfaces of contrasting electrical properties (e.g. pavement and soil interface, soil stratigraphic changes and buried metallic and nonmetallic objects) while the remaining energy continues until reaching additional reflectors where the process is repeated. Reflected energy is received by the antennae and recorded for later processing and interpretation. Factors such as soil moisture, clay content, and variations in the dielectric constants of materials control the effectiveness of the GPR method. Wet conductive soils severely attenuate GPR signals and thus the effective depth of exploration. The presence of foreign product leeched into the soil can eschew the data collected. GPR energy cannot transmit through ferrous objects since metal acts as a pure reflector. GPR energy cannot transmit through ferrous objects since metal acts as a pure reflector. Freshly-poured concrete (less than 60 days), concrete containing metal fibers, fine-mesh screenings beneath tile, Styrofoam between floor or roof slabs can inhibit the effective permeability and accuracy of GPR. In order to accurately conduct a radar survey, orthogonal scans must be made across the target area. Confined or obstructed areas that restrict an even scanning pattern can impede the data collected and reduce the accuracy of the final results. GPR does not measure diameter of objects, just their location(s).

Electromagnetic induction is a method in which a transmitter signal is applied by directly coupling to a target. As long as the target is metallic, a receiver is used to detect the transmitted signal. Passive detection is another technique used to locate naturally occurring magnetic fields that exist on power cables generating a 50/60 Hz signal. Additionally, passive VLF signals can be detected on other metallic utilities that are typically long in length and are well grounded electrically.

Locating underground utilities is not an exact science. Therefore, Ground Hound Detection Services, Inc. (GHD) expresses no guarantees that using one or any of the available technologies for identifying utilities/structures will identify all utilities/structures and/or meet the objective of this or any individual project. Globaltech understands that limitations within the available technology, the complexity of site conditions and circumstances beyond the control of GHD may limit the performance/results of the GHD's services. Project Owners, Globaltech and any of its Subcontractors shall hold harmless and indemnify GHD against any and all losses as a result of inability to locate or mislocate due to limitations within the available technology, the complexity of site conditions and circumstances beyond its control, but not against negligence on the part of GHD or its employees. The services provided by GHD shall be performed in accordance with generally accepted professional practices as related to the nature of services performed. Payment to GHD shall not be contingent upon its performance or results due to any limiting condition as described. Hand digging is required in all situations when excavating within 24" of GHD's markings. If any legal action or other proceeding is brought for the enforcement of this contract, or because of an alleged dispute, breach, default or misrepresentation in connection with any provisions of this Contract, the successful or prevailing party or parties shall be entitled to recover reasonable attorney's fees, expenses and court costs, including appellate fees incurred in the action or proceeding, in additional to any other relief to which such party or parties may be entitled.

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

CONDITIONS: Locating underground utilities for design/pre-excavation:

- Utility locations are being provided in an attempt to prevent or reduce the likelihood of damage during excavation and /or provide design information.
- Areas to be investigated must be level and free of obstructions. EM and GPR discovery may be limited up to 24" within any vertical impediment, structure or otherwise.
- Results are dependent upon field conditions at the time of locating services.
- GHD's inability to complete the project due to delays, conditions outside GHD's control does not void this contract.
- If GHD is to produce an AutoCAD drawing (optional, additional fee), customer is responsible for providing an electronic AutoCAD file for GHD to record its discoveries. If a file is not available, additional costs and time to produce the drawing are likely.
- Drawings produced by GHD (optional, additional fee) are not considered to be "survey grade" drawings. GHD will include dimensions from a fixed feature in the field/drawing to the horizontal position of the target being depicted. Drawings are not prepared by a licensed Engineer, Surveyor or Draftsman. In addition, drawings are not prepared to any State survey or drafting standard.
- APWA color marking standards will be used whenever possible.
- GHD is not responsible for, moved, altered, obliterated or maintaining marks. GHD will impose an additional fee to relocate/remark facilities.
- If underground facilities are damaged, whether marked by GHD or not, it is your obligation to notify a representative of GHD immediately at the time of damage.
- GHD is not a substitute for Chapter 556 of the FL State Statute (Underground Facility Damage Prevention and Safety Act). Prior to project construction, excavating contractor is responsible for securing locations of public utilities through Sunshine State One Call of Florida (Phone # 811).
- Any available as-builts, engineered or other record drawings with regards to any utilities within the project limits shall be made available to GHD for its review prior to commencement of field work.
- The performance of GHD's services is limited to full and unobstructed access to include but not limited to: mechanical rooms, manholes, hand holes, vaults, meter rooms, telecom rooms, fixtures (plumbing, electrical, communication), dispensers, fenced compounds, tanks and structures. Full cooperation from the on site personnel is necessary to perform a complete survey.

COST ESTIMATE:

Electromagnetic, GPR Investigation

- Perform/verify horizontal locations of existing detectable utilities using EM & GPR techniques.
- Mark selected targets on the ground surface as necessary.
- Review all site discoveries with on site personnel.

EM & GPR Investigation	**$1,800.00/ day***

Price based on $225/ hour with a four hour minimum.

The above cost is effective for 30 days from the date of this proposal. Costs are subject to change upon unforeseen conditions, any changes will be negotiated accordingly. In no event shall payment to GHD be made later than 45 days from submission of its invoice, irrespective of Contractor's receipt of payment from Owner.

Mr. Olson, thank you for allowing us to present this proposal. Should you have any questions please contact me at: 561-737-9800.

Sincerely,

Sean R. Halsey

Sean Halsey, South Florida Director
Ground Hound Detection Services

_____ _____

Accepted by Title/Company

_____ _____

Print Name of Signer Date

Re: "WTP No. 11- 39700 Hooker Highway, Belle Glade"

WGI™

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

Attn: Troy Lyn [tlyn@globaltechdb.com]

RE: PBCWUD WTP-11 Odor Control Structural Design Services

Wantman Group, Inc., (WGI) is pleased to provide this scope of services and fee proposal to GLOBALTECH for Structural Engineering Services associated with The **PBCWUD WTP-11 Odor Control Design-Build Project.**

Our scope of services includes:

TASK 1
Design Phase Services $19,120.00

1. Foundation for the Option 1 or Option 2 Bio-Trickling Filters
2. FRP Duct Concrete Pedestal Supports
3. Structural Review of option 1 or 2 anchorage for the vessels
4. Surge Tank replacement anchorage and cradle review
5. Demo and design of new OSG housekeeping slab
6. Misc. Structural evaluation/details for building coring and pull boxes
7. Pump Skid Design
8. Modification of equipment supports in Ammonia housing
9. 100% Construction Document Preparation and Associated Meetings

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

Respectfully,

WANTMAN GROUP, INC

Jeffrey Bergmann, P.E.
Senior Project Manager

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April 29, 2016

Terracon

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

Attn: Rick Olson, P.E.
Phone: 561 997 6433
Email: rolson@globaltechdb.com

Re: Proposal for Geotechnical Engineering Services
Water Treatment Plant (WTP) No. 11 Tank Support
39700 Hooker Highway
Belle Glade, Florida
Proposal No. PHD165058

Dear Mr. Olson:

Terracon Consultants, Inc. (Terracon) appreciates the opportunity to submit this proposal to provide geotechnical engineering services for the above-referenced project. The purpose of the work will be to evaluate the subsurface conditions at the site and to provide geotechnical engineering recommendations related to the design and construction of the project. This proposal outlines our understanding of the project, and provides a scope of services and schedule for the work. Compensation for our services is also described herein.

A. PROJECT INFORMATION

We understand that the new construction will consist of a 25' x 35' x 24" thick mat foundation that will support two 12-foot diameter tanks, each weighing 60,000 pounds. The area of the proposed construction has been excavated to remove previously existing muck and surcharged to compact the backfill.

B. SCOPE OF SERVICES

2.1. Safety - *IIF*

Terracon has a commitment to the safety of all its employees. As such, and in accordance with our *Incident and Injury Free®* safety culture, we will prepare a "Pre-Task Plan" to identify the potential site safety and job hazards associated with the work proposed at this site. Prior to commencement and during the on-site activities, we will re-evaluate potential job hazards and appropriate safe working procedures. At this time, we anticipate that a United States Occupational Safety and Health Administration (**OSHA**) Level D work uniform consisting of hard hats, traffic vests, safety glasses, protective gloves, and steel-toed boots will be required by all personnel in the work area.

2.2. Geotechnical Evaluation

The services for the Geotechnical Engineering Evaluation to be provided by Terracon are summarized in the following paragraphs.

Field Program – We propose the following field testing/exploration program to evaluate the subsurface conditions at the project site.

1. Visit the project site, field mark boring locations, and contact the Sunshine Underground Utility Clearance network. Private utilities will also need to be located. If the locations of private utilities are not known, Terracon can conduct a Ground Penetrating Radar (GPR) survey to locate private utilities near our test boring locations for an additional fee. Even if the GPR survey is performed, Terracon will not be responsible for damage to existing underground utilities. We will take reasonable precautions to avoid damage to existing utilities.
2. Once underground utility clearance is obtained, mobilize a truck mounted drilling rig and drill two Standard Penetration Test (SPT) borings at (or near) the location of the proposed mat foundation. The borings will be drilled to 50 feet below grade using mud rotary methods. Samples of the subsurface materials will be obtained at frequent vertical intervals in accordance with procedures outlined in ASTM D 1586 (the Standard Penetration Test). Once the samples have been collected and classified in the field, they will be placed in appropriate sample containers for transport to our laboratory. The boreholes will be sealed with neat cement grout.

Subsurface conditions may be found which merit alterations of the field boring and/or sampling programs described herein. However, we will not perform additional scope or incur additional expense without your authorization.

Laboratory Testing – The samples obtained from the borings will be returned to our laboratory for visual classification by a geotechnical engineer. Limited laboratory testing (such as moisture content and organic content testing) will be performed as needed to aid in soils classification and assessment of the subsurface materials.

Geotechnical Engineering Analysis and Report – The results of our field work will be evaluated (by a professional geotechnical engineer licensed in the State of Florida) in light of the proposed construction. Based on the results of our evaluation, an engineering report will be prepared that details the methodology used for the subsurface exploration, provides logs of the borings, and geotechnical engineering criteria for design of the project. The report will include a design bearing capacity for the mat foundation and a forecast of anticipated foundation settlement.

2.3. Schedule

We can commence the work after receipt of authorization to proceed. This will begin with field marking the proposed boring locations and clearing the locations for buried utilities. Once the boring locations are cleared, we will mobilize to the site to begin the field work (within about one week of receiving a signed agreement). We expect the field exploration will require one day, if the weather conditions permit, and that the geotechnical engineering report can be submitted within about two weeks after the field work is completed.

C. COMPENSATION

We propose to do the work for a fixed fee of ***$5,000.00***. The fee is valid for 90 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures. The fee is based on the assumptions and conditions provided at the time of this proposal. Further, the scope and fee are predicated upon the assumption that the boring will be accessible with a truck mounted drilling rig. Should it be necessary to expand our services beyond those outlined in this proposal, we will notify you, then send a supplemental proposal stating the additional services and fee. We will not proceed without your authorization.

D. AUTHORIZATION

We understand that the work will be authorized with a Task Order issued under a Subcontract Agreement between Dunkelberger Engineering & Testing, A Terracon Company and Globaltech, Inc. The fee is valid for 90 days from the date of this proposal and is based on the assumption that all field services will be performed under safety Level D personal protective procedures. The fee is based on the assumptions and conditions provided at the time of this proposal.

Terracon

We appreciate the opportunity to provide this proposal and look forward to working with you on this project. If you have any questions or comments regarding this proposal or require additional services, please give me a call.

Sincerely,
Terracon Consultants, Inc.

Kevin E. Aubry, P.E.
Senior Project Engineer

Daniel J. Marieni, P.E.
Geotechnical Services Manager

Please indicate whether or not the additional scope and fee ($1,000) for GPR is authorized:

___ Yes

___ No

Rick Olson

From: Bruce Rahmani
Sent: Tuesday, May 10, 2016 2:22 PM
To: Rick Olson
Subject: FW: WTP11 Odor Control Revised Drawings

Bruce Rahmani

From: Luis Garcia [mailto:lgarcia@cccontrolcorp.com]
Sent: Monday, April 25, 2016 3:45 PM
To: Nico Shaner <NShaner@globaltechdb.com>
Cc: Bruce Rahmani <bruce@globaltechdb.com>
Subject: RE: WTP11 Odor Control Revised Drawings

Nico,

The budgetary prices are as follows:

Blower Panels $7,000.00 x 3 = $21,000.00 plus tax

Notes!!

1) Quote does not include modifications to exist. MCC center for new blowers.
2) Quote does not include LCP-2010 Local Control Panel
3) Quote does not include any instrumentation, gauges or additional components.

Luis L. Garcia
Estimating and Sales
C.C. Control Corp.
5760 Corporate Way
West Palm Beach, Florida 33407
Main: 561.293.3975 x103
Fax: 561.293.3976
Cell: 561.596.6415

C.C. CONTROL CORPORATION

From: Nico Shaner [mailto:NShaner@globaltechdb.com]
Sent: Thursday, April 21, 2016 2:10 PM
To: Luis Garcia <lgarcia@cccontrolcorp.com>
Subject: FW: WTP11 Odor Control Revised Drawings

Hi Luis.

Revised drawings for WTP #11 odor control panel quote.

Tried calling you back, but we missed each other.

Regards,
--
Nico Shaner
Globaltech, Inc.
6001 Broken Sound Pkwy NW
Suite 610
Boca Raton, FL 33487
nshaner@globaltechdb.com
561-997-6433 - office
404-226-7645 - cell
www.globaltechdb.com

From: Bruce Rahmani
Sent: Thursday, April 21, 2016 1:29 PM
To: Nico Shaner
Subject: FW: WTP11 Odor Control Revised Drawings

Revised drawing for WTP 11 Odor Control. Please send the "I" drawings to CC.

Bruce Rahmani

From: Thein Win [mailto:twin@hillersee.com]
Sent: Thursday, April 21, 2016 1:24 PM
To: Troy Lyn <tlyn@globaltechdb.com>
Cc: Bruce Rahmani <bruce@globaltechdb.com>
Subject: WTP11 Odor Control Revised Drawings

Troy,
Attached pdf is the revised drawings for WTP11 Odor Control system.
Please note that the breakers in MCC and feeder wires are upsized for 50HP blower.
The flowmeter is added to riser diagram

Bruce,
Please use drawing I-3 for Blower LCP to get quote.
Thanks,

Thein Win, P.E., LEED AP
Hillers Electrical Engineering, Inc.
561-451-9165 x225

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Cc: Bruce Rahmani <bruce@globaltechdb.com>
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The flowmeter is added to riser diagram

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Thein Win, P.E., LEED AP
Hillers Electrical Engineering, Inc.
561-451-9165 x225

BioAir Solutions, LLC | 110 Kresson-Gibbsboro Road | Suite 303 | Voorhees, NJ 08043
P 856.258.6969 | **F** 856.258.6975 | www.bioairsolutions.com

April 28, 2016

Troy L. Lyn
Globaltech, Inc.
6001 Broken Sound Parkway, NW Suite 610

Dear Troy,

As requested, attached is the updated proposal to include the additional items as discussed. It was not clear if the gooseneck would or would not be required so we have included it below but you have the breakout number if you decide to remove it.

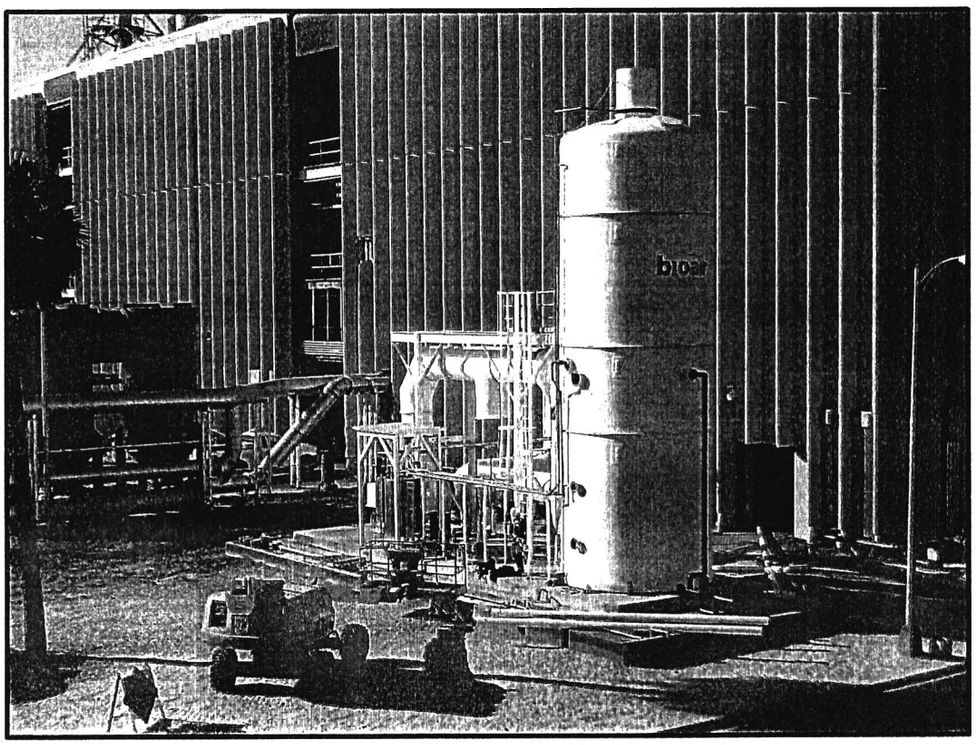
Please let us know if you have any questions or need additional information.

Sincerely,

Christopher A. West

BioAir Solutions, LLC.
Regional Sales Manager
Ph: (856) 495-5501

Palm Beach County
PBC WTP 11



BioAir EcoFilter EF1242
Jacksonville, FL

BioAir Odor Control Scope of Supply
Q151A028 R1
April 28, 2016

Table of Contents

1. Equipment Included

1.1. Odor Control Improvements

1.1.1. Biotrickling Filter

Two (2) EcoFilter® reactors made from Fiberglass Reinforced Plastic (FRP) and constructed to comply with ASTM D3299 and C582. The system will arrive on site with the EcoBase® structured synthetic media pre-installed complete with spray nozzle assemblies. The vessels consists of two (2) main pieces that are delivered ready to be offloaded onto a suitable concrete pad, placed and bolted together. The vessel will include integral mist eliminators with wash systems, a sliding solid cover over the inspection hatch at the top of the biotrickling filter vessel, and gooseneck style outlet stacks with non-corrosive mesh screen. An inlet flexible connector and neoprene pad/felt paper will be provided for installation at the site by others.

	Approximate Values	
EcoFilter Diameter	12	(feet)
Height to top of EcoFilter Vessel	31	(feet)
Operating Weight	61,300	(Lbs)

1.1.2. Controls

One (1) Standard Electrical Control Panel:
The Electrical Control Panel (ECP) will be UL508 labeled and fabricated from 316 Stainless Steel. It will contain an Allen-Bradley MicroLogix 1400 PLC to control the irrigation of the media and provide monitoring of standard control functions and will include a single 120 volt GFCI convenience outlet.

Two (2) Water Control Panels:
The Water Control Panels (WCP) will be fabricated from 316 Stainless Steel and will contain equipment required for the irrigation control of the EcoFilter® system. The WCP will include – irrigation water flow meter, irrigation control valve, pressure control valve, strainer and shut-off valve and the nutrient metering pump.

One (1) Nutrient Storage Tank:
Designed to hold sufficient nutrients for a minimum of 30 days.

1.1.3. Blowers

Three (3) Air Handling Blowers (2 Duty/ 1 Standby):
The blowers are manufactured by New York Blower, Hartzell, Verantis or Equal and are sized to provide the design air flow against a predetermined head, as determined by the Owner or engineer and confirmed by BioAir. Blower motors to each include a thermostat and 120V space heater.

The replacement blowers will fit inside the existing sound enclosures.
Blowers will be provided with One (1) set of spare belts per blower.

1.1.4. Instrumentation

One (1) Hach sc200 pH transmitter
Two (2) Hach PC1R1N pH sensors
Irrigation Water Flow Meters with instantaneous, totalized and previous day/week totals (included in the WCP)
Differential pressure gauges
One (1) FCI ST98 Thermal Mass Flow Meter to be installed and connected by others

1.1.5. Treated Exhaust Air Sampling System

The vessel will be provided with a sample point at the vessel discharge and a mounting point for the supplied MOSS-2 (vacuum pump - installed at site by others) and a data logger (not specified or included in this scope). The interconnecting pipe is to be provided and installed by others

The MOSS-2 is a sampling tool for use with inlet and outlet OdaLog PPM H_2S Gas Loggers. Designed to facilitate OdaLog data collection in locations where positive or negative pressures are present and in locations with up to 100% relative humidity, as these conditions can affect the OdaLog measurements. For quality data collection where these adverse conditions are present, it is necessary to present a constant flow rate similar to the calibration flow rate. The MOSS-2 accomplishes this through the use of a regulated one-liter pump; two adjustable flow meters housed within a durable corrosion proof case and external moisture removal traps. The pump draws the air sample through moisture removal traps prior to introduction to the flow meters and subsequent delivery to the OdaLogs (not included). The flow meters are set by the user to 0.40 LPM and deliver a constant gas sample to the OdaLog H_2S Gas Logger.

2. Documentation

Engineering Submittals
Submitted per Specifications, the Engineering Submittals will contain detailed information on the equipment being supplied with equipment lists, drawings and calculations.

Offloading, Installation & Startup Instructions
Provided prior to equipment shipment is the EcoFilter® Complete Offloading, Installation and Startup Manual. Instructions are detailed with graphic and photographic demonstrations for the plug and play assembly and installation.

Operation & Maintenance Manuals
An Operations and Maintenance Manual will be provided prior to startup of the equipment and will contain details of operation, monitoring recommendations and a troubleshooting guide, along with a listing of all components.

Structural drawings and Calculations
Structural drawings and Calculations shall be provided showing compliance with the specified requirements for Wind Loading, Snow Loading and Seismic Loading.

3. Manufacturer's Services

Installation Assistance
The equipment is modular and shipped in as few components as possible with media pre-installed so the installation is 'plug-and-play' by nature. The BioAir Service department is available by phone to assist during the installation phase to ensure correctness/readiness for operation.

Startup Assistance
The startup of the system is simple and takes between 2 and 6 weeks to allow sufficient time for the biological acclimation process to take place. One (1) trip with three (3) on-site days is included for equipment startup. During the startup trip, the BioAir service person will measure and confirm the airflow and hydrogen sulfide concentration into the reactor and certify the mechanical and electrical installation of the equipment. For the 2- to 6-week acclimation period, BioAir Service Personnel are available for consultation and assistance. Please allow two (2) weeks for scheduling of the startup visit.

The Biological acclimation process is enhanced by the use of a BioAir proprietary Startup system. The system components are provided by BioAir for the purpose of acclimation only and will be removed from the site once completed. Complete 'hook-up' instructions are included in the Offloading, Installation & Startup manual. The minor piping and re-piping prior to and post startup in to be completed per BioAir instructions by the installing contactor.

Training
After Startup is complete, and at the discretion of the Owner / Contractor, the BioAir service team will provide complete operation and maintenance training for the Owner's personnel. This training will include a training manual with excerpts of the Operation and Maintenance Manual with both classroom and hands-on, on-site sessions. One (1) trip with one (1) on-site day is included for training.

Performance Testing
After the system has been fully started up and acclimated, BioAir Solutions will provide the necessary instrumentation, sampling and data recording equipment to confirm that the system is operating correctly and meets the performance requirements specified. A second Performance Test shall be conducted within One (1) year following the initial Performance Test. Performance Testing will not include the addition of bottled H_2S gas.

Service Contract
After completion of successful startup and performance testing, BioAir Solutions will provide the County with a twelve (12) month service contract to include monthly site visits for routine maintenance, adjustments and applicable re-calibration of the system.

4. Equipment Warranty

BioAir Solutions ("BioAir") warrants the synthetic media against defects in material and workmanship for five (5) years from delivery of the equipment to the job site. In the event it is determined that a defect exists in the synthetic media, BioAir's sole obligation shall be to repair or replace the defective media at BioAir's cost and expense.

All equipment supplied by BioAir, other than the synthetic media is warranted by BioAir against defects in material and workmanship for twelve (12) months from successful completion of startup of equipment or eighteen (18) months from equipment delivery to the jobsite, whichever comes first. In the event it is determined that a defect exists in such equipment, BioAir's sole obligation shall be to repair or replace the defective equipment at BioAir's cost and expense.

BioAir will not be liable under any warranty if the defect was caused by misuse, abuse, improper operation, improper maintenance, alteration, repair or modification, negligence in use, casualty, storage, handling or any other cause beyond the control of BioAir.

5. Price

Total price for Equipment, Manufacturers Services, Documentation And Warrantees listed above.....$464,540.00

Freight, FOB Jobsite, is included
Prices are valid for 90 days from the date of this proposal.
BioAir Solutions, LLC General Terms and Conditions of Sale, a copy of which is annexed hereto, is incorporated into this Scope of Supply by reference and made part thereof.
The Total Price does NOT include any sales, use or any other taxes, duties or permit fees ("Taxes") associated with the purchase of this Equipment. Purchaser shall be responsible for payment of all Taxes

Payment terms:

10% of the Price, Net 30 days after approval of submittals
80% of the Price, Net 30 days after delivery of the equipment to the job site
10% of the Price, Net 30 days after successful completion of the Performance Testing but no later than 150 days from the date that the Equipment is delivered to the job site.

6. Delivery Schedule

Engineering Submittals:	4 Weeks, after receipt of Purchase Order
Equipment Delivery:	14-16 Weeks, after release to Manufacture
Offloading / Installation Manual:	10 Weeks, after release to Manufacture
Operation and Maintenance Manual:	14 Weeks, after release to Manufacture

7. Work NOT Included in Scope

- Design and construction of concrete foundation
- System anchor bolts
- Section 1.3.1.11 Given the structured nature of BioAir's EcoBase media, access hatches in the side of the vessel do not allow for any access, inspection or maintenance and are therefore not included. The media warranty eliminates the need for any access, inspection or maintenance.
- Recirculation pumps and appurtenances are not applicable to the operation of the BioAir EcoFilter system and are not included.
- Receiving and offloading of equipment
- Placement and assembly of the system components
- Supply or installation of interconnecting electrical equipment or labor including power supply to control panel, power from control panel or VFDs to motors/field disconnects, and power/signals from control panel to field-mounted instruments.
- Supply or connection of biotrickling filter water piping including supply to water panel, interconnecting piping from water panel to irrigation nozzle connection, startup system piping, and drain piping.
- Provision and installation of insulation and heat tracing (if required) for all water / nutrient lines, or nutrient container
- Totalizer for nutrient flow (diaphragm pumps provide irregular flow pulses which are not easily totalized)
- Grounding rods
- Heat tracing and insulation of interconnecting duct work (if required)
- Supply of all ductwork, fittings and dampers
- Flex connectors / Expansion joints unless specifically listed above
- All ductwork supports
- Shoe Box LED Lighting Pole
- Lightning protection systems
- Emergency eyewash and showers
- Operation of the equipment
- Modifications of existing sound enclosures, if required
- Section 1.3.1.33 – Given the inherent danger associated with concentration hydrogen sulfide gas, the use of bottled H_2S is typically not used in the Municipal industry. Furthermore, since the amount of gas consumed during the acclimation and performance testing of a biotrickling filter could range very significantly, it is impossible to determine prior to on-site evaluation. If, during system startup and performance testing, the County would like to dose bottle H_2S to augment the inlet concentrations, BioAir will conduct the performance test accordingly.
- Any Taxes as defined herein

8. Clarifications

- System panels shall be mounted a minimum of three (3) feet from reactor and outside of an NEC Class 1 Division 2 designated area.
- Section 1.3.1.1. q – Insufficient information is provided on the Plant Wide Control System. Basic assistance in coordination is included for the controls included herein.
- Section 1.3.1.1. s – The treated exhaust sampling system is included but tubing/piping from the sample point at the discharge of the system to monitoring point at ground level, is not included. Sampling system is one (1) MOSS-2 by Detection Instruments. H_2S transmitters/loggers are not included.
- Given the potential for lethal concentrations of Hydrogen sulfide and dripping sulfuric acid at the bottom of the vessel, BioAir strongly discourage providing access to this area of the vessel, wherein there are no maintenance requirements.
- Section 1.3.1.28. j – The nutrients are metered into the irrigation water supply and monitored by way of a pulse type flow meter. In the event of no nutrient flow, an alarm signal is provided to the PLC.
- FCI ST98 thermal mass flow meter has been specified to comply with the manufacturer's recommended upstream and downstream duct diameter straight lengths. Additional calibration cost may be required if the required straight lengths of duct are not available.

BioAir Solutions, LLC's General Terms and Conditions of Sale

1. Definitions. "Proposal" means the proposal to which these General Terms and Conditions of Sale are attached, any specifications thereto, and the terms and conditions contained herein. "Seller" means BioAir Solutions, LLC, its subsidiaries and affiliates. "Buyer" means the person, firm, or corporation identified as the purchaser or customer in the Proposal. "Equipment" means all machinery, parts, accessories and attachments described in the Proposal. Any replacements, additions, improvements, alterations, spare parts, attachments or repairs provided by Seller shall be subject to these General Terms and Conditions of Sale. The sale or furnishing of any replacements, additions, attachments, accessories or repairs to the Equipment which are made or delivered subsequent to the sale of the Equipment shall not cause or create any extension of the guarantees or warranties made herein with respect to the Equipment nor shall they change the effective date on which the Equipment is delivered by Buyer. For purposes of the warranty provision contained herein, the phrase "components of the Equipment which have been manufactured by Seller" shall include only those components manufactured by Seller.

2. Price and Terms. The purchase price of the Equipment shall be as set forth in the Proposal. The purchase price shall not include, taxes, freight and/or handling charges unless these items are specifically listed and priced in the Proposal. Buyer shall pay or reimburse Seller for any sales, use, excise or other tax now or hereafter imposed by reason of the production, sale, transportation, delivery or installation of the Equipment. The purchase price is F.O.B. point of shipment unless otherwise stated in the Proposal. The purchase price shall be payable in United States currency on or before fourteen (14) days after the date of invoice unless otherwise specified in the proposal. Any invoices which are not paid within fourteen (14) days shall be subject to interest at the rate of 1.5% per month from the date of the invoice until the date on which such invoice is paid.

3. Delivery, Risk of Loss and Storage. The delivery date set forth in the Proposal is the Seller's best estimate when the Equipment will be delivered to the carrier and shall not be deemed to represent a fixed or guarantied delivery date. Delivery shall be deemed to have been made when Seller places the Equipment in the possession of a carrier selected by Buyer (or selected by Seller with Buyer's approval) at which time Buyer shall bear the risk of loss for the Equipment. If Buyer is not prepared to accept delivery of the Equipment upon notice that it is ready for shipment, Seller may store it in a warehouse at Buyer's expense and risk, in the name of the Buyer or Seller. Such delivery to a warehouse shall constitute shipment and delivery of the Equipment to Buyer and the balance owed shall become immediately due and payable.

4. Insurance. Buyer shall be required to obtain and maintain an insurance policy in an amount equal to the unpaid balance of the purchase price, to cover all risks of loss and damage to the Equipment, which policy shall name Seller as an insured to the extent that its interest may appear. Buyer shall deliver a certificate from the insurance company certifying that such insurance is in effect and shall not be cancelled or revoked without fifteen (15) days prior written notice to Seller until the purchase price of the Equipment is paid in full.

5. Installation. The purchase price does not include installation unless installation is expressly specified in the proposal. If installation is included, (i) the Buyer shall be responsible for preparing the site and all other equipment for the installation of the Equipment prior the Equipment's scheduled delivery date, and (ii) the Buyer shall pay Seller at the Seller's rates then in effect for any additional installation time caused by Buyer's failure to prepare the site or by any other delay at the installation site not within Seller's control.

6. Security Agreement. To secure payment of any obligation of Buyer to Seller (including, but not limited to, Seller's charges for service and parts), Buyer hereby grants Seller a security interest in the Equipment together with all parts, accessories, attachments, additions, accessions, substitutions, improvements and replacements thereto or thereof and all proceeds from insurance, sale or disposition.

7. Default and Remedies. The occurrence of any of the following shall constitute a default by Buyer: failure to make any payment when due; failure to comply with or perform any provision of the Proposal; false or misleading representations or warranties made or given by Buyer; assertion of any lien, levy or other judicial process against the Equipment or diminishment or impairment of Buyer's rights in or to the Equipment; voluntary or involuntary commencement of any proceeding under which Buyer is subjected to or seeks relief under any bankruptcy, insolvency or receivership proceeding; any act of Buyer which results in the substantial reduction in the value of the Equipment or imperils the prospect of full performance or satisfaction of Buyer's obligations hereunder; any modification to the Equipment without Seller's written consent; if Buyer sells, encumbers or otherwise disposes of the Equipment while title thereto remains in Seller; or if Buyer is in default of any other obligation to Seller or any company affiliated with Seller. Upon any default by Buyer, and at the option of Seller, all sums payable under the Proposal and any other amount due Seller shall immediately become due and payable in full without notice or demand to Buyer and Seller shall have all the rights, remedies and privileges as are accorded to Seller by law including, without limitation, those pertaining to repossession, retention and sale of the Equipment and disposition of the proceeds. In addition, Seller may also enter, with or without legal process, into or upon the premises where the Equipment or any part thereof may be located and take possession of the Equipment, or render it unusable, or dispose of the Equipment (in such event Buyer agrees not to resist or interfere with Seller's actions); or require Buyer to make the Equipment available to Seller at a place reasonably designated by Seller to enable Seller to dispose of the Equipment. If Seller exercises its option to retake the Equipment, it may resell the Equipment at public or private sale. The proceeds of sale shall be applied as follows: first to reimburse Seller for the fees, costs and expenses incurred, including reasonable counsel fees; next to pay Seller the unpaid balance of the purchase price or any other amount due Seller; and the surplus, if any, shall be paid to Buyer. Buyer shall remain liable to Seller for any deficiency. Seller shall be entitled to recover reasonable attorneys' fees and all other fees, costs and expenses incurred by Seller if Buyer defaults or Seller is successful in defending a claim asserted by Buyer. If, in the judgment of Seller, Buyer's financial condition has changed, Seller shall have the right to cancel the Proposal unless Buyer provides such additional security as Seller may require or makes full payment of the balance of the price. Such cancellation shall be without prejudice to Seller's claim for damages.

8. Warranty. **THE WARRANTIES PROVIDED FOR IN THIS PROVISION AND THE OBLIGATIONS AND LIABILITIES OF SELLER SET FORTH HEREIN ARE EXCLUSIVE AND IN LIEU OF AND BUYER HEREBY WAIVES ANY AND ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE AND ALL OTHER REMEDIES AND LIABILITIES.** The Buyer acknowledges and agrees that no other representations or warranties were made to or relied upon by Buyer.

A. Warranty For Components of Equipment Manufactured by Seller. Seller warrants that the components of the Equipment which have been manufactured by Seller shall, under normal use, be free of defects in material and workmanship for a period of one (l) year from the date the Equipment is delivered to Buyer or installed by Seller, if applicable, provided that, (i) Buyer, immediately upon discovery of the claimed defect, discontinues all use of the components, and (ii) the claim of defect with respect to the components is submitted to Seller in writing within the one (1) year warranty period and no later than ten (10) days after the discovery of the claimed defect. If Buyer claims, within the warranty period, that a defect exists, Seller reserves the right to demonstrate that there is no defect. If a defect exists, Seller's sole responsibility shall be to repair or replace any defect or, at its option, Seller may rescind the Proposal and, in such event, Seller's only obligation shall be to refund amounts previously paid by Buyer without interest.

B. Disclaimer For Parts or Units Not Manufactured by Seller. Seller shall not be liable to Buyer for any breach of warranty or breach of contract on account of any defect in the Equipment or failure of the Equipment to operate properly where the cause thereof is attributable to a defect in the work, labor, services or materials employed in parts or integral units of the Equipment which are not manufactured by Seller. Component parts or integral units of the Equipment not manufactured by Seller are sold only under such warranty as the manufacturer of such parts or units may give to Buyer. Seller shall assist Buyer in obtaining from the manufacturer, in accordance with the manufacturer's warranty (copies of which will be furnished upon request), the repair or replacement of any component parts or integral units of the Equipment that may prove defective in material or workmanship. The foregoing shall constitute the exclusive remedy of Buyer and the sole responsibility of Seller with respect to component parts or integral units of the Equipment not manufactured by Seller.

C. Warranty Limitations. Seller shall not be liable under any warranty if Seller determines that the defect was caused by misuse, abuse, improper application, improper operation, improper maintenance, alteration, repair or modification, negligence in use, casualty, storage, handling or any other cause beyond the control of Seller. The remedies set forth herein shall be Buyer's sole and exclusive remedies for any breach of warranty. If any samples, technical literature, illustrations, catalogues or other documents have been shown to Buyer, they shall not give rise to any express or implied warranty except to the extent that such warranties are specifically set forth in writing in the Proposal.

9. Limitation of Liability, Safety and Indemnification. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER, OR TO BUYER'S OFFICERS,

EMPLOYEES OR REPRESENTATIVES, OR TO ANY THIRD PARTY, FOR ANY SPECIAL, INDIRECT, INCIDENTAL, LIQUIDATED OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFIT OR REVENUES, LOSS OF USE OF EQUIPMENT, DAMAGE TO ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF SUBSTITUTE PRODUCTS, FACILITIES OR SERVICE, OR DOWNTIME COSTS. Buyer assumes all risks and liabilities for any loss, damage or injury to persons, property, or the environment arising out of, connected with or resulting from the use or subsequent sale of the Equipment, either alone or in combination with other products. Buyer expressly agrees that the remedies granted to it hereunder are Buyer's sole and exclusive remedies with respect to any claim of Buyer arising under the Proposal. During the life of the Equipment, Buyer agrees to provide to all Equipment users (including its own employees and independent contractors) all of Seller's safety information as contained in warnings, instructions, owner's manuals, safety features of the Equipment and to adequately train all users in the safe use and maintenance of the Equipment. Buyer agrees to defend, indemnify and hold Seller harmless from and against all claims, losses, damages, liabilities and expenses (including reasonable attorneys' fees) to the extent that they relate to or have been caused by Buyer's failure to comply with the provisions of the Proposal or Buyer's negligence.

10. Patents. If any claim is asserted or action commenced against Buyer based upon a claim that the Equipment or any part thereof manufactured or sold by Seller constitutes an infringement of any U.S. Letters Patent or Trademark, Buyer shall give immediate notice thereof to Seller. Seller shall have the exclusive right, at its own expense, to conduct any litigation and/or settlement negotiations with respect to such claim or action. However, Buyer shall render all reasonable assistance required by Seller in the defense of the claim or action. Subject to the conditions and limitations set forth below, Seller shall pay such portion of the damages awarded against Buyer in such action as are allocable to the infringing Equipment or parts manufactured or sold by Seller, to the exclusion of any damages awarded for the use of such Equipment or part. In no event shall Seller's liability to Buyer exceed the purchase price of the infringing Equipment or part. If the Equipment or any part thereof manufactured or sold by Seller is held to be an infringement in such action, and the use thereof is enjoined or if, as a result of a claim or settlement, Seller deems the continued use thereof inadvisable, Seller may, at its sole option and expense, (a) procure for Buyer the right to continue using said Equipment or parts, (b) replace said Equipment or parts with non-infringing equipment or parts, (c) modify said Equipment or parts so that they are no longer infringing, or (d) refund the purchase price of the Equipment or parts less reasonable depreciation and remove the Equipment or parts from Buyer's place of business. The obligation of Seller set forth in this Section shall be null and void and Seller shall have no liability whatever to Buyer on account of any judgment, award or damages suffered by Buyer arising out of such claim or action, if (a) Buyer does not give immediate notice to Seller of such claim or action, (b) Buyer does not render all assistance reasonably required by Seller in the defense of such action or claim, (c) Buyer interferes with Seller's defense thereof, (d) the Equipment or any part thereof has been changed or altered, has been combined with equipment or parts not manufactured by Seller, or has not been used in accordance with Seller's specifications, or (e) the Equipment, or any part thereof, was manufactured by Seller in accordance with Buyer's designs, blueprints, samples, or specifications, in which case Buyer shall defend, indemnify and hold harmless Seller from any and all expenses (including reasonable counsel fees), injuries or loss arising out of any claims or actions related to the manufacture, use or sale thereof. THE FOREGOING SETS FORTH THE SELLER'S ENTIRE LIABILITY FOR PATENT OR TRADEMARK INFRINGEMENT INVOLVING THE EQUIPMENT OR ANY PART THEREOF. Nothing in the Proposal shall be deemed to grant any license or right to Buyer, express or implied, under any patents or patent application, design patent or trademark owned or controlled by Seller.

11. Specifications/Documents. The specifications and all other documents supplied pursuant to and in connection with the Proposal are the property of Seller and are being made available to Buyer on a non-exclusive basis as long as Buyer owns the Equipment. The specifications and documents shall not be used by Buyer in any manner for manufacture or for the purchase or other acquisition of similar equipment from any competitor of Seller nor will Buyer display, exhibit, or otherwise make available such specifications and documents to any competitor of Seller.

12. Confidentiality. Buyer acknowledges that Buyer, its employees, agents, and contractors may receive certain proprietary and confidential business or other information of Seller in connection with Buyer's purchase, installation or use of the Equipment. Buyer shall not disclose such information to any other party in any manner whatsoever, or use such information for any purpose other than in connection with Buyer's purchase, installation or use of the Equipment, without the prior written consent of Seller. Buyer shall take all reasonable precautions to protect the confidentiality of such information, which precautions shall in no event be less that the precautions taken to protect its own proprietary and confidential information.

13. Performance and Payment Bond. Notwithstanding any provisions in the Proposal, contract, the bond or any other document or representation to the contrary, the surety's liability hereunder shall be limited to those provisions of the contract relating to performance of construction and the liability of the surety shall not extend to claims of any kind or nature which in any way relate to any alleged design and/or engineering defect, inadequacy, or deficiency or any damages arising from any alleged design and, or engineering defects, inadequacy or deficiencies. Furthermore surety's liability hereunder shall be limited to the warranty against defective materials and workmanship as defined in the Contract, not to exceed one (1) year from Substantial Completion. Surety's liability shall not extend to any claims resulting from any special, or extended warranties.

14. Adjudication of Disputes and Governing Law. The parties agree that any controversy or claim between them shall be governed by and construed in accordance with the laws of the State of New Jersey and, unless an alternative jurisdiction is selected by Seller, shall be adjudicated exclusively in the State Courts of New Jersey. Buyer consents to the exclusive jurisdiction of the state courts of New Jersey. Service of process by certified or registered mail, return receipt requested, shall be sufficient to commence suit and Buyer waives any right to personal service of process. THE PARTIES AGREE TO WAIVE THE RIGHT TO TRIAL BY JURY. Provided, however, if Seller so directs, the controversy or claim shall be resolved by binding arbitration administered by the American Arbitration Association under its Commercial Arbitration Rules, and judgment on the award rendered by the arbitrator(s) may be entered in any court having jurisdiction thereof. The arbitration shall take place in a location in New Jersey selected by Seller. Nothing contained herein shall prevent a party from applying to a court having jurisdiction for emergent equitable relief. In the event Seller prevails, Seller shall be entitled to recover reasonable counsel fees and costs.

15. Miscellaneous. The parties specifically exclude the provisions of the United Nations Convention On Contracts For the International Sale of Goods. Section headings are for convenience only and shall not be used to interpret or change the provisions of the Proposal. The Proposal shall be construed in accordance with its plain meaning and not against either party as the drafting party. The Proposal expressly limits acceptance to the terms and conditions in the Proposal and supercedes all other terms and conditions contained in any purchase order, sales order, proposal, acknowledgement or other document submitted by Buyer prior to, concurrently with, or pursuant to the Proposal. Any additional or different terms proposed by Buyer are expressly rejected unless specifically accepted by Seller in writing. The Proposal constitutes the complete and final agreement of the parties hereto and supercedes all prior or contemporaneous agreements, discussions and/or representations not expressly stated in the Proposal. No alterations, modifications, deletions, additions or changes in or to the Proposal, whether by Buyer's purchase order or otherwise, shall be binding unless embodied in writing signed by both parties. Buyer shall not assign the Proposal without Seller's prior written consent. Seller's failure at any time to insist upon strict performance of any term or condition of the Proposal shall not be construed as a waiver of any subsequent breach of any term or condition. Buyer shall not assert against any assignee of Seller of the Proposal any claim or defense that it may have against Seller. The invalidity or unenforceability of any provision of the Proposal shall not affect the other provisions hereof, and the Proposal shall be construed in all respects as if the invalid or unenforceable provision had been omitted. Seller shall not be liable for any costs, expenses or damages or be deemed to be in default of the Proposal as a result of any delay in performance including, but not limited to, a delay caused by any act of God, labor problem, war, fires, floods, accidents, act of a governmental entity, accident (whether valid or invalid), unavailability or delay in obtaining labor, parts, transportation or equipment or any cause beyond Seller's control. If there is any conflict between the printed Terms and Conditions and the typed portion of the Proposal, the typed portion shall control. Notices and consents required by the Proposal shall be in writing and sent by certified mail, return receipt requested, or by recognized overnight courier with a copy, if possible, sent by facsimile. The Proposal shall, when signed by Buyer or otherwise adopted by Buyer, constitute Buyer's offer to buy the Equipment. The Proposal shall not constitute a binding agreement until accepted by an authorized officer of Seller at Seller's New Jersey office. Without limiting the generality of the foregoing, acceptance of a deposit or other payment from the Buyer shall not constitute acceptance by the Seller.

INDUSCO
Environmental Services, Inc.

PO Box 8093
Spanish Fort, Alabama 36577
Phone: 251-621-2338
Fax: 251-621-2343

Date: May 6, 2016

Quote: IE216037 rev 1

Company: Moss Kelley / PBCWUD WTP-2
Attn: John Mushinsky
Address:
Moss Kelley, Inc. /MKI Services, Inc.
210 University Drive, Suite 500
Coral Springs, FL 33071

Project Name: PBCWUD WTP-2
Phone: (954)755-2092
Fax: (954)341-9370
Email: jmm@mosskelley.com

Item	Description/Part Number	Qty (Each)	Unit Price	Subtotal
1	Furnish (1) Lot FRP Duct Spools per attached drawing. Fabrication: Hand Lay-up per NBS PS 15-69 and Hand Lay-up per ASTM D 3982-08 Resin: Derakane 411 or equal Thickness: Suitable for +/- 20" WC **Ductwork Notes:** 1. Expansion joints, supports and support design by others. 2. Laminates will confirm to tables 5-1 and 5-2 of SMACNA not filament wound which contradicts tables 5-1 and 5-2.	1	28,101.70	28,101.70
2	36" Model 203 Damper w/Handwheel	2	2854.30	5708.60
3	48" Model 203 Damper w/Handwheel	1	5107.15	5107.15
4	316 SS Fasteners for Duct Flange to Damper Flange	Lot	413.00	413.08
5	Gaskets 1/8" Thk. EPDM	Lot	503.70	503.70
6	48" Fiberglass Field Wraps	2		
7	36" Fiberglass Field Wraps (Material only)	1		
8	Gas outlet 48" diameter flanged elbow w/ wire mesh	1		
9	24" Manway Cover	1		
10	Lot, Supervision, Labor, Tools, Misc. Equipment, Insurance to Install duct, field wraps, dampers, gas outlet, manway. **(No more than 2 trips 4 days total)**	1	24,631.56	24,631.56
11	60' Straight Boom (1 DAY)	1	2500.00	2500.00
	Total			**66,965.79**

Exclusions
Chain wheels (unless specified)
Chain for chain wheels
Electric or Pneumatic Actuators
No Duct Supports

1. ALL ORDERS MUST HAVE: PO#, SHIPPING ADDRESS, BILLING ADDRESS, CONTACT NAME, PHONE NUMBER, FAX NUMBER, TAX EXEMPT CERTIFICATE (if applicable).
2. ALL SALES ARE FINAL -PLEASE REVIEW AND VERIFY ALL PARTS AND ITEMS QUOTED
3. NO FEDERAL, STATE, OR LOCAL TAXES/FEES INCLUDED.

Terms & Conditions	
Proposed Shipping Date TBD	**Payment Terms** Net 20 days
Shipping Method	**Shipping Terms:** **FOB Origin,** Prepay & add
F.O.B.	This Quotation is valid for 30 days.

Thank you for your inquiry!

From: Craig Irwin
To: Troy Lyn
Cc: Bruce Rahmani
Subject: FW: Phase II and Odor Control Projects - Panels, Q151A028
Date: Thursday, May 5, 2016 1:31:35 PM
Attachments: image001.png

Please proceed with adding the anti-spin on the blowers. I have always called it non-reverse ratchet.....

From: Mark Petrucelli [mailto:mpetrucelli@bioairsolutions.com]
Sent: Thursday, May 05, 2016 1:20 PM
To: Troy Lyn
Cc: John McLaughlin; Chris West; Craig Irwin; Bruce Rahmani
Subject: RE: Phase II and Odor Control Projects - Panels, Q151A028

Good afternoon Troy,

To add an anti-spin brake on the blowers, it would cost a total of $7,623.00 for all 3 blowers ($2541.00 per blower).

Thanks,
Mark

Mark Petrucelli | **Applications Engineer** | **BioAir Solutions, LLC**
+1-856-258-6969 x129 | mpetrucelli@bioairsolutions.com

From: Troy Lyn [mailto:tlyn@globaltechdb.com]
Sent: Wednesday, May 04, 2016 11:11 AM
To: Mark Petrucelli <mpetrucelli@bioairsolutions.com>
Cc: John McLaughlin <johnjmcl@aol.com>; Chris West <cwest@bioairsolutions.com>; Craig Irwin <CIrwin@pbcwater.com>; Bruce Rahmani <bruce@globaltechdb.com>
Subject: RE: Phase II and Odor Control Projects - Panels, Q151A028

Mark. Unfortunately I don't think there is no space within the existing ductwork to install a backdraft dampener – see left hand side of picture which shows the blower/enclosure is connected to duct manifold. Attached pictures shows the blower connection inside the blower enclosure. There is an isolation dampener in between the blower housing and duct manifold. We are looking into placing an actuator there to close dampener when the blower is not in use. Also the backdraft dampener will impart more head loss which I am unsure if you had accounted for in the proposed blower.

Can you provide the additional cost for the anti-spin breaks just as an added protection for the blower. I would need this cost by Friday at the latest. Thanks.

From: Mark Petrucelli [mailto:mpetrucelli@bioairsolutions.com]
Sent: Wednesday, May 4, 2016 10:56 AM
To: Troy Lyn <tlyn@globaltechdb.com>
Cc: John McLaughlin <johnjmcl@aol.com>; Chris West <cwest@bioairsolutions.com>
Subject: RE: Phase II and Odor Control Projects - Panels, Q151A028

Good morning Troy,

Typically, in situations like this we would have backdraft dampers on the outlets of each of the three (3) blowers to eliminate the possibility of the flow traveling through the standby blower in the opposite direction. Speaking with the blower manufacturer they can add anti-spin brakes to the blowers, but this would only stop the motor from spinning in the opposite direction rather than seal it off from any airflow pushed into the blower outlet.

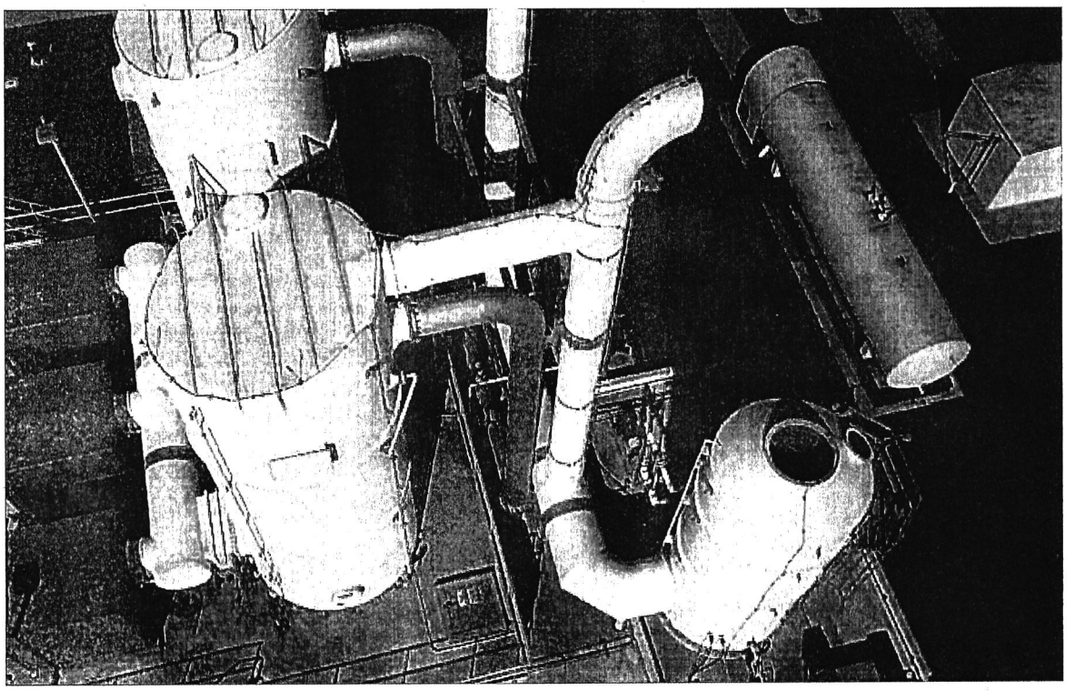
If you would like us to price out the anti-spin brakes for these blowers let me know. Again, the preferred method here would be to add backdraft dampers on each blower outlet, if that is possible.

Thanks,
Mark

Mark Petrucelli | **Applications Engineer** | **BioAir Solutions, LLC**
+1-856-258-6969 x129 | mpetrucelli@bioairsolutions.com

From: Troy Lyn [mailto:tlyn@globaltechdb.com]
Sent: Tuesday, May 03, 2016 2:12 PM
To: Chris West <cwest@bioairsolutions.com>; Mark Petrucelli <mpetrucelli@bioairsolutions.com>
Cc: John McLaughlin <johnjmcl@aol.com>
Subject: RE: Phase II and Odor Control Projects - Panels, Q151A028

Chris. We have gotten county's comments and are trying to revise our work authorization. So we are making progress. One of the question they have is regarding the blower. They would like to confirm that the blower is reverse ratchet. The concern is that the blowers are on a common manifold and air flow could be reversed through the blower - see left side of picture below. Please confirm as soon as you can. We are hoping to finalize by end of week. Thanks.



Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

PROCO PRODUCTS, INC.

QUOTATION

267410

PROCO PRODUCTS, INC.
The Expansion Joint and Check Valve People

REMIT TO ADDRESS: 3477 PAYSPHERE CIRCLE CHICAGO IL 60674

SHIP TO ADDRESS: 2431 N. WIGWAM DRIVE STOCKTON, CA 95205

EMAIL: sales@procoproducts.com -www.procoproducts.com
Phone: (209) 943-6088 - Fax: (209) 943-0242 - Toll Free Phone: (800) 344-3246

IN ALL COMMUNICATIONS, INDICATE ABOVE NUMBER

Date of Quotation:

04/27/2016 WCO2 _ IM

ATTENTION:

GLOBALTECH, INC. **217669**

1075 BROKEN SOUND PARKWAY #103
BOCA RATON FL 33431
US

BRUCE RAHMANI
PHONE: (561) 997-6433
FAX: (561) 997-5811
EMAIL: bruce@globaltechdb.com

Fabricated items are not cancelable or returnable.
Stocked items can be returned within one month of sale for a 10% restocking fee, if in resellable condition.
Quote valid for 60 days.

Project	

ITEM	QUANTITY	DESCRIPTION OF GOODS	UNIT PRICE	TOTAL PRICE
		PROCO STYLE 520, U-TYPE, FABRIC REINFORCED FLUE DUCT EXPANSION JOINT WITH INTEGRAL RUBBER FLANGES.		
		RATED@ +- 3 PSI		
		THIS IS A NON-STOCK ITEM AND IS NOT ELIGIBLE FOR CANCELLATION OR RETURN.		
1	2	EJ520/EE 520/EE EPDM COVER, EPDM TUBE 36" ID X 10 " F/F WITH EPDM TUBE/COVER, 150# DRILLED FLANGES 1/4" THK X 2PLY	1,394.00	2,788.00
2	2	EJRINGS RETAINING RING PER DESCRIPTION 316 SS . RET. RINGS	1,460.00	2,920.00
3	1	EJ520/EE 520/EE EPDM COVER, EPDM TUBE 42" ID X 12 " F/F WITH EPDM TUBE/COVER, 150# DRILLED FLANGES 1/4" THK X 2PLY	1,445.00	1,445.00
4	1	EJRINGS RETAINING RING PER DESCRIPTION 316SS RET. RINGS SET	2,700.00	2,700.00
5	1	EJ520/EE 520/EE EPDM COVER, EPDM TUBE 48" ID X 12 " F/F WITH EPDM TUBE/COVER, 150# DRILLED FLANGES 1/4" THK X 2PLY	1,656.00	1,656.00
6	1	EJRINGS RETAINING RING PER DESCRIPTION	1,880.00	1,880.00

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Quote valid for 60 days.

Project	

ITEM	QUANTITY	DESCRIPTION OF GOODS	UNIT PRICE	TOTAL PRICE

1/4 SECTIONS-1 SET 316 SS RET.RINGS

LEAD TIMES MAY INCREASE PER SPECIAL TOOLING ON DUCT. JOINTS.

THIS IS A SPECIAL ORDER ITEM AND MAY NOT BE CANCELLED OR RETURNED AFTER DRAWING APPROVAL.

PLEASE REFERENCE THIS QUOTE NUMBER WHEN PLACING AN ORDER.

THANKS, IVAN MARTINEZ

SHIP VIA: Best Way
FREIGHT TERMS: PPD&ADD

TOTAL NET	13,389.00
TOTAL TAXES	
QUOTE TOTAL	

F.O.B. Point	Shipping Point	**Terms of Sale:** NET 30 DAYS	
Lead Time	4-5 WEEKS ARO		

PROCO PRODUCTS, INC.

By: Ivan Martinez

This quotation is subject to PROCO PRODUCTS, INC. Terms of Sale effective on the date the Offer is sent, which are incorporated in full by this reference. PROCO PRODUCTS, INC. Terms of Sale are available at http://www.procoproducts.com/terms.html and also will be sent by mail or facsimile to you, the purchaser upon request. PROCO PRODUCTS, INC. limits acceptance to PROCO PRODUCTS, INC. Terms of Sale, and objects to any additional or different terms in your purchase order or acceptance.

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HAROLD BECK & SONS, INC.
11 TERRY DRIVE • NEWTOWN, PENNSYLVANIA 18940 • USA
PHONE: 215-968-4600 • FAX: 215-860-6383 • www.haroldbeck.com

sales@haroldbeck.com
Visit us on the web at www.haroldbeck.com

Quote #: JKT-16-106936

Quote

Quote To:

Globaltech
6601 Broken Sound Pkwy NW
#610
Boca Raton, FL 33487
USA

Primary Contact: Bruce Rahmani

Date: 5/4/2016 **Expires:** 7/3/2016

Sales Person: Jay Tannan

Summary:
Budgetary RFQ - Scrubber Valves

Thank you for the opportunity to provide this quotation. Orders placed with Harold Beck & Sons Inc. are subject to terms and conditions of sale as shown. Prices quoted do not include sales, use, or municipal taxes unless otherwise specified. All prices quoted are in US Dollars unless otherwise specified. Using the contact information provided above, orders may be placed by e-mail, fax, telephone, or mail. Please note the Beck quotation number on your purchase order.

Beck drives are supported by the best warranty in the industry. Please refer to the enclosed Terms & Conditions for details of our 3 year warranty.

Lead Time (Weeks)*: 8
Freight Pay Terms: Prepaid & Added
Shipping Terms: FOB Newtown, PA
Order Pay Terms: Net 30 PCA

CC: David G. Sylvanus
Attachments:

*** This shipment leadtime approximates the shipment date scheduling after receipt of a purchase order. However, please consult the factory if it does not meet your requirements.**

Alt for Line	Item	Part #	Description	Quantity	Unit Price	Line Item Total
	1	11-163	11-163 ROTARY CONTROL DRIVE With HDWR for Field Mounting Valve/ Scrubber Actuator, direct-mount hardware and 4 foot stainless steel bonnet extension to mount on existing 30" butterfly valve in the field. Subtract $2,000 from the price if the 4 foot extension is not required. ***An additional bracket may be required to support the actuator and extension. This is not included in the price and is the responsibility of the purchaser to determine if it is required.	3	5,775.00	$17,325.00
1	2	11-153	11-153 ROTARY CONTROL DRIVE With HDWR for Field Mounting Alternate for item 1 Actuator, mounting pedestal and pipe kit to linkage connect on existing 30" butterfly valve in the field. This option may work if you can mount the actuator on the ground and operate the valve using the existing lever arm. Please consult factory prior to ordering this option.	3	4,200.00	$12,600.00

(Quote Total does not include Alternate items) **Quote Total:** **$17,325.00**

Quote Notes: Note: For shipments after February 1, 2016, the Group 11 actuator utilizes two 1" NPT conduit entrances instead of one 1" and one 1/2". This reflects a design change to allow for more/larger wires, and common adapting parts.

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sales@haroldbeck.com
Visit us on the web at www.haroldbeck.com

Quote #: JKT-16-106936

Quote

Line Item #	Qty	Model/Part #	Application Description
1	3	11-163	Valve/ Scrubber Actuator, direct-mount hardware and 4 foot stainless steel bonnet extension to mount on existing 30" butterfly valve in the field. Subtract $2,000 from the price if the 4 foot extension is not required. ***An additional bracket may be required to support the actuator and extension. This is not included in the price and is the responsibility of the purchaser to determine if it is required.

SPECIFICATIONS:

Voltage/Phase/Freq:	120/1/60
Torque (lb-ft):	120
Stroke Timing (seconds):	36
Travel (degrees):	90
Auxiliary Limit Switches:	2X SPDT
Control Signal:	Open-Close or pushbutton operation
Feedback Signal:	NONE
Loss of Power Action:	Stay In Place
Enclosure Rating:	Weatherproof
Wiring Diagram:	17-5503-03

Integral Features:
- Self-Locking, Self-Releasing Gear Train
- Over-Travel Limit Switches
- Handwheel (manual operation without power)
- Non-coasting Beck control motor with instant magnetic braking
- Dust-Tight Construction
- Cast Mechanical Stops
- 5-Position Handswitch (electrical manual operation) auxiliary contact closed in AUTO

Additional Features: 4 foot Stainless Steel Bonnet Extension
SS Hardware and Epoxy Paint

Valve Info: Customer Field Mounting with Beck Supplied Mounting Hardware
30" Butterfly Valve

Valve/Damper Supplied By: Customer

Line Notes: Built to the similar specification as Beck S/N 11-163-152901-01-0x

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Visit us on the web at www.haroldbeck.com

Quote #: JKT-16-106936

Quote

Line Item #	Qty	Model/Part #	Application Description	Alternate For Line:
2	3	11-153	Alternate for item 1 Actuator, mounting pedestal and pipe kit to linkage connect on existing 30" butterfly valve in the field. This option may work if you can mount the actuator on the ground and operate the valve using the existing lever arm. Please consult factory prior to ordering this option.	1

SPECIFICATIONS:

Voltage/Phase/Freq:	120/1/60
Torque (lb-ft):	120
Stroke Timing (seconds):	40
Travel (degrees):	100
Auxiliary Limit Switches:	2X SPDT
Control Signal:	Open-Close or pushbutton operation
Feedback Signal:	NONE
Loss of Power Action:	Stay In Place
Enclosure Rating:	Weatherproof
Wiring Diagram:	17-5503-03
Linkage:	20-1730-05

Integral Features:
- Self-Locking, Self-Releasing Gear Train
- Over-Travel Limit Switches
- Handwheel (manual operation without power)
- Non-coasting Beck control motor with instant magnetic braking
- Dust-Tight Construction
- Cast Mechanical Stops
- 5-Position Handswitch (electrical manual operation) auxiliary contact closed in AUTO
- Crank Arm with Adjustable Radius

Additional Features: SS Hardware and Epoxy Paint
Generic 6.5" High Mounting Pedestal (p/n 20-2815-63)

HAROLD BECK & SONS, INC

Thank you for the opportunity to furnish this invoice. Orders are subject to the following terms and conditions.

Price and Delivery

The prices and estimated delivery on the face of this quotation are valid for the periods stated, provided Buyer's order, release for production, and requested delivery date are all within the dates shown on the face of this quotation. Additional extended price protection is not available unless specifically so stated on the face of the quotation.

Prices are subject to correction for errors, and are in accordance with price control regulations of the U.S. Government.

Changes to Quantities and Specifications

Changes in quantities and specifications requested or approved by Buyer after receipt of the Buyer's order will be invoiced at the price in effect at the time the change is received.

Delivery and Risk of Loss

Shipment shall be FOB Seller's factory, Newtown, Pennsylvania USA. Buyer hereby grants to Seller a security interest in the equipment purchased to secure payment of the purchase price invoiced to Buyer. Risk of loss or damage in transit shall be upon Buyer even if the equipment is shipped FOB place of destination.

Payment and Credit Terms

Unless otherwise specified on the face of this quotation, terms of payment are net cash 30 days from date of invoice, subject to approval and continuation of approval of credit by the Seller. All payments are to be made at par in U.S. currency through a U.S. bank to the address stated in Seller's invoice.

If at any time after any approval of credit the financial conditions of the Buyer shall be determined or believed by the Seller, in its sole judgment, to be or to have become such as not to justify the continuation of the above credit terms by the Seller to the Buyer, terms of payment shall be or become COD or immediate partial or full advance payment, or a combination of the foregoing methods, or as the Seller may then or thereafter from time to time elect and specify.

Remedies upon Default in Payment

In the event of default by Buyer in making payment when due, the Seller, its agents or assigns, is authorized to take possession and remove the equipment from the Buyer's premises, or elsewhere, without demand or other cause or notice of any kind, and all rights for action of trespass or other causes are waived by Buyer, Buyer will pay to Seller reasonable charges for its use of the equipment and reimburse Seller for its expenses or repossession.

Shipping Dates

Shipping dates are approximate and are based upon prompt and timely receipt of all necessary information from the Buyer. Orders which require approval prior to release for production, or which are placed on hold any time after receipt of order, but prior to shipment, will be subject to revised delivery dates. Such delivery dates shall be the estimated delivery dates in effect at the time the release for production or release from hold is received by Seller.

The Seller shall not be liable for delays in delivery or failure to manufacture or deliver due to: (1) causes beyond its reasonable control, (2) acts of God, acts of the Buyer, acts of civil, or military authority, priorities, fires, strikes, floods, epidemics, war, riot, delays in transportation, (3) inability to obtain necessary labor, materials, components, or manufacturing facilities, or (4) changes in specifications, directions, or design requested by Buyer or agreed to by Buyer. In the event of such delay, the delivery date shall be extended for that length of time as may be reasonable necessary to compensate the delay.

Invoicing

The Seller reserves the right to invoice when orders are ready for shipment and are held past the scheduled delivery date by Buyer's request, or any other reason beyond the Seller's control. Terms of payment for invoices issued under such circumstances will be the same as though the invoice were prepared at the time of shipment. Buyer will be liable for actual costs of storage and transportation resulting from said deferral of delivery.

Maintenance and Installation; Instruction Manual

Unless otherwise specified on the face of this quotation, installation and maintenance of the equipment is the responsibility of the Buyer.

One instruction manual including installation, maintenance, and parts information is included for each Model type in the shipment. Additional copies requested will be shipped separately unless otherwise instructed. There may be a charge for requested quantities that are large relative to number of units shipped.

Three Year Limited Warranty Statement

Harold Beck & Sons, Inc. (Beck) warrants that our equipment shall conform to Beck's standard specifications. Beck warrants said equipment to be free from defects in materials and workmanship. This warranty applies to normal recommended use and service for three years from the date on which the equipment is shipped. Improper installation, misuse, improper maintenance, and normal wear and tear are not covered.

The Buyer must notify Beck of any warranty issues within 37 months of original shipment date and return the goods in question, at Buyer's expense, to Beck for evaluation. If the product fails to conform to the warranty, Beck's sole obligation and the Buyer's exclusive remedy will be: 1) the repair or replacement, without charge, at Beck's factory, of any defective equipment covered by this warranty, or 2) at Beck's option, a full refund of the purchase price. In no event will Beck's liability exceed the contract price for the goods claimed to be defective.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL OTHER OBLIGATIONS OR LIABILITIES OF BECK. In no case shall Beck be liable for any special, incidental or consequential damages based upon breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of revenue, loss of use of the equipment or any associated equipment, cost of capital, cost of any substitute equipment, facilities or service, downtime, the claims of third parties including customers and injury to property.

Buyer acknowledges its responsibilities under OSHA, related laws and regulations, and other safety laws, regulations, standards, practices or recommendations that are principally directed to the use of equipment in its operating environment. Buyer acknowledges that the conditions under which the equipment will be used, its use or combination with, or proximity to, other equipment, and other circumstances of the operation of such equipment are matters beyond Beck's control. **Buyer hereby agrees to indemnify Beck against all claims, damages, costs or liabilities (including but not limited to, attorney's fees and other legal expenses), whether on account of negligence or otherwise, except those claims based solely upon the negligence of Beck and those claims asserted by Beck's employees which arise out of or result from the operation or use of the equipment by Beck's employees.**

Return of Equipment for Repair

Authority for return of equipment for repair, whether under the warranty clause or otherwise, must be obtained from the Seller in advance. Equipment returned for repair must be carefully packed so as to reach the Seller's factory without damage. Buyer shall pay shipping costs.

Service

Field service to be performed at the Buyer's plant or construction site can be arranged separately from this quotation, unless specifically included on the face thereof. Under such service arrangements, the Seller provides qualified technical personnel to provide field installation services, field repair and modernization services, or technical field assistance.

Dates for such service, and the scope of the service required, must be arranged for in advance. Buyer will be responsible for all travel and living expenses of Seller's personnel, as well as service time on the job, all in accordance with then current rates.

Terms and conditions for service agreements are specified in Beck's Selling Policy L-5526.

Return of Equipment for Credit

Unused equipment which has been invoiced to Buyer within one year may be returned for credit, if consent is first obtained. Such consent will not be unreasonably withheld. Consent for return will not be given with respect to equipment not currently manufactured by Seller at the time of the request. Equipment returned for credit must be carefully packed so as to reach the Seller's factory without damage. Buyer shall pay all shipping costs. Returns will be subject to restocking and handling charges.

Should the equipment or any interest in the equipment supplied under this contract be transferred to another party, all the terms and conditions of this contract shall apply to that other party. It is Buyer's responsibility to take such measures as are necessary to ensure that the terms and conditions of this contract apply to such other party.

Cancellation

Any order placed with the Seller can be canceled by the Buyer subject to payment of reasonable cancellation charges, which will normally include the following: (a) work completed; (b) work-in-progress; (c) raw materials and purchased parts, at cost to Seller plus handling charges; and (d) any other expenses or charges, including engineering and overhead charges incurred by Seller up to date of cancellation.

Buyout Items

Buyout equipment is any device not manufactured by the Seller, but which may be mounted on, shipped with, or shipped separately from the Seller's products. Any increase in price from the Seller's source of buyout items that is received from the time an order is received until it is shipped, will be passed on to the Buyer in the final invoice of the order.

Seller makes no warranty, express or implied, with respect to buyout equipment.

Taxes

The Seller's prices do not include sales, use, excise, or similar taxes, or import duties; however, if the Seller is registered for use/sales tax collection with the state to which equipment shall be delivered, and such taxes are applicable, the Seller's invoice prices shall include the appropriate use/sales tax. Consequently, in addition to the price specified herein, the amount of any present or future sales, use, excise, or other similar tax or import duty applicable to the sale or use of the equipment hereunder shall be paid by the Buyer or, in lieu thereof, the Buyer shall provide the Seller with a tax exemption certificate acceptable to the taxing authorities. Buyer will indemnify and hold Seller harmless against any loss, expense, or payment occasioned by collection of any such tax or duty from Seller by any taxing authority.

Contract

The terms on this and the face side of this quotation will become our entire contract. If Buyer's order includes any different or additional terms, our acceptance of Buyer's order and supplements thereto is made conditional on Buyer's consent to the terms and conditions hereof (which may be evidenced by Buyer's acceptance of delivery of the equipment sold hereunder). Seller will not be bound by any different or additional terms and conditions contained in Buyer's order, or in any other document delivered to us by Buyer, unless such terms and conditions are expressly agreed to in writing by the Seller. This contract is to be construed according to the laws of the Commonwealth of Pennsylvania.