



## ABOUT GLOBALTECH, INC.

Globaltech is a privately-owned, local Design/Build firm with corporate headquarters in Boca Raton, FL. Originally established in 1993 and incorporated in April, 1995, we have been serving south Florida utilities for more than 25 years.

As an integrated project delivery firm, we offer comprehensive services in utility water and wastewater treatment system design and related facilities. Our full-service design-build capabilities range from conceptual planning, design, and permitting to services during construction, commissioning, and operations.

We offer all of the following State of Florida certifications under one roof:

- Professional Engineer - COA 7225
- General Contractor - CGC 1507230
- Mechanical Contractor - CMC 1249255
- Underground Contractor - CUC 1224907
- Plumbing Contractor - CFC 1427843

## Our Capabilities

Globaltech's commitment to design/build, engineering and construction excellence has resulted in numerous repeat clients, and enabled the company to grow and successfully take on larger projects. Through the skill and breadth of our staff we are able to self-perform most of our design and construction projects.

Globaltech is comprised of seasoned design professionals with a high level of proficiency in the execution of both large and small projects. Our experience includes projects that are varied in complexity of scope and technical breadth, and also span a range of budgets allocated to those projects. Our project managers have served in various capacities on projects ranging from small efforts comprised of a core of only a few individuals with budgets less than \$50,000 to large multi-discipline, multi-team projects with construction values in excess of \$50,000,000.



Globaltech has a total staff of 46 including 8 professional engineers with degrees in the following disciplines:

- Mechanical Engineering
- Environmental Engineering
- Electrical Engineering
- Civil Engineering
- Chemical Engineering
- Construction Management

Globaltech brings a group of talented staff that have successfully completed over 250 design-build projects. As a vertically integrated design-build firm our combined staff of in-house engineers, financial and administrative support staff, construction managers, and our line construction staff have worked cohesively on design-build projects for over 20 years.

As a self-performing design-build firm we have in-house construction crews, utility trucks, construction equipment, and specialty tools which allow us to control both quality and schedule for our projects.

Our office is fully equipped with current state-of-the-art computer systems and a full suite of today's engineering and construction management software products.

We have a strong history of collaborative design-build project delivery working with utility staff and our team partners to deliver best value. We adhere to Design-Build Best Practices established by the Design-Build Institute of America and pride ourselves on following established standards for progressive design-build.

## **Design/Build Services**

With Globaltech as your design build partner, you will benefit from our long history as a single source of accountability. Working alongside our utility clients, we have met unforeseen challenges and devised appropriate solutions for a wide variety of project types:

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Our Design/Build Services include:

- ◆ Water treatment, including:
  - Biological odor control
  - Lime Softening
  - Membrane plant optimization
  - Ion exchange
  - Disinfection improvements
- ◆ Raw water supply and transmission
- ◆ Water storage, pumping and distribution
- ◆ Chemical feed systems
- ◆ Wastewater treatment and reuse
- ◆ Wastewater collection and pumping
- ◆ Environmental improvements
- ◆ Power generation





**Paul Gandy, P.E.**  
President / CEO

#### AREAS OF EXPERTISE

- Program/Project Management
- Process Mechanical (water and wastewater treatment)
- Large capacity pumping stations
- Value Engineering
- Operation and Maintenance Construction
- Maintenance of plant operations

#### EDUCATION

B.S., Mechanical Engineering  
University of Florida

#### LICENSURE / CERTIFICATIONS

Florida Professional Engineer  
No. 37928

Florida Certified General Contractor  
No. CGC 1507230

Florida Certified Mechanical Contractor  
No. CMC 1249255

Florida Certified Plumbing Contractor  
No. CFC 1427843

Florida Certified Underground Utility and Excavation Contractor  
No. CUC 1224907

Paul Gandy has worked in the consulting engineering and construction business for over 30 years. He has experience in the planning, design, and construction of all facets of water and wastewater treatment as well as collection and distribution, hydraulics, fluids handling, and pumping. He has been involved with projects ranging in size from under 0.1 million gallons per day (MGD) to over 100 MGD. Water treatment projects have included: raw water supply including wellheads, pumping & piping; lime softening facilities; filtration, sludge dewatering and handling; membrane softening, brackish/seawater reverse osmosis; in-plant pumping and chemical facilities; concentrate disposal systems; and ground storage and high service pumping facilities.

#### FEATURED EXPERIENCE



#### **Lee County 4 MG GST and Transfer Pump Station, Design-Build** *Fort Myers, FL / Project cost: \$2.8 million*

Globaltech made improvements to the ground storage tank (GST) system at the Lee County Corkscrew WTP to increase detention time for chloramine disinfection. Our design-build proposal included value engineering options to reduce cost and improve operational flexibility. Paul served as lead designer and project manager for the installation of a 4 MG prestressed concrete GST, cast in-place concrete clearwell, transfer pump station, and associated piping valves, electrical and instrumentation. He also performed hydraulic calculations to confirm high service pump capacity for the \$2,800,000 project.

#### OTHER DESIGN-BUILD EXPERIENCE

**FPUA Reverse Osmosis Plant Phase 2 Expansion** / Fort Pierce, FL  
**Florida Water Services Lehigh Wellfield Expansion** / Lehigh Acres, FL  
**Seacoast Utility Authority High Service Pumps 2, 3 and 7 Replacement** / Palm Beach Gardens, FL  
**PBCWUD WTP 2 MIEX System Improvements** / West Palm Beach, FL



**Troy Lyn, P.E.**  
Executive Vice President

#### AREAS OF EXPERTISE

- Lime Softening
- Membrane Processes
- Anion Exchange
- Disinfection
- Chemical Feed Systems
- WTP Regulatory Compliance

#### EDUCATION

M.S., Environmental Engineering  
University of Central Florida

B.S., Environmental Engineering  
University of Central Florida

#### LICENSURE / CERTIFICATIONS

Florida Professional Engineer  
No. 49525

#### PROFESSIONAL ASSOCIATIONS

Water Environment Federation  
American Water Works Association  
Southeast Desalting Association  
American Public Works Association  
Southeast Florida Utility Council

Troy Lyn has served in the water utilities industry for over 26 years. He has evaluated many conventional and advanced water treatment processes using desktop studies, bench-scale units, pilot-scale units, and full-scale plant studies to determine feasibility and effect on water quality, operation, maintenance, and cost. Troy has also evaluated and developed action plans to control microbial regrowth and corrosion in water distribution systems. He designed, permitted, and constructed lime softening/filtration facilities and advanced water treatment processes such as membranes (microfiltration, nanofiltration, reverse osmosis), anion exchange, and enhanced coagulation. Design projects have included pumping systems, piping systems, and chemical storage and feed systems including chlorine gas, sodium hypochlorite, ammonia gas, ammonium sulfate, carbon dioxide gas, sodium hydroxide, sulfuric acid, fluoride, lime, and polymers.

#### FEATURED EXPERIENCE



#### **Fort Pierce Utility Authority Replacement Well S-8R**

*Fort Pierce, FL / Project cost: \$399,000*

Troy was the project manager and lead designer for this project. FPUA wanted to improve the reliability and quantity of raw water supply to the existing lime softening plant. However, the permitting of brand new wells would have taken a long time due to South Florida Water Management District (SFWMD) restrictions on using the surficial aquifer and Florida Department of Environmental Protection (FDEP) setback criteria. Instead, a replacement well was installed to replace the existing well that was diminished in capacity.

#### OTHER DESIGN-BUILD EXPERIENCE

**PBCWUD WTP 11 RO Skid Energy Device Improvements / Belle Glade, FL**

**Lauderhill WTP Disinfection System Upgrade / City of Lauderhill, FL**

**FPUA Sodium Hypochlorite Conversion & Four-Log Virus Treatment / Fort Pierce, FL**



**David Schuman, P.E.**  
VP of Engineering

**AREAS OF EXPERTISE**

- Project Management
- Water Treatment Systems
- Wastewater Treatment Systems
- Pumping Systems
- Chemical Feed Systems
- Hydraulics

**EDUCATION**

M.S., Environmental Engineering  
Virginia Polytechnic Institute

B.S., Civil Engineering  
Florida International University

**LICENSURE / CERTIFICATIONS**

Florida Professional Engineer  
No. 52092

**PROFESSIONAL ASSOCIATIONS**

Water Environment Federation  
American Public Works Association  
Southeast Florida Utility Council

David Schuman has more than 25 years of experience in numerous water and wastewater utility projects in Florida. He has expertise in treatment/process technologies, pump stations, pipelines, hydraulics, and mechanical design for both design-bid-build and Design-Build projects. David's design experience includes many facets of water supply, treatment, storage and conveyance systems including lime softening plants, membrane softening plants, reverse osmosis plants, pump stations, and storage tanks. He has served in a variety of roles involving water quality studies, process engineering, design engineering, cost estimating, permitting, project management, start-up services, and construction management.

**FEATURED EXPERIENCE**



**FPUA Lime Softening Unit Rehabilitation, Henry A. Gahn WTP**

*Fort Pierce, FL / Overall project cost: \$7.9 million*

Dave recently served as project manager responsible for the design and construction for the rehabilitation of most of the lime softening facilities at the Henry A. Gahn WTP. He oversaw concrete and steel repairs, drive replacements, replacement of the Accelator internals, replacement of all the filter media, rehabilitation of the filter underdrains, blasting and coating, replacement of backwash and transfer pumps, replacement of all piping associated with the softeners, replacement of all the pneumatic control valves with electrically actuated control valves, new aluminum handrails/ walkways and installation of a new PLC based control system.

**OTHER DESIGN-BUILD EXPERIENCE**

**FPUA WWTP Clarifier Mechanism Replacement / Fort Pierce, FL**

**PBCWUD South Bay Regional Pumping Station / South Bay, FL**

**SUA Biosolids Equipment Improvements / Palm Beach Gardens, FL**

**CSID WWTP Influent Screen Replacement / Coral Springs, FL**



**Pranoti Kikale**  
Project Engineer I

**AREAS OF EXPERTISE**

- Wastewater Treatment
- Sustainable Water Reuse
- Design Calculations
- Technical Writing

**EDUCATION**

M.S., Environmental Engineering  
University of Colorado, Boulder

**LICENSURE / CERTIFICATIONS**

International Water Association  
American Water Works Association  
Water Environment Federation

Pranoti Kikale joined Globaltech after completing her Master's of Science degree in Environmental Engineering. Prior to graduate school she worked in engineering for an environmental technologies firm in India, helping to design and optimize a sequential batch reactor based on cyclic activated sludge processes (C-TECH). She also helped design advanced technology for aeration and sludge dewatering. As a graduate research assistant, Pranoti developed design algorithms and energy balance models to identify wastewater and water reuse treatment scenarios to maximize energy, nutrient, and water recovery.

**FEATURED EXPERIENCE**

**Seacoast Utility Authority  
PGA WWTP Biosolids Equipment Improvements**

*Palm Beach Gardens, FL / \$1.6 million*

For this project, Pranoti conducted a pilot study to test dewatering centrifuge equipment from three different vendors. Equipment was staged on-site (see photos at right) and test results compared for efficiency and cost. Pranoti wrote the pilot study evaluation report and assisted in creating specifications and drawings for installation of the selected dewatering equipment.



**OTHER DESIGN-BUILD EXPERIENCE**

**Seacoast Utility Authority PGA WWTP Clarifier 3 Replacement**

- Evaluation of existing clarifier design
- Development of specifications
- Drawings, technical memorandum writing

**PBCWUD WTP 9 Miscellaneous Improvements**

- Design of Diesel Exhaust Fluid system



**Bruce Rahmani**  
VP of Construction

**AREAS OF EXPERTISE**

- Construction Management
- Construction Inspection
- Equipment and Piping Layout
- Procurement
- Project Management

**EDUCATION**

B.S., Mechanical Engineering  
Florida Atlantic University

**LICENSURE / CERTIFICATIONS**

EIT Registration

Florida Certified General Contractor  
No. CGC 1517392

Florida Certified Plumbing Contractor  
No. CFC 1428053

OSHA 10-Hour Safety Certification

American Red Cross First Aid/CPR

Bruce Rahmani has worked in the water and wastewater field for 12 years. As Vice President of Construction, he supervises Globaltech's 19 construction personnel while coordinating with the design engineers and owners to successfully execute the construction of Design-Build projects. His work experience includes involvement in numerous engineering design and Design-Build projects in which he designed, permitted, estimated, procured equipment, and managed construction of the project. He served as the resident engineer for the expansion of the Highland Beach Reverse Osmosis Plant and City of Lauderhill Water Treatment Plan Disinfection System Upgrade.

**FEATURED EXPERIENCE**



**Lauderhill WTP Disinfection System Upgrade**

*City of Lauderhill, FL / Project cost: \$1.7 million*

When the City of Lauderhill selected Globaltech as their Design-Build to improve the disinfection system of the existing lime softening plant, Bruce served as construction manager and project engineer. The improvements were to provide 4-log virus treatment of the groundwater source used by the City's WTP to meet the Ground Water Treatment Rule. Work included the installation of a carbon dioxide storage tank and solution feeder system, chlorine gas feeders, aqua ammonia storage and chemical metering pump feeders. Globaltech provided health department permitting, environmental permitting, building permitting, final design, and construction for the new treatment processes.

**OTHER DESIGN-BUILD EXPERIENCE**

**PBCWUD Lake Region WTP Reverse Osmosis Skid Energy Recovery System Improvements / Belle Glade, FL, \$2.75 M**

**Glades Utility Authority Pahokee WWTP Gas Conversion to Sodium Hypochlorite / Pahokee, FL, \$200K**

**FPUA Surficial Aquifer Well W-4R Replacement / Fort Pierce, FL, \$293K**





## Eddie Lauth

### Construction Manager

#### AREAS OF EXPERTISE

- Construction Management
- Process Mechanical Pipe and Equipment Installation
- Site Inspection
- Site Supervision
- Site Safety
- Project Schedule Management
- Heavy Equipment Operation
- Facility Startup and Commissioning

#### LICENSURE / CERTIFICATIONS

OHA 10-Hour Safety Certification  
OSHA Rigging Basics & Safety  
OSHA Trenching & Excavation  
OSHA Fall Protection  
American Red Cross First Aid/CPR

Eddie Lauth has worked in the construction business for more than 17 years. He has been involved in the inspection, site supervision and construction of water and wastewater treatment plants and the associated facilities throughout his career. His main responsibilities have included supervising construction crews for underground utilities, mechanical process piping, heavy civil construction, equipment installation and start up, along with leading teams through facility commissioning. Eddie's construction experience includes existing facility expansions, lime softening system rehabilitation, reverse osmosis facilities, chemical storage and feed facilities, sludge processing, odor control systems, and pump stations.

#### FEATURED EXPERIENCE

##### **PBCWUD ECR-FPL Reuse Improvements Phase 1 & 2** *West Palm Beach, FL / \$3.5 million*

As Construction Superintendent, Eddie oversaw all construction activity for the many tasks included in this project. These included installation of a 600HP vertical turbine high service pump, new 600HP VFD and switchgear upgrades, new grinder pump stations for facility sanitary sewer drains, programming of PLC, and instrumentation additions at the receiving metering station at FPL's West County Energy Center.



#### OTHER DESIGN-BUILD EXPERIENCE

**PBCWUD WTP 2 MIEX System Improvements** / *Greenacres, FL*  
**Fort Pierce Utilities Authority Softeners 1 and 2 Repair & Replacement** / *Fort Pierce, FL*  
**Seacoast Utility Authority High Service Pump 2, 3, & 7 Replacement** / *Palm Beach Gardens, FL*  
**PBCWUD Optimization & Improvements D-B Contract** / *County-wide locations, FL*



## FPUA WTP Lime Softener No. 2 Rehabilitation

Fort Pierce Utilities Authority / Fort Pierce, FL

Lime Softener No. 2 at Fort Pierce Utility Authority's (FPUA) water treatment plant was nearly 35 years old and in need of significant rehabilitation. Globaltech had successfully refurbished the plant's other lime softener (No. 1) two years earlier. With Softener No. 1 running at full capacity, No. 2 could now be taken down for rehabilitation—and Globaltech was again selected to be the design-build contractor.

The 10 MGD Softener No. 2 consisted of steel-skirt Accelator internals located in a circular steel tank. Specific items that were replaced included:

- New gearbox and drive
- New 30 HP variable-speed motor
- New recirculation and blow down pumps
- New potable water service station
- New spray wash piping and nozzles
- New electrical and controls

Globaltech replaced and/or reinforced large sections of the steel walls; replaced all the radial launders; made large-diameter influent, discharge and drain

pipings modifications, and completely replaced all small diameter water and chemical lines. We also installed a concrete trench for running chemical lines, and installed a new 4-foot-square exterior opening that required significant plate-reinforcing of the exterior wall.

### Project Achievements / Benefits

- During the course of construction, it was determined that the existing tank drain line was incorrectly piped, and it had to be corrected immediately in order to keep the plant producing water. Globaltech placed an emergency order for the materials and performed the repair work during an overnight shut-down to meet the Owner's schedule.
- After repairing deteriorated portions of the steel structures, Globaltech performed abrasive blasting and coating with an NSF 61 epoxy. All blasting and painting operations were tented to protect adjacent facilities.

### Client Contact

Bo Hutchinson, P.E.  
Director of Water/Wastewater Systems  
Fort Pierce Utilities Authority  
715 South 25th Street  
Fort Pierce, FL 34947  
(772) 466-1600  
bhutchinson@fpua.com

### Project Timeframe

27 months  
Completed September 2016

### Project Cost

\$1.2 million

### Our Role

Design-Builder



## Davie Anion Exchange Color Removal System

Town of Davie / Davie, FL

Like many municipalities, the Town of Davie needed to take extra steps to produce crystal-clear drinking water, since color is naturally occurring in the Town's groundwater source. Globaltech was selected as a design-build contractor to permit, design, construct and commission a 4 mgd color removal system at the Town's South Water Treatment Plant. It was installed at the end of the plant's existing lime softening plant process to further enhance the water quality and appearance.

The system uses an anion exchange resin to remove organic material. The resin is similar to that used in a home water softener system except that it removes negative ion including slightly negative organic/color molecules.

### Project Achievements / Benefits

- Davie's raw groundwater ranges from 40 to 60 color units; testing showed that the finish water (after lime softening) had 15 color units, giving it a yellowish tint. The new anion exchange system reduces the water's color from 15 color units to less than 2 color units. With the new color removal system on-line, the Town's water is virtually colorless to the naked eye.
- The reduction in organic material also lowers the formation of disinfection byproducts such as trihalomethanes and haloacetic acids (regulated byproducts) which are formed when chlorine used for disinfection reacts with the organics naturally found in the groundwater. As a result, the treatment plant is able to meet more stringent water quality regulations for disinfection byproducts.
- Globaltech designed and constructed the color removal system in nine months' time, meeting the client's budget and schedule expectations.

### Client Contact

Don Bayler, Utility Director  
Town of Davie  
351 SW 30th Street  
Davie, FL 33314  
Phone: (954) 327-3741  
Email: don\_bayler@davie-fl.gov

### Project Timeframe

9 months  
Completed September 2008

### Project Cost

\$1.9 million

### Our Role

Design-Builder



## Boynton Beach Raw Water Pipeline

City of Boynton Beach, Utilities Department / Boynton Beach, FL

Two water treatment plants serve the residents of Boynton Beach—one on the east side of town, the other on the west. The East plant had excess capacity to treat raw water, but did not have access to the highly productive western wells. By connecting the wells feeding each plant, the City could provide raw water to either plant, utilizing treatment capacity and increasing the reliability of the raw water supply.

In order to achieve this goal, the City constructed 6 miles of raw water pipeline alongside busy Woolbright Road, tunneling beneath TriRail commuter rail tracks and Interstate 95. The general contractor used open cut, directional drill, and jack and bore methods to install 36-inch ductile iron and 42-inch high density polyethylene (HDPE) piping.

Globaltech served as the City's construction manager, utilizing our pipeline engineering and construction expertise to oversee the contractor, provide general project administration services, design the connection to the existing raw water main, develop a flushing and disinfection plan, and close out all permits.

### Project Achievements / Benefits

- Identified an error in the construction drawings early and avoided an unnecessary change order
- Provided thorough quality inspections of HDPE piping as long as 2,300 LF, and insisted that damaged sections be repaired to meet industry standards and specifications when necessary
- Provided 24-hour/day inspection coverage during pullbacks of HDPE piping to ensure pipe was not damaged
- Designed connections to the existing piping, after the contract was awarded, that minimized plant shutdowns and increased operational flexibility
- Coordinated with Palm Beach County Traffic Division and developed an effective repair plan after frac-outs and road settling occurred

### Client Contact

Chris Roschek  
Manager of Engineering  
City of Boynton Beach  
124 E. Woolbright Road  
Boynton Beach, FL 33435  
(561) 742-6413  
roschek@bbfl.us

### Project Timeframe

18 months  
Completed April 2017

### Project Cost

Fee for construction management: \$311,250  
Construction award: \$6.5 million

### Our Role

Construction Manager



## FPUA Wellfield Improvement Program

Fort Pierce Utilities Authority / Fort Pierce, FL

The Fort Pierce Utilities Authority (FPUA) maintains multiple raw water supply wellfields located throughout its service area and operates a combination of both surficial and Floridan aquifer wells connected by a network of raw water mains. In a continuing effort to improve the reliability and quantity of raw water supply to its water treatment facility, FPUA in 2005 began a series of well improvement and replacement projects.

### RAW WATER SUPPLY WELLS INCLUDED IN THIS PROGRAM

Well 1R, replacement with new well  
 Well 2R, replacement with new well  
 Well 3W, new well and wellhead  
 Well 4W, new well and wellhead  
 Wells N15, N16, and N19R, replacement with new well  
 Wells N18R & N21R, well replacement & development  
 Well 8S, well replacement with new wellhead  
 Well 9S, well replacement with wellhead  
 Floridan Wells FA7 & FA9, new wells and wellheads

Through the course of several consecutive design-build contracts, Globaltech has provided a full suite of services to SUA as the Prime Design-Build contractor for wellfield improvements.

Services have included:

- Hydrogeological evaluation of existing wells for improvement strategies
- Site study and design for new replacement wells
- Raw water system network modeling for proper pump selection and design
- Complete wellhead design and construction
- Aquifer performance testing (APT) for well location and capacity analysis
- Installation of new wells including drilling services and well testing
- Power, SCADA, and control panel replacements and new construction
- Full permitting services involving:
  - Building Department
  - FDEP (including sanitary survey)
  - SFWMD
- Pump/column pipe installation and startup/testing services
- Well abandonment and plugging

### Client Contact

Bo Hutchinson, P.E.  
 Director of Water/Wastewater Systems  
 Fort Pierce Utilities Authority  
 715 South 25th Street  
 Fort Pierce, FL 34947  
 (772) 466-1600  
[bhutchinson@fpua.com](mailto:bhutchinson@fpua.com)

### Project Timeframe

2005 - 2017

### Project Cost

Total of all projects: \$2.9 million

### Our Role

Design-Builder



## CSID/Margate Interconnect

Coral Springs Improvement District / Coral Springs, FL

With an eye toward emergency preparedness, the Coral Springs Improvement District (CSID) and its neighbor to the east, the City of Margate, agreed to construct a potable water interconnect. If an unforeseen event were to cut off drinking water to CSID customers, the interconnect would provide them with temporary access to Margate's drinking water—and vice-versa.

As part of a continuing design-build services contract with CSID, Globaltech was hired to provide engineering design, permitting, and construction of the interconnect.

The project required directional drilling under the Sunshine Water Control District (SWCD) East Outfall Canal to connect an 8-inch water main on the CSID side of the canal with a 12-inch water main on the Margate side. On the CSID side, Globaltech installed 60 feet of ductile iron pipe to connect the canal crossing pipe to a hot tapping valve off the CSID water main. On the Margate side, two vaults were installed, each with a strainer, turbine flow meter, check valve and isolation valves to allow sending water to either utility.

### Project Achievements / Benefits

- During the design phase, the Owners approved Globaltech's recommendation to replace an existing 45-degree elbow in the Margate water main with a Tee, eliminating the need for a hot tap. This change made the interconnect more durable and easier to maintain.
- On the CSID side, new interconnect piping crossed through residential property. Globaltech kept homeowners informed about construction activities, repaired private irrigation lines that were impacted, and installed new sod to return yards to their original shape.
- Globaltech delivered a successful project with only one water shutdown affecting four homes for a total of six hours.

### Client Contact

Curtis Dwiggin  
Water Distribution Supervisor  
Coral Springs Improvement District  
10300 NW 11th Manor  
Coral Springs, FL 33071  
(954) 796-6608  
curtd@csidfl.org

### Project Timeframe

15 months  
Completed April 2018

### Project Cost

\$460,456

### Our Role

Design-Builder



## FKAA High Service Pump Replacement

Florida Keys Aqueduct Authority / Florida City, FL

All five of the High Service Pumps (HSPs) that send finished drinking water from the J. Robert Dean Water Treatment Plant in Florida City to the Florida Keys had become outdated and needed to be replaced. The Florida Keys Aqueduct Authority, which operates the water treatment plant, selected Globaltech as the prime contractor to replace the pumps and all associated piping and valves.

Of the five new pumps installed by Globaltech, three were 800 HP and two were 500HP. The work involved:

- Removing the existing 18-inch underground suction butterfly valves and replacing them with new valves
- Removing and replacing the existing pumps and discharge piping
- Providing and installing 18-inch high pressure (300psi) discharge piping and valves
- Prepping and coating the new pumps, piping and valves
- Providing startup services

### Project Achievements / Benefits

- The plant needed at least three of its five pumps to be operating at all times. In order to meet this requirement, Globaltech replaced the HSPs in pairs.
- During exploratory excavations, Globaltech discovered several concrete duct banks located above the underground pump suction pipes and valves. Our crew managed to work around these existing conditions, operating in very tight work spaces to replace valves in 18" pipe.

### Client Contact

Anthony Rossetti  
Ass't Manager, Production & Transmission  
Florida Keys Aqueduct Authority  
1100 Kennedy Drive  
Key West, FL 33041  
(786) 349-6530  
arossetti@fkaa.com

### Project Timeframe

19 months  
Completed October 2015

### Project Cost

\$1,104,386

### Our Role

Prime Contractor



## CSID WWTP Plant D Damage Assessment and Repair

Coral Springs Improvement District / Coral Springs, FL

Three days before Thanksgiving, the Coral Springs Improvement District (CSID), with whom we have a continuing design-build services contract) informed us they had experienced a structural problem with their Plant D Package Plant. Within an hour, Globaltech had an investigative team at the plant site. It appeared that water from the plant's outer aeration ring had rushed into the inner clarifier section in a rapid, uncontrolled fashion, lifting up the clarifier section.

Globaltech returned the next day, after all water had been pumped from the plant, to continue investigating. We noted damage to the clarifier floor and mechanism arms, displacement of the WAS pipe, and separation of the axial wall in the aeration section from the interior and exterior walls. Eager to learn why this happened, CSID issued a Work Authorization to have Globaltech develop a summary report on the probable cause of damage, with recommendations for corrective action.

Globaltech subcontracted with a structural engineering firm to assist in evaluating the cause of the failure and developing a remedy. Our investigation included collecting corings, with compressive tests, of the sloped clarifier floor in several locations.

The evaluation concluded that the high-water level in the aeration ring, in relation to an empty clarifier, caused the entire clarifier section to float due to hydrostatic forces. This led to damage of the clarifier mechanism, cracking of the clarifier floor, slight displacement of the clarifier wall, damage to aeration piping/diffusers, damage to the divider wall in the aeration basin and minor damage to piping and electrical.

### Project Achievements / Benefits

Based on the damage, Package Plant D could not be used until the repairs were made. The recommended repairs, executed by Globaltech, include:

- Replacing some mechanism components, including the drive
- Replacing the clarifier floor slab with a new fully-reinforced floor slab, to be structurally tied into the flat base slab
- Installing additional, larger clarifier wall anchors.
- Replacing the aeration basin baffle wall
- Repairing aeration diffusers and piping
- Minor repairs to water piping, electrical components, and coatings
- Modifications to the walkway to provide better access to the man-lift safety hoist

*Globaltech's immediate full-service response to CSID's unexpected facility damage demonstrates the value of our integrated design-build service model.*

### Client Contact

Tim Martin  
Chief Wastewater Dept. Operator  
Coral Springs Improvement District  
10300 NW 11th Manor  
Coral Springs, FL 33071  
(954) 796-6677  
timm@csidfl.org

### Project Timeframe

Assessment: 45 days  
Repairs: estimated 12 months  
Completion anticipated April 2019

### Project Cost

\$1.5 million

### Our Role

Design-Builder





## Corkscrew WTP 4.0 MG Storage Tank and Clearwell Addition

Lee County Department of Public Works, Utilities Division / Fort Myers, FL

Lee County needed to increase detention time of chloramine-treated finished water at its Corkscrew Water Treatment Plant in order to meet CT disinfection requirements. The County's Utilities Division chose Globaltech to design and implement the necessary water storage improvements. As part of the project, Globaltech provided value engineering options to reduce cost and improve operational flexibility.

During the construction phase, we installed a new, 4.0 MG, CROM prestressed concrete storage tank along with a new 36" DIP finished water pipe connecting the transfer pumps to the new tank. We provided baffles in the new 4.0 MG tank and in an existing 2.0 MG tank. We also installed new clearwell and transfer pumps and modified the existing transfer pump system. Finally, we provided new instrumentation to interface with one of three existing Allen-Bradley Control Logix PLC's in Citect format.

### Project Achievements / Benefits

Globaltech's value engineering recommendations saved the County money and gave them more operational flexibility. For example:

- A parallel 18" finished water (FW) pipe was installed in lieu of replacing the existing 24" FW with a 36" FW main.
- Polypropylene baffle curtains were installed instead of concrete baffle walls in the new 4.0 MG ground storage tank and existing 2.0 MG ground storage tank. Polypropylene curtains are NSF approved and are more economical, easier, and faster to install.
- Perforated storage tank inlets were installed to increase baffling factor and to lower the number of baffles in both the new and existing storage tanks. Perforated inlet pipe provides dispersion of water in the storage tank and increases contact time. It also allows the storage tanks to operate in series without the addition of a costly new inlet pipe.

### Client Contact

Luis Molina, P.G., P.E.  
Dept. of Public Works, Utilities Division  
Lee County Bd. of County Commissioners  
1500 Monroe Street  
Fort Myers, FL 33901  
Phone: (239) 533-8598

### Project Timeframe

18 months  
Completed July 2009

### Project Cost

\$2.9 million

### Our Role

Design-Builder



## PBCWUD WRWTF Power Improvements

Palm Beach County Water Utilities Department / Belle Glade, FL

The existing 300-kilowatt emergency back-up generator and main switchboard inside Generator Building No. 1 at the Western Regional Wastewater Treatment Facility (WRWTF) had both surpassed their reliable life spans and needed to be replaced. Under a continuing design-build contract, Palm Beach County Water Utilities Department (PBCWUD) hired Globaltech to design, permit, and install a new generator system.

The project included removing and recycling the old generator and main switchboard from Generator Building No. 1, then sealing and insulating the building, installing air conditioning to provide a temperature-controlled environment, installing a new main switchboard, and upgrading other electrical controls.

The new generator system included a new 500 kW diesel-engine generator with an integrated noise-attenuating aluminum enclosure mounted on top of a 4,500-gallon belly fuel tank.

### Project Achievements / Benefits

- The small existing generator (circa 1982) could not power all loads connected to the main switchboard (MSB-1). The new generator is capable of supplying emergency power to all the connected loads plus expected future loads.
- The new stand-alone generator sits on a reinforced concrete slab built on auger-cast piles due to poor soil conditions.
- During the project, Globaltech minimized facility downtime by performing some of the work at night.
- Globaltech coordinated with Florida Power & Light to replace the 40-year-old transformers.

### Client Contact

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### Project Timeframe

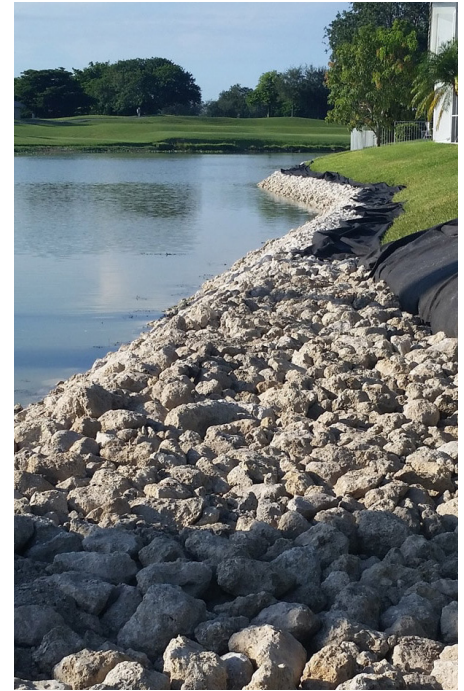
12 months  
Completed September 2016

### Project Cost

\$811,498

### Our Role

Design-Builder



## CSID Canal Bank Stabilization Program

### Coral Springs Improvement District / Coral Springs, FL

The Coral Springs Improvement District (CSID) owns and maintains more than 20 miles of canals in the City of Coral Springs. Constructed in the early 1970s by various developers and incorporated into the CSID canal network, these canals were often constructed based on fill needs and aesthetic interpretation without following a plan to assure slope stability.

Over the course of 40 years, the canal banks have experienced erosion, undermining and surcharging, posing an increasing threat to adjacent structures and prompting CSID to launch a canal bank stabilization program. Under a continuing design-build services contract with CSID, Globaltech has led a series of projects to evaluate, design and stabilize canal banks on a total of 41 residential properties to date.

The work involves placing coarse aggregate or "rip rap"—limestone averaging 6 to 12 inches in diameter—to re-establish property boundaries and ensure lasting stability of the banks. So far, more than 40,000 tons of limestone has been used to stabilize more than 4,200 linear feet of canal bank.

#### Project Achievements / Benefits

- Coordinating with all stakeholders (CDIS staff, homeowners, regulatory agencies, and others), Globaltech gathered data from all canal bank failure sites, designed rip rap implementation plans, and prepared detailed Maintenance of Traffic (MOT) plans.
- All construction work was performed from barges in the canals, eliminating the need for trucks and equipment on residential streets. Workers accessed backyards from the water rather than having to cut through private property.
- Once work crews re-established the proper canal alignment and slope, the banks were finished with a geotextile fabric, top soil and sod.
- All sites were fully restored after construction. Crews maintained and replaced irrigation systems, landscaping, and fences for individual homeowners as well as restored a 1,200-foot-long construction road along the first hole of the Eagle Trace Golf Course.

#### Client Contact

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#### Project Timeframe

2015 - 2018

The project is funded through stormwater user fees.

#### Project Cost

\$6.1 million to date

#### Our Role

Design-Builder