



Office of the City Clerk
600 West Blue Heron Boulevard
Suite #140
Riviera Beach, FL 33404

Chemical Feed System Improvements

RFQ No. 999-20-2

Due Date and Time
July 8, 2020 at 11:00 AM

TAB A

title page



Water Treatment Plant and Utility System Chemical Feed System Improvements Design-Building Services

RFQ No.
999-20-2

Prime Firm:
Cardinal Contractors, Inc.

Address:
580 Village Boulevard
Suite 325
West Palm Beach, FL 33409

Primary Contact
Michael Brandao
Project Manager
MBrandao@prim.com

Telephone No.:
954.587.0520

Due Date and Time:
July 8, 2020 at 11:00 AM



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TAB C

transmittal letter





July 8, 2020

2051 MLK Blvd, Suite #310
Riviera Beach, FL 33404

RE: **CITY OF RIVIERA BEACH**
RFQ NO. 999-20-2
LETTER OF TRANSMITTAL

Dear Sir or Madam:

It is with great interest and commitment that Cardinal Contractors, Inc. is submitting our qualifications for the design build delivery of chemical feed system improvements to your water treatment plant. On behalf of our entire team, we sincerely thank you for this opportunity.

A Local Company with Extensive Resources

Cardinal Contractors, Inc. was founded in 1984 as a specialty contractor to serve the municipal water treatment community. In 2003, Cardinal joined Primoris Services Corporation as a wholly owned subsidiary, to continue its mission of service to this community. Today, Primoris is 13,000 employees strong and provides a vast array of services to support our water & wastewater design-build efforts in Florida.

Cardinal Contractors, Inc. has over **\$100 Million Dollars of Design-Build Projects** at water and wastewater treatment facilities throughout Florida. Our team is located in Palm Beach County and is very well positioned to serve Riviera Beach with **best-value** solutions and **timely** delivery.

As a Primoris company, we have access to resources in house that are typically outsourced to third party vendors. In the uncertainty of our current market, these resources help us weather the storm of uncertainty found in today's markets. Available resources inside of Primoris include:

- 19,000 pieces of equipment
- 4 pipe fabrication facilities throughout North America
- Electrical Contractor capabilities
- Hydro-excavation
- Design & Drafting
- National agreements with major material suppliers

Flexible and Trustworthy

We view a design-build project as a partnership with the client. The goal is to deliver the timely, quality project that Riviera Beach requests. We do that with solutions that are geared to meet your operational requirements and your permit requirements while maintaining considerations of budget. But success is achieved by maintaining flexibility in our approach. We understand the customer's need because we treat the customer as a partner throughout the process. The city will have a role in equipment selection. We provide analysis of various solutions with recommendations explaining the cost-benefit of the possible solutions. The client input and flexible approach gives us the information to move forward with tailored solutions.

Also, to be a good partner in this process, our team will maintain the highest degree of integrity and honesty. In 2014, Forbes Magazine listed Primoris as **one of the most trustworthy companies in America**. We are proud of that, and we work hard to maintain our core values.

Teamwork

Our team is comprised of firms and individuals with local and relevant expertise. Cardinal has joined forces with the following select firms to provide the appropriate services for the scopes of work identified in the solicitation:

Cardinal Contractors, Inc.
580 Village Blvd • Suite 325 • West Palm Beach, FL 33409 • www.prim.com



- Calvin Giordano & Associates, Lead Design Engineer
- Hillers Electrical Engineering, Electrical Engineer (MBE)
- Lakdas & Yohalem Engineering, Inc., Structural Engineer (MBE)
- RADISE International L.C., Geotechnical Engineer (MBE)
- Energy Efficient Electric, Electrical Contractor
- Electron Plus of Florida, Electrical Contractor (MBE, Mentor-Protege program with Cardinal Contractors)

Cardinal has selected our design and subcontract teammates as a result of prior successes with these team members. As a design builder we measure our success on quality, timeliness, efficiency, reliability and client satisfaction. Our teammates have proven successful performance by the standards defined above.

The scopes we identified and the designs we performed will require the work of two electrical contracting firms. We are pleased to have Energy Efficient Electric and Electron Plus of Florida on our team.

Energy Efficient (a Palm Beach County certified SBE firm) has collaborated with Cardinal on projects for over 19 years. They are a high quality, specialty firm and one of our preferred electrical contractors for intricate electrical and controls work inside of a working facility.

We have worked with Vincent Scott, the owner and founder of *Electron Plus of Florida* (Palm Beach County certified MBE, AABE) since 2010. We have watched him grow in the business as a professional and supported him through various stages of professional licensing and eventually, the start of his own firm in 2017. He is truly a local success story and we are proud to have him on our team.

Experience

Prior team experience in your Water Treatment Plant facility give us the knowledge base and understanding to move quickly to finalize a design that meets Riviera Beach's needs and overall improvement plans for the facility and meet Health Department requirements and deadlines.

This team (Cardinal & Calvin Giordano) is responsible for over 48 million dollars of design build projects in Broward and Palm Beach County. As a client, you benefit from the team history and experience, getting efficiency in processes and expedient results.

Thank you again for giving us an opportunity to formally submit our qualifications for your consideration. We look forward in anticipation to partnering with Riviera Beach to make these projects a success.

Respectfully,

Cardinal Contractors, Inc.

A handwritten signature in blue ink, appearing to read 'Michael Brandao'.

Michael Brandao
Vice President

MEET OUR DESIGN-BUILD KEY TEAM

Our team have comprehensive knowledge in the design, management and delivery of design-build services. Our local team of Chartered Engineers is made up of individuals who have extensive experience with design-build projects, and moreover with chemical feed system improvement projects.

With a significant portfolio of project experience and knowledge of all major water treatment plant improvements and regulatory requirements, our team can ensure that your assets will be satisfactorily completed, maximizing the project needs, budget and costs.



David Stambaugh, PE, DBIA
Technical Design Leader / Quality Control



Emeliz Torres, PE
Design Manager



James Hart, PE
Chemical Design Expert



Michael Brandao
Project Manager



John Scott
Design Build Manager

TAB D

company overview/qualifications of firm





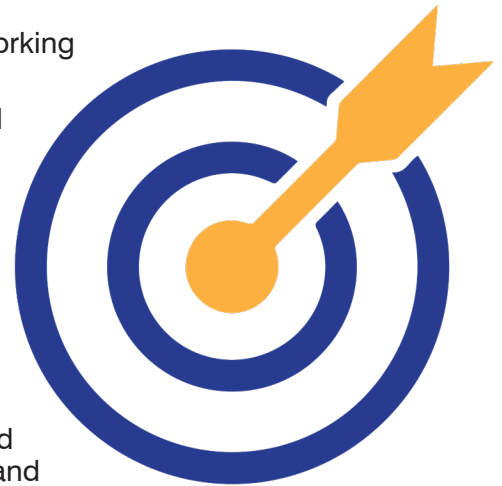
Tab D - Company Overview/Qualifications of Firm

Over the last 36 years, Cardinal Contractors Inc. (Cardinal) has constructed hundreds of treatment facilities in South Florida using such diverse contracting methods as Design-bid-build, Design/Build, Construction Management at Risk and lump sum negotiated. We are a specialty contractor focused on construction, rehabilitation and maintenance of municipal water & wastewater treatment facilities. Our experience specializing with Municipalities gives us keen insight into the regulatory constraints of the owner so that we can efficiently manage the complexities of project delivery. As part of the Primoris Services Corporation family of companies, we have access to the resources of a large national firm, while maintaining the personal connection of a local south Florida firm. What sets our team apart is the amount of team experience Cardinal & Calvin, Giordano & Associates, Inc. (CGA) have performed together. **As a design-build team, Cardinal & CGA have performed over \$48 million dollars of work.** Our team has become so integrated over the last 10 years, that we have moved Cardinal staff into the CGA office in West Palm Beach. This has further integrated our team so that we function as a unified design build firm.

An Established Team of Subconsultants

We have an established relationship with our subconsultants working together in successful projects.

Calvin, Giordano & Associates, Inc. (CGA) is a well-established multi-disciplinary firm that has been located in South Florida for more than 80 years. Since 1937 surveying and engineering have been a cornerstone at CGA, and today they offer a broad range of services including: wastewater treatment facilities design, storm water management, grant application services, environmental engineering, emergency management, surveying, planning, landscape architecture, GIS, transportation, and data technology. Their diversified experience and exposure to different professional perspectives has greatly enhanced our team's ability to provide our municipal partners with innovative ideas, quality solutions, and technical strength in our roles as project managers, designers, and agency liaisons.



CGA has a long history of working in cooperation with local municipalities, cities, counties, FDEP, FEMA, and FDOT. As such CGA have in place the working relationships to understand not only the apparent problems that need to be resolved in the upcoming projects, but also the hidden issues that may arise in the process of permitting and stakeholder coordination. CGA has extensive experience in designing water and wastewater treatment facilities, raw water transmission mains, reclaimed water treatment facilities and associated pumping and storage facilities as well as serving as consultant engineers to other municipalities and utility service providers in the South Florida region.

CGA has in place many working relationships with the other local engineering subconsultants who provide unique enhancements to their abilities. Among these include electrical/ instrumentation engineering, geotechnical engineering, acoustic engineering, structural engineering and architectural. As part of their community efforts and outreach, CGA has been able to consistently enlist many MBE/WBE/SBE subconsultants in the community. The design-build team assembled for this consists of an exceptional group of subconsultants which we have worked with on past projects, yielding a superior end product.

We have retained the same subconsultant team that has proven their abilities on the previous design-build contracts with PBCWUD. Those subconsultants are as follows; Hillers Electrical Engineering, Inc. for electrical and instrumentation engineering, Lakdas/Yohalem Engineering, Inc. for structural engineering, and RADISE International, LC. for geotechnical investigation.



Hillers Electrical Engineering, Inc. (HEE) has been in business since 1994 and is located in Boca Raton, Florida with branches in Hollywood, Miami and Orlando. HEE brings over 200 years of combined, unsurpassed experience, expertise, and personalized service in electrical engineering design, control application programming, and construction management. Our electrical design services include power, control, instrumentation, telemetry, start-up assistance, construction management services and PLC/ computer programming for County and State municipal agencies as well as private industry.

Our office is fully equipped with state-of-the-art computer systems and engineering software to help ensure a quality and cost-effective product. Software programs include AutoCAD SKM fault current/ coordination/ arc flash program, generator sizing programs, and 3 dimensional lighting calculations program.

HEE's design staff brings vast electrical, instrumentation and telemetry design and project management experience in a variety of areas such as raw water wells, ASR and DIW wells, water treatment facilities, water distribution systems, wastewater collection systems, wastewater treatment facilities including reuse, storm water and treatment pumping stations, DOT roadway systems, major air carrier and general aviation airports terminals & airfield electrical & lighting systems. HEE, as part of an energy team, has performed an energy audit on all of Palm Beach County water treatment and wastewater treatment facilities.

HEE provides a variety of electrical, instrumentation and telemetry design and construction management tasks including:

- ◆ Low, Medium, and High Voltage Power
- ◆ Distribution Systems
- ◆ Motor Control Centers (MCCs)
- ◆ Distribution Panels
- ◆ Voltage Drop Calculations
- ◆ Variable Frequency Drive (VFD) Application
- ◆ Luminaire Calculations
- ◆ Short-Circuit Calculations, Protective Device
- ◆ Coordination & Arc Flash
- ◆ Standby Generator Systems
- ◆ Fire Alarm and Security Systems
- ◆ Instrumentation & Control Systems
- ◆ Telemetry Systems
- ◆ Supervisory Control and Data Acquisition (SCADA) Systems
- ◆ Shop Drawing Review
- ◆ Energy Audits
- ◆ Cost Estimates, Testing, and Start-Up



The nature of Consulting is such that responsiveness is the key to maintaining a long-term relationship. HEE takes great pride in ensuring that we are immediately accessible and responsive to our client's needs. This is demonstrated in the excellent relationship we have established over the last 20 years with many municipalities and environmental consulting firms.

Lakdas/Yohalem Engineering, Inc. (LYE)) is a medium sized professional structural engineering firm that has been in operation in South Florida since 1970. We have provided engineering, design and inspection Services on a number of high profile projects in the tri-counties, which includes city complexes, institutional buildings, multifamily residential properties, water treatment plants, waste water treatment plants, fire stations, police stations, school facilities, libraries, emergency power stations, parks, pedestrian bridges and highways, marinas, resorts, airports and port terminals and petroleum facilities. Our firm has completed over 4,500 projects with over 2800 commercial and public building projects during the past 46 years in the US and on several islands in the Caribbean Basin. We are State Certified Masonry and Threshold Inspectors. Lakdas Nanayakkara and two of our staff members are professional Engineers as well as state certified general contractors who have in depth knowledge of design, inspection and constructability of building and engineering projects. Lakdas/Yohalem Engineering, Inc. offers a variety of inspection and engineering services which include: threshold and site inspections, feasibility studies, and design and condition survey of structures, restoration damage assessments, value engineering and constructability review.

RADISE International, LC. (RADISE) has been in business over 13 years as a Professional Geotechnical Engineering and Construction Material Testing Firm. RADISE has provided geotechnical engineering, construction inspection and materials testing services to the Florida Department of Transportation (FDOT), Palm Beach and Broward Counties, South Florida Water Management District, Cities of Coral Springs, West Palm Beach, Boca Raton and Jupiter as well as private clientele throughout South Florida. RADISE is a certified DBE firm with FDOT, holds SBE and M/WBE Certifications with Palm Beach County and Palm Beach County School Board, and MBE Certification for Broward County and Broward County School Board.

On the following page, please reference our Project Team Experience.

Our team has proven and repeatable experience with the type of work required, allowing the development of reliable project.

DESIGN BUILD TEAM EXPERIENCE				CGA & CARDINAL WORKING TOGETHER ON PROJECTS RELEVANT TO RIVIERA BEACH															
				Design Build Package No. 1								Design Build Package No. 2					Future Possible Packages		
				Sodium Hypochlorite Feed System	Ammonia System Improvements	Polymer System Improvements	Lime Softener No. 3 Influent Mods	Flow Metering, Water Quality Monitoring and Control Improvements	Plant Water Improvements	General Improvements to SCB	Ancillary Improvements - Piping, Injection Points, Supports, Painting, etc.	Standalone Lime System	Retrofit Existing Lime System (SCB)	Replacement of Electrical Gear (currently in NCB)	Recarbonation System	Ancillary Improvements - Piping, Injection Points, Supports, Painting, etc.	Stabilization and/or demo/reconstruction of NCB	Rehabilitation of Lime Softening Units No. 1 & 2	Implementation of Improvements to Existing Filtration System
1	2	3	4	5	6	7	8	1	2	3	4	5	1	2	3	4			
Project Title	Contract Amount	Year	Client																
WTP No. 8 Fluoride System Improvements	\$797,646	2019	Palm Beach County	✓							✓			✓	✓				
WTP #3, 9 & 11 Fluoride Improvements (WUD 19-023)	\$1,985,000	2019	Palm Beach County					✓	✓		✓			✓					
WTP #8 Lime System And Process Improvements (WUD 19-038)	\$1,892,000	2019	Palm Beach County					✓			✓	✓		✓	✓				
WTP No. 8 Valve Replacements	\$195,257	2019	Palm Beach County						✓		✓			✓					
WTP #3 & 9 Valve and Process Improvements	\$1,809,090	2019	Palm Beach County						✓		✓			✓					
WTP #8 Finished Water Improvements	\$2,111,268	2018	Palm Beach County					✓			✓			✓					
WTP#8 Lime Slakers, Fuel Storage Tnaks and High Service Pump Replacement WUD 17-034	\$2,030,950	2017	Palm Beach County								✓	✓		✓					
Water Treatment Plant #2 Improvements (R2017-0733)	\$2,136,487	2017	Palm Beach County	✓	✓		✓	✓	✓		✓	✓	✓	✓			✓		
Pines WTP Anion Exchange Emergency Rehabilitation	\$3,108,521	2017	City of Pembroke Pines						✓		✓		✓	✓					
WTP #3 Membrane Cleaning, Strainer and Clearwell	\$2,054,665	2016	Palm Beach County								✓			✓					
NaOCl Storage and Bryneer Tank Replacement	\$2,000,000	2016	Palm Beach County	✓				✓	✓		✓			✓					
WTP #8 Vacuum Filter / HSP 3&4	\$1,834,679	2016	Palm Beach County						✓		✓			✓			✓		
Wastewater Plant Blower Replacement	\$1,398,702	2011	City of Pembroke Pines								✓			✓					
Wastewater Reclamation Facility Expansion RFQ 08-03-01	\$10,033,106	2009	City of Miramar	✓							✓			✓					
Ph 3 Water/Wastewater Plant Improvements	\$14,980,936	2008	City of Pembroke Pines	✓	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓		
	\$48,368,307																		

TAB E

staff experience





Tab E - Staff Experience

STAFF EXPERIENCE WORKING TOGETHER

Cardinal Contractors, Inc. has extensive experience in all areas of Water Treatment Plant projects relevant to meet the City of Riviera Beach needs for this project. In the last 10 years, we have successfully completed several Design-Build projects with a contract value of more than \$300M of similar scope projects. As shown on our Relevant Experience table in Tab F, we have effectively completed projects identified in the Design Criteria Document.

Our staff also has extensive experience working together as an integrated team. The following projects are representative of the Staff's experience working together (Cardinal & CGA) and are only a sampling from our \$48 M of team experience:

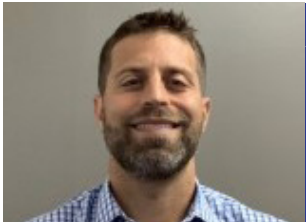
- **Palm Beach County WTP 8 Lime Slakers, Fuel Storage & HSP Replacement** (\$2,030,950) - The project included the replacement of two (2) lime slakers, replacement of a 2,000 gallon diesel fuel tank in-kind for the wellfield generator, replacement of a 10,000 gallon diesel fuel storage tank for the water treatment plant with a new 20,000 gallon tank to extend the duration for operating on standby generator, replacement of High Service Pump #5, and installation of three (3) mixers on the existing ground storage tanks to reduce the DPB formation in the finished water. The project's objectives were met by facilitating the procedures for quality control and quality assurance.
- **Palm Beach County WTP 2 Improvements** (\$2,136,487) - Design & construction Services at WTP #2 include increasing the high service pumping capacity and upgrading an aging lime feed equipment. The design incorporated upgrading the existing lime inductors to an flow paced vfd controlled pumping system complete with actuated valves for operation and flushing. The scope of the project also included a major electrical improvement – the replacement of the plant main electrical breaker as well as expanding the high service pumping capacity by adding two high service pumps with variable frequency drives to improve fire flow and pumping capacity during hurricanes.
- **Palm Beach County WTP 2, 3 & 9 NaOCl Storage & Bryneer Tank Replacement** (\$2,000,000) -Replacement of sodium hypochlorite tanks used for water disinfection and installation of salt storage/brine makers used for generation of anion exchange media. The project is necessary to maintain the integrity and reliability of the aging sodium hypochlorite tanks and to increase capacity of the salt storage/brine maker system.
- **Sodium Hypochlorite System Rehab and CO2 Injection System, Pembroke Pines** (\$3,200,000) - Project consisted of replacement of sodium hypochlorite injection skids and transfer pumps, new carbon dioxide feed system, new turbidity meters, installation of post-clearwell ammonia analyzers, among other improvements to the Water Treatment Plant. The team was responsible for the design, construction oversight and quality control for the entire project as well as the emergency procurement of the CO2 feed system. The team also constructed the structural foundations and installed the tank under the emergency order.
- **Palm Beach County WTP8 Lime System and Process Improvements** (\$1,892,000) - The project focuses on the replacement of the existing lime delivery system with two (2) self-contained lime delivery systems utilizing the existing silos and slakers. The delivery systems consist of slurry boxes, pumps and control panels, variable frequency drives, flushing system, actuated valves, piping, containment area, and hurricane rated canopy. The two (2) systems are interconnected to provide redundancy.
- **Miramar Water Reclamation Facility Expansion** (\$10,033,106) - This fast-track Design/Build project was permitted, designed, and constructed during a 24-month period. The plant improvements include a permitted system capacity increase from 10.1 to 12.6 MGD (TMADF) through the addition

of a 5th concrete Aeration Basin (250 ft x 28 ft) containing eight cells; a 4th Secondary Clarifier (100 ft diameter); a 3rd Injection Well Booster Pump (8000 gpm) with appurtenances; Return Activated Sludge (RAS) pumping system piping modifications; replacing two existing 200 HP Aeration Blowers with new 500 HP blowers, the addition of a 5th 500 HP Aeration Blower; and conversion to Anoxic operations of the four existing aeration basin cells and one new basin cell. Additional improvements include replacement and modernization of the existing Plant-Wide SCADA system, replacement and addition of electrical equipment including 400hp VFD, 200hp RVSS, and the addition of a new Sodium Hypochlorite distribution system.

Following are the key staff that are proposed for the Water Treatment Plant and Utility System Chemical Feed System Improvements Design-Build Services. These team members have worked together in the past to design and construct the projects listed above.

KEY STAFF

Vice President – Michael Brandao



Education: BSE Mechanical Engineering, University of Florida

Licenses / Certifications: Florida Department of Business and Professional Regulation / Mechanical Contractors License No. CMC1250454 / Plumbing Contractors

License No. CFC1429729 / Engineering Intern License No. 1100011244

Mr. Brandao has 20 years experience in the construction and rehabilitation of water and wastewater treatment plants in Florida. His construction experience has served as a foundation in the construction of reverse osmosis / membrane softening water treatment plants. Over the last 14 years, Mr. Brandao has worked on a variety of traditional water treatment plant processes and wastewater treatment plants with experience in rehabilitations and retrofits, new concrete hydraulic structures. His experience at Cardinal includes 16 design-build projects in South Florida.

Design Build Manager – John Scott



Education: BSE Chemical Engineering, Texas Tech University

Military Service: U.S. Marine Corps, Marine Security Forces (6 Years)

After serving his country for 6 years, Mr. Scott attended Texas Tech University where he obtained a Chemical Engineering degree with honors. In the ensuing 16 years, Mr. Scott has immersed himself in the design and construction of infrastructure. His experiences have a foundation in engineering design and management for large scale industrial projects. As Mr. Scott progressed in the industry, his responsibilities expanded to encompass both design and construction. Over his career, Mr. Scott has managed over a billion dollars in construction projects that include municipal wastewater treatment and chemical processing and treatment.

Technical Design Leader/Quality Control – David Stambaugh, PE, DBIA



Education: BSE Civil Engineering, University of Central Florida

Licenses / Certifications / Associations: Professional Engineer FL (70757) / Design-Build Institute of America (DBIA) Design-Build Professional / Florida Stormwater, Erosion, and Sedimentation Control Inspector

With more than seven years of construction experience followed by thirteen years of design and project management, Mr. Stambaugh has developed a strong understanding of the engineering profession and necessary skills to successfully complete projects. He is experienced in the design of public and private engineering projects, including the design and expansion of water and wastewater treatment plants, design of sewage collection and transmission systems, water distribution systems, surface water management systems, roadways, and parking lots.

Design Manager – Emeliz Torres, PE



Education: MSE Civil Engineering – Water Resources & Water Treatment, Politechnic University of Puerto Rico / BSE Civil Engineering, University of Puerto Rico

Licenses / Certifications / Associations: Professional Engineer FL (85897) & TX (126866) / American Water Works Association, Water Environment Federation

Ms. Torres has over 10 years of experience that includes project management of public and private engineering projects including water and wastewater planning and design, evaluation of water and wastewater treatment plants, distribution and collection systems, site development, preparation of design-build criteria package for wastewater plan, design manager of design-build projects. Responsibilities include site plan development, drainage studies, feasibility studies, water and wastewater facilities inspections, water and wastewater treatment plant and utilities assessment and design, preparation of bid packages including technical specifications, scheduling, construction cost estimates and engineering services during construction. As a Design Manager, her responsibilities include preparing request for qualifications, contract proposals, developing and managing project schedules, and manage subconsultants to achieve project expectations.

Chemical Design Expert – James Hart, PE



Education: BSE Chemical Engineering, Cleveland State University / BSE Business Administration and Marketing, Bowling Green State University

Licenses / Certifications / Associations: Professional Engineer FL (65420) / Florida Engineering Society, American Institute of Chemical Engineers, Florida Institute of Chemical Engineers, National Society of Professional Engineers

Mr. Hart is a Professional Engineer with significant experience in all major phases of equipment and system design for a wide array of process industries. Experienced in scrubbing technology (HCl, H₂S, NO_x, ethanol, ethylene oxide, emergency chlorine, odor control, steel pickling lines) and anaerobic digesters, filtration and



evaporation. Experienced in water pollution remediation, ozone application, UV sterilization, and thermo oxidation. Demonstrated ability to organize work and manage major projects to meet cost and schedule deadlines. Possesses a unique blend of engineering, CAD and computer programming knowledge and experience.

Prior Experience - Prior to joining the firm, worked for 20+ years in various private sector companies, primarily in the areas of instrumentation, process design, scrubber design, water treatment systems (including filtration, thermal oxidation, ozonation and UV disinfection). He also worked for a major producer of concrete admixtures, in their research facility. Mr. Hart delivered a presentation at the November 29, 2011 AWWA Fall Conference, titled Membrane and Solute Combinations for ESOC Removal. He co-authored a paper published in the August 2012 issue of Florida Water Resources Journal, titled Pembroke Pines Explores Aquifer Recharge as a Cost-Effective Alternate Water Supply Strategy. Mr. Hart was also a co-author for the following articles: Evaluating Membrane Options for Aquifer Recharge in Southeast Florida in the IDA Journal, Fourth Quarter 2011; and Comparing Contaminant Removal Costs for Aquifer Recharge with Wastewater with Water supply Benefits, Journal of the American Water Resources Association, April 2014, Use of Lime, Limestone and Kiln Dust to Stabilize Reverse Osmosis Treated Water, Journal of Water Reuse and Desalination, March 2011.

ORGANIZATION CHART

In order to meet your project needs, we have assembled our team based on their relevant experiences with chemical feed system improvements, field surveying, electrical engineering, structural engineering, geotechnical investigation, and subsurface utilities, with a priority placed on Florida projects. Because of the team's familiarity and proven ability to work together, we can be responsive and meet the needs of this contract. As part of their community efforts and outreach, our team has been able to consistently enlist many MBE/WBE/SBE subconsultants in the community. The design-build team assembled for this consists of an exceptional group of subconsultants which we have worked with on past projects, yielding a superior end product. Our organization chart (shown on the following page) depicts our management structure, key team members and their project function:



Brown & Caldwell
Design Criteria Engineer

Project Manager
Micheal Brandao

Design Build Manager
John Scott

Design

Build

Technical Designer Leader/Quality Control
David Stambaugh, PE, DBIA - CGA

Construction Manager
Gary Jones - Cardinal

Design Manager
Emeliz Torres, PE - CGA

Superintendents
Mike Wilsey - Cardinal
Robert Schulte - Cardinal
Fred Fasolo - Cardinal

Discipline Leads
Chemical Design Expert
• James Hart, PE- CGA
Electrical - Hillers (MBE)
• Paul Hillers, PE
• Thein Win, PE
Structural - LYE (MBE)
• Lakdas Nanayakkara, PE
Geotechnical - RADISE (MBE)
• Andrew Nixon, PE
• Akash Bissoon, PE

Speciality Subcontractors
Rene Viau - Energy Efficient
Vincent Scott - Electron Plus (MBE)
Matt Skidmore - CC Control Corp

Design Support
Civil Design
• Nicholas Kandelidis, PE - CGA
Survey
• Steve Watts, PSM - CGA

Construction Support
Safety Director
• Dustin Dier, CSP - Cardinal
Senior Estimator
• Vincent Capouzzi - Cardinal
Project Engineer
• Juan Pablo Gonzalez, PE - Cardinal
Design-Build Quality Control
• Richard Holt - Cardinal



Additional Staff Members Include:

Prime Design-Builder

Gary Jones: Mr. Jones has been in the construction industry for over 40 years. He has supervised and managed construction projects since 1978 and has extensive experience in water and wastewater treatment plants. Mr. Jones is very team oriented, and has demonstrated his ability to work effectively with engineers and owners in a very cooperative and professional manner.

Michael Wilsey: Mr. Wilsey has over 32 years of experience in the construction and fabrication industry focused on support of the water and wastewater Industry. His unique experience both as a craftsman, and as a business president provide him a perspective that brings increased value to your project.

Robert Schulte: Mr. Schulte has over 40 years of Construction experience involving all aspects of the construction industry. He has spent the last 16 years working in the unique water and Wastewater treatment market focusing primarily on projects located on the Florida East Coast. He brings an extensive understanding of the market conditions, and multiple facets of treatment construction, to help complete his projects on time.

Richard Holt: Mr. Holt has been involved in the construction Industry for more than 28 years serving in roles from general laborer to Division Manager. The experience and qualifications from his education and background in the Industry is ideal for understanding design/build projects. Mr. Holt uses this combination of skills to provide support and oversight to design/build water/wastewater projects throughout Cardinal.

Fred Fasolo: Mr. Fasolo began his career in the construction industry thirty three years ago. His Career has included work on numerous municipal water and wastewater plants all throughout the United States requiring supervision for several crew members and multiple subcontractors.

Dustin Dier, CSP: Responsible for general Health, Safety and Environmental program management of Primoris Service Corporation businesses including Cardinal Contractors, Inc. and Primoris Mechanical Contractors. Responsible for developing and implementing strategic HSE objectives for the business units. Work directly with leadership to promote excellence in HSE programs throughout business groups while maintaining appropriate level of HSE professional staff, assisting with case management and supporting in-field projects.

Vincent Capuozzi: Mr. Capuozzi has been in the construction industry since 1972. He has been a superintendent and supervised many construction projects and has extensive experience in all phases of budgeting, supervising, estimating and construction of water and wastewater treatment plants. His efforts ensure our ability to provide the Owner a quality project within their budget.

Juan Gonzalez: Mr. Gonzalez has over 8 years of experience in construction, purchasing, sales, business development, administration and customer service, with proven success in managing client relations, and deliverables, combining technical and analytical attitudes with exceptional problem-solving strengths. Demonstrated ability to work effectively as a team member or independently. Areas of expertise include logistics, procurement, purchasing, scheduling inventory management, and leadership.

Specialty Subcontractors

Energy Efficient, Rene Viau: Construction manager with a 35-year record of success overseeing all phases of electrical construction with Energy Efficient Electric, Inc. This includes 15 years of estimating and design build experience. Energy Efficient has been working with Cardinal since the 1980's.

Electron Plus, Vincent Scott: Owner, operator and founder of Electron Plus, Vincent self performs all his work with a small skilled team of employees.



CC Control Corp, Matt Skidmore: Mr. Skidmore has more than 20 years of engineering experience designing, checking, drafting, and revising electrical, control processes instrumentation loop and logic drawings.

Design Team

Nicholas Kanelidis, PE: Mr. Kanelidis' background experience encompasses site design, civil, geotechnical, surface water management, water, and wastewater services for both the private and public sector. As a Project Manager at CGA, his responsibilities include preparing proposals with labor breakdowns, developing and managing project schedules, hydrologic and hydraulic modeling, developing quantity take-offs and cost estimates, preparing various engineering plans and technical specifications, permitting, bidding assistance, project management during construction, addressing Contractor RFI's, reviewing shop drawings, negotiating and reviewing change orders, as-built reviews, and final project certifications. As an engineer with previous design and field experience, he is versatile in his ability to perform the tasks at each individual project stage.

Steve Watts, PSM: Mr. Watts has over 35 years of experience, 31 years as a licensed Florida Professional Surveyor and Mapper. Having spent his entire surveying career working in South Florida, he is extremely knowledgeable of the rules, requirements and specifications for completing surveying and mapping projects in the tri-county area. He specializes in architectural and engineering design type surveys, land acquisition, easements, title research, and computer mapping.

Specialty Subconsultants

Paul F. Hillers, PE - Hillers Electrical Engineering, Inc.: Mr. Hillers has over 39 years of as a Electrical Professional Engineer in electrical and I&C design, programming, and construction management. Design and construction services experience includes high, medium and low voltage electrical distribution systems; process instrumentation and control systems; complete supervisory control and data acquisition (SCADA) systems; PLC/computer programming; fire alarm, security and security camera systems; time & attendance systems; normal and standby generation systems.

Thein Win, PE – Hillers Electrical Engineering, Inc.: Mr. Win has over 19 years of experience as a Electrical Professional Engineer in electrical and I&C design, programming, and construction management. Engineering, design and construction services experience includes medium and low voltage electrical distribution systems, instrumentation and control systems design and implementation. Supervisory control and data acquisition (SCADA) systems experience in water treatment facilities and wastewater treatment facilities. Electrical and I&C design for projects of nanofiltration treatment, reverse osmosis treatment, lime softening and wastewater treatment plants including reclaimed water systems. Programming of PLC and HMI for lift stations, raw water wells, water and wastewater treatment plants.

Lakdas Nanayakkara, PE – Lakdas/Yohalem Engineering, Inc.: Mr. Nanayakkara has over 36 years of practicing as a Professional Structural Engineer in the following disciplines: building structures, marine and bridge engineering structures for many state, county and city agencies in support of high visible and miscellaneous public projects. Over 1500 projects were completed in South Florida and the Caribbean Basin during the last 31 years.

Andrew Nixon, PE - RADISE International, LC.: Mr. Nixon has over 15 years of experience including providing Environmental, Geotechnical and Construction Materials Testing Services for low and high-rise structures, silos, transmission towers, etc.

Akash Bisson, PE - RADISE International, LC.: Mr. Nixon has over 14 years of geotechnical engineering experience including providing project management for a wide range of work involving geotechnical, environmental and civil engineering.



Mike Brandao

Vice President



Firm Name:

Cardinal Contractors, Inc.

Years with this Firm:

11 Years

With Other Firms:

9 Years

Education:

*University of Florida
College of Engineering
B.S. Mechanical Engineering*

Licensing:

*Florida Department of
Business and Professional
Regulation:*

*Mechanical Contractors
License No. CMC1250454*

*Plumbing Contractors
License No. CFC1429729*

*Engineering Intern
License No. 1100011244*

Qualifications:

Qualifications:

Mr. Brandao has 20 years experience in the construction and rehabilitation of water and wastewater treatment plants in Florida. His construction experience has a foundation in the construction of reverse osmosis / membrane softening water treatment plants. More recently, Mr. Brandao has worked on a variety of traditional water treatment plant processes and wastewater treatment plants with experience in rehabilitations and retrofits, new concrete hydraulic structures. His experience at Cardinal include 16 design-build projects in South Florida.

Experience:

2016-Present Cardinal Contractors, Inc.
Vice President

2009-2016 Cardinal Contractors, Inc.
Project Manager

2000 to 2009 Poole and Kent Company
Project Manager

Recent Project Experience:

City of Pembroke Pines
WWTP Design-Build Improvements Phase 1
Pembroke Pines, FL

City of Sunrise
Sawgrass WWTP Reuse Facility Phase 1
Sunrise, FL

Palm Beach County
Design-Build Optimization and Improvements for Water, Wastewater & Reclaimed Water
West Palm Beach, FL

City of Hollywood
Headworks Replacement and Rehabilitation
Hollywood, FL

City of Pembroke Pines
Design Build Services for Odor Control
Pembroke Pines, FL

City of Sunrise
Sawgrass Rerate Improvements
Sunrise, FL



Mike Brandao

Vice President

Project Experience:

City of Tamarac
WTP Emergency Generator Replacement
Tamarac, FL

Broward County
WTP 2A 4 Log Virus Removal
Pompano Beach, FL

City of Pembroke Pines
Master Lift Station #4
Pembroke Pines, FL

City of Pembroke Pines
Rehabilitation of Units #2 and #3
Pembroke Pines, FL

City of Sunrise
Springtree WTP NaOCl Tank Replacement
Sunrise, FL

City of Pembroke Pines
Rehabilitation of Treatment Unit #4 WWTP
Pembroke Pines, FL

City of Sunrise
Springtree WTP NaOCl Tank Replacement
Sunrise, FL

Town of Davie
Refurbishment of System III Lime Softening Unit
Davie, FL

Palm Beach County
Design Build- Water, Wastewater & Reclaimed Water Improvements
West Palm Beach, FL

City of Ft. Lauderdale
Influent Screening Devices
Ft. Lauderdale, FL

City of Pembroke Pines
Wastewater Plant Blower Replacement
Pembroke Pines, FL

City of Pembroke Pines Environmental Services Division
Rehabilitation of Plant #1 for the Wastewater Treatment Plant
Pembroke Pines, FL



Mike Brandao

Vice President

City of Sunrise
Effluent Pumping Station Expansion
Sunrise, FL

City of Miramar
Wastewater Reclamation Facility Expansion to 10.5 MGD Design-Build
Miramar, FL

Miami-Dade Water and Sewer Department
South District Wastewater Treatment Plant
Miami, FL

Palm Beach County Water Utilities Department
Lake Region Water Treatment Plant
Belle Glade, FL

Town of Jupiter
Jupiter Nanofiltration Water Treatment Plant
Jupiter, FL

City of Boca Raton Utility Services Department
Wastewater Treatment Plant Solids Processing Facility Improvements
Boca Raton, FL

City of Boca Raton Utility Services Department
Glades Road Water Treatment Plant Membrane Softening Process Addition
Boca Raton, FL



John Scott

Senior Project Manager

Qualifications:

Mr. Scott has 16 years of experience in construction and engineering. His experiences have a foundation in engineering design and management for large scale industrial projects. As Mr. Scott progressed in the industry, his responsibilities expanded to encompass both design and construction. Over his career, Mr. Scott has managed over a billion dollars in construction projects.

Experience:

2019-present Cardinal Contractors, Inc
Sr. Project Manager

2016-2019 McDermott
Project Director

2008-2016 CB&I / McDermott
Project Manager

2003-2008 BJ Services / Baker Hughes
Technical Services Engineer

Recent Project Experience:

City of Sunrise \$10 MM
Springtree Wastewater Treatment Plant Headworks Improvements
Sunrise, FL

Excellon Power Carbon Capture Plant \$90 MM
Design-Build Gas Fired Power Plant utilizing New Technology & Zero CO2 Emissions
LaPorte, TX

OXY Markham Facilities Ethylene Processing Plant \$120 MM
Design-Build Ethylene Treatment Facility for Salt Dome Storage & Distribution
Markham, TX

OXY Ethylene Production & Fractionation Plant \$180 MM
Design & Procurement of ethylene production facility including production, fractionation and utilities, electrical & control buildings, storage tanks and heaters
Corpus Christi, TX

Exxon-Esso LNG Upstream Gas Processing Facility \$70 MM
Design-Build Processing Facility for treatment, compression and distribution including Logistics, Offsite Staging and Materials Management
Hides Field, Papua New Guinea

Ecopetrol Refinery Expansion & Refurbishment \$50 MM
Design-Build expansion of an existing oil refinery including high pressure vessels, gas-fired heaters, piping, storage, electrical building and controls
Cartagena, Columbia

Firm Name:

Cardinal Contractors, Inc.

Education:

*Texas Tech
College of Engineering
B.S. Chemical Engineering
Dean's Honors List*

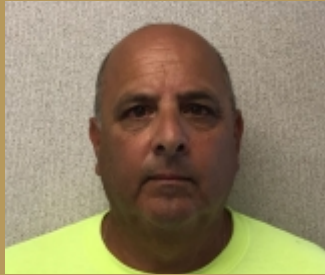
Military Service:

*U.S. Marine Corps – 6yrs
Marine Security Forces*



Fred Fasalo

Superintendent



Firm Name:
Cardinal Contractors, Inc.

Years with this Firm:
8 Years

With Other Firms:
32 Years

Education:

Certifications:

*OSHA - Trench and
Excavation Confined Space*

Languages:

Qualifications:

Mr. Fasalo began his career in the construction industry thirty three years ago. His Career has included work on numerous municipal water and wastewater plants all throughout the United States requiring supervision for several crew members and multiple subcontractors.

Experience:

2012-Present Cardinal Contractors, Inc.
Superintendent

2004-2011 Globe Tec Construction
Mechanical Superintendent

1999-2004 United Engineering
Superintendent

1988-1999 Felix Equities
Superintendent

Project Experience:

City of Sunrise
Sawgrass WTP Membrane Replacement and Acid Modifications
Sunrise, FL

City of Cape Coral
SWRF Bio-Solids Centrifuge Installation
Lee County, FL

City of Sunrise
Sawgrass WTP Improvements
Sunrise, FL

City of Fort Lauderdale
54' Emergency Replacement
Ft. Lauderdale, FL

Miami-Dade County Water & Sewer Department
ASR Ultraviolet Disinfection System, West & Southwest Well Field Improvements
Miami, FL

City of Dania Beach,
Water Treatment Plant Upgrades and Water 2.0 Million Gallon Storage Tank
Broward County, FL

City of Tamarac
Water Treatment Plant Upgrades and Water 2.0 Million Gallon Storage Tanks
Broward County, FL



Fred Fasalo

Superintendent

Village of Palm Springs
Vacuum Sewer System Improvements
Palm Beach, FL

Florida Keys Aqueduct Authority
Little Venice AWWTP
Marathon, FL



Fred Fasalo

Superintendent

Collier County
18 MGD, RO Expansion with 6MG above ground Crom Tank
Collier County, FL

City of West Palm Beach
East Central Regional WWTP Expansion
West Palm Beach, FL

City of West Miami
Storm Sewer Pump Station 1 &2
Miami, FL



Mike Wilsey

General Superintendent



Firm Name:
Cardinal Contractors, Inc.

Years with this Firm:
5 Years

With Other Firms:
28 Years

Education:
*Western High School
Davie Florida*

*Sheridan Technical College
Hollywood, FL*

Certifications:
*OSHA - Trench and
Excavation Confined Space*

*OSHA – Fall Protection
First Aid & CPR Training*

Qualifications:

Mr. Wilsey has over 32 years of experience in the construction and fabrication industry focused on support of the water and wastewater Industry. His unique experience both as a craftsman, and as a business president provide him a perspective that brings increased value to your project.

Experience:

2017 to Present – Cardinal Contractors, Inc.
General Superintendent

2015 to 2017 – Rosetta Construction Company, Inc.
Equipment Manager & Shop Supervisor

2005 to 2015 – M.W. Industrial Corporation - Loxahatchee, FL
President

1999 to 2005 – Intrastate Construction Company
Foreman & Superintendent

1994 to 1999 – Cardinal Contractors, Inc. (Formerly Widell Inc)
Craftsman & Foreman

Recent Project Experience:

Palm Beach County Water Utilities
WTP #8 Valve Installation & Communications Improvements
Palm Beach County, FL

Palm Beach County Water Utilities
WTP #8 Finished Water Improvements
Palm Beach County, FL

Palm Beach County Water Utilities
WTP #8 Lime Slakers, Fuels Storage tanks & high Service Pump Replacement
Palm Beach County, FL

Palm Beach County Water Utilities
WRWWTP Thickeners & HW and NRRWWTP Bypass
Palm Beach County, FL

Palm Beach County Water Utilities
WTP #3 membrane Cleaning, Clearwell & Sand Strainer Improvements
Palm Beach County, FL

Coral Springs Improvement District
South Plant WWTP Improvements
Coral Springs, FL



Bob Schulte

Superintendent

in addition to the supporting electrical/instrumentation and control sub structures along with the installation of new 36 inch raw water mains and motorized valves.

Broward County, North WWTP Bid Package I - Specialty general construction work including form work, reinforcing and poured in place and precast concrete. The project included a 78,000 S.F. aeration basin, three 130 foot diameter clarifiers, RAS pump station , was pump stations, plant lift station and blower/electrical structure .Sub contractors included misc. metals and roofing.

City Of Cape Coral, Everest WWRF Administration And Maintenance Facility - Self-performed and sub contracted work on a two story reinforced masonry structure. Direct responsibilities included misc. metals, finishes, flooring, laboratory casework, standing seam roof on metal trusses.

Broward County Aviation Department, Ft. Lauderdale Airport Expansion – Runway expansion including necessary construction for bridge crossing over US 1, as well as installation of 2,735 24”x24” piles and associated dewatering and Maintenance of Traffic Activities. \$340,000,000

Project Experience:

Bonita Springs Utilities Department
West WWRF expansion
Bonita Springs, FL

Broward County BOCC
WTP 1A&2A Improvements
Broward County, FL

Broward County BOCC
North WWTP Dewatering facility
Broward County, FL

City of Dania
WTP upgrades
Dania, FL

Palm Beach County Utilities Department
WTP 9 reverse osmosis
Palm Beach County, FL

Miami-Dade Aviation Dept.
Central Chiller East Expansion
Miami, FL

Miami-Dade Water & Sewer Department
South District Digester Cluster
Miami, FL

Miami-Dade Water & Sewer Department
North District Injection Well Pump Station



Gary Jones

General Superintendent

Qualifications:

Mr. Jones has been in the construction industry for over 40 years. He has supervised and managed construction projects since 1978 and has extensive experience in water and wastewater treatment plants. Mr. Jones is very team oriented, and has demonstrated his ability to work effectively with engineers and owners in a very cooperative and professional manner.

Recent Experience:

1995- Present Cardinal Contractors, Inc.
General Superintendent / Estimator / Equipment Manager

1989-1995 M. Bone, Inc.
Superintendent

Relevant Project Experience:

Sarasota County, Bee Ridge WRF Phase 2 Expansion — Phase 2 expansion of the Bee Ridge Water Reclamation Facility, including improvement to expand the capacity from 9.0 MGD to 12.0 MGD. Project cost was \$1,977,806.

Manatee County, SWWRF Lake Filtration & North Pond Improvements — Conversion of the existing unlined North Effluent Storage Pond to a lined Reject Holding Pond and a lined Effluent Holding Pond to store Part III Reclaimed Water. Construction consists of the following: Earthwork, pondliner, pipes, valves, precast wetwells, pumps, cast-in-place concrete, pipe grouting, pipe removal, miscellaneous renovations and automation necessary to monitor Effluent quality, divert reject water to the Reject Pond and return reject flow to the Headworks for retreatment, and return flow from the Part III storage pond to the Lake Filtration System.. Project cost was \$13,053,423.

City of Sarasota, Lift Station 16 rehabilitation — Provide the replacement of existing pumps at Lift Station No 16 with new higher capacity pumps. Provide a new motor control center in the former generator room. Provide a complete Emergency Pump Room to house three diesel powered sewage pumps capable, when pumping together, of delivering the anticipated peak well weather sewage flow. Provide for the site landscaping and irrigation around the lift station. Project cost was \$1,916,749.

City of Sarasota, Nitrification Basin Improvements — Nitrification Basin Improvements including the addition of four split case horizontal centrifugal internal recycle pumps, four split case horizontal centrifugal mixed liquor pumps, 48" ductile iron piping suction header, 36" ductile iron pipe suction header, 30 inch bonneted knife gate valves; 48" bonneted knife gate valves, demolition of existing pumps and pump bases, new concrete pump bases and pipe supports, electrical and controls. Project cost was \$1,977,806.

Port of the Islands Community Improvement District, Port of the Islands WTP — Construction of new water treatment plant including site/civil work, coordination with Severn Trent through the Engineer, temporary facilities, demolition, restoration, equipment and materials startup and testing, all appurtenances, and all other required contract Work, including storm drainage systems, electrical systems, chlorine contact tank, instrumentation and SCADA Systems and yard piping. Project cost was \$3,384,475.

Firm Name:
Cardinal Contractors, Inc.

Years in the Industry:
42 Years

Education:

Registrations:

Other Related Skills:

- *OSHA 10-hour training*
- *First Aid/Blood Borne Pathogens Training*
- *Confined Space Training*
- *Competent Person Training*
- *Fall Protection*
- *Trench Safety*



Gary Jones

General Superintendent

City of Cape Coral, Everest WRF Expansion Minor Modifications — Package "A" CCB & Yard Piping - demolition, clearing & grubbing; drainage and site concrete at fuel tank, pump station & bleach storage; site erosion control; demo of 15" drain line; new chlorine contact basin & effluent wet well; modifications to existing chlorine contact basins; new reclaimed water pump station; relocate existing fuel tanks; and new bleach storage facility, etc.

Package "B" Headworks Modifications - erosion control; all work associated with modifications to headworks; coatings; testing of concrete hydraulic structures; pipe testing, and restoration. Project cost was \$4,227,061.

City of Ft. Myers, Central Advanced WWTF Reclaimed Water System Improvements — Construct reclaimed water system improvements, including new filter feed pumps, disk filters, transfer pumps, high service pumps, one (1) 5-MG ground storage tank, yard piping, instrumentation, storm drainage, maintenance of flow and all supporting appurtenances. Project cost was \$6,630,630

Hillsborough County, NW Class A Sludge Processing Facility — Construction of a Class A sludge processing facility utilizing rotary drum thermal dryers to dewater and pelletize domestic wastewater sludge, demolition of existing belt filter presses, installation of (4) new pre-purchased sludge centrifuges; construct a new bio solids processing building; a new foreign sludge receiving station, and install a new asphaltic concrete pavement. Project cost was \$11,928,272.

Lee County Utilities, Corkscrew WTP Wellfield — Install well pumps and wellhead piping for 5 raw water wells. Project cost was \$244,175.

Lee County Utilities, Corkscrew WTP Lime Softening — Install well pumps and wellhead piping for 5 raw water wells. Project cost was \$459,000.

City of Punta Gorda, Secondary WTP Phase 1 — Project consisted of expansion to existing wastewater treatment plant to include construction of a new influent structure and new effluent pumping station and headworks, including piping and flow meters; demolition of existing influent structure and conversion of the existing irrigation pumping station to become a pond return pumping station; electrical and instrumentation facilities; and surface restoration. Project cost was \$2,065,702.

Bonita Springs Utilities, WRF phase 2 expansion — Construction of this design/build project consisted of the expansion of an existing water reclamation facility (WRF) from 2.0 MGD to 4.25 MGD capacity. The construction effort required keeping the existing facility on line while building the major expansion. The work consisted of poured-in-place concrete tanks and structures, mechanical aeration, clarifiers, chlorine disinfection, effluent pumping, sludge thickening, odor control, pumping facilities, operations building, electrical building, stand-by power generation and site work. Cardinal's team evaluated the design for economic constructability, selected equipment, and made alternate and substitute recommendations to improve construction. Project cost was \$5,009,930.

Florida Keys Aquaduct Authority, Marathon RO Plant and Stock Island Improvements — Construction of RO Plants. Project cost was \$8,733,250.

Lee County Division of Utilities, Fort Myers Beach WWTP — Construction and Expansion of Aeration system and Digesters. Project cost was \$3,611,756



Juan Gonzalez

Project Engineer



Firm Name:
Cardinal Contractors, Inc.

Years with this Firm:
3 Years

With Other Firms:
8 Years

Education:
Universidad Rafael Urdaneta (U.R.U)
B.S. Civil Engineering

Other Related Skills:

- *Confined Space Training*
- *Fall Protection Training*

Qualifications:

Mr. Gonzalez has over 8 years of experience in construction, purchasing, sales, business development, administration and customer service, with proven success in managing client relations, and deliverables, combining technical and analytical attitudes with exceptional problem-solving strengths. Demonstrated ability to work effectively as a team member or independently. Areas of expertise include logistics, procurement, purchasing, scheduling inventory management, and leadership.

Experience:

2017-Present Cardinal Contractors, Inc.
Project Engineer

2016-2017 Inversiones Reggio Fortuna, LLC
Store Manager

2015-2016 Inversiones Reggio Fortuna, LLC
Commercial Sales Representative

2014-2015 Carico International, Inc.
Sales Representative

2012-2013 Delrinpo, C.A.
Business Manager

2011-2012 SAMFOR, S.A.
Engineer Assistant

2009-2011 Ralph Gonzalez, C.A.
Assistant Manager

Recent Project Experience:

Design Build Services for WWTP Rehabilitation Phase I – Design-build project to rehab Treatment Unit 5, East Transfer Pump Station and the East and West Surge tanks. Project includes construction of a new pumping system and controls while maintaining existing pumps in service. Rehabilitation of the tanks and treatment units include structural repairs, coatings, mechanical repairs, control and electrical replacements. *\$5,391,255.*

City of North Miami, Winson WTP Bid Package 1: Filter Rehabilitation — Project consisted of the replacement of filter media, surface wash agitator system, under drain system and pipe gallery for existing Filters Nos. 1 through 4, including refurbishment and waterproofing of filter interiors for leak suppression, with all ancillary accessories. *\$4,442,000.*

City of Sunrise, WWTP Reuse facility — The City of Sunrise (City) conducted a Reuse Feasibility Study that determined that a reuse water treatment capacity was feasible. Based on this finding and other subsequent studies, the City is building new process areas to treat a portion of the secondary effluent to tertiary reuse standards. These new process components are to be located in a currently undeveloped southeast corner of the WWTP site. *\$15,915,000.*

SAMFOR S.A New Headquarters Building — Project consisted in the design and construction of a new modern two story building to be the new administrative headquarters of the company. Project value: *\$350,000.*



Vincent Capouzzi

Senior Estimator



Firm Name:

Cardinal Contractors, Inc.

Years in the Industry:

48 Years

Education:

- *Miami-Dade Jr. College*
- *Broward County Carpenter Apprentice Program*

Registrations:

Other Related Skills:

- *HCSS Heavy Bid Certification*
- *OSHA 10 Hour certification*
- *First Aid/Blood Borne Pathogens Training*
- *Confined Space Training*
- *Competent Person Training*
- *Fall Protection*
- *Trench Safety*

Qualifications:

Mr. Capouzzi has been in the construction industry since 1972. He has been a superintendent and supervised many construction projects and has extensive experience in all phases of budgeting, supervising, estimating and construction of water and wastewater treatment plants. His efforts ensure our ability to provide the Owner a quality project within their budget.

Recent Experience:

2004- Present Cardinal Contractors, Inc.
Estimator / Assistant Project Manager

2004 - 1988 Project Integration
Project Superintendent

1988-1986 –Widell Associates
Project Superintendent

1986-1981 – Intercounty Construction
General Foreman

1978 to 1981- Rowan Construction Corp.
Assistant Superintendent

1977-1972 –Snead Construction Company
Carpenter Apprentice

Relevant estimating Experience:

City of Sunrise, Sawgrass Wastewater Treatment Plant Reuse facility, Phase 1 - The City is building new process areas to treat a portion of the secondary effluent to tertiary reuse standards. These new process components are to be located in a currently undeveloped southeast corner of the WWTP site, including filtration, pumping and chemical treatment. Project Cost is \$15,915,000

Manatee County, SWWRF Lake Filtration & North Pond Improvements — Conversion of the existing unlined North Effluent Storage Pond to a lined Reject Holding Pond and a lined Effluent Holding Pond to store Part III Reclaimed Water. Construction consists of the following: Earthwork, pondliner, pipes, valves, precast wetwells, pumps, cast-in-place concrete, pipe grouting, pipe removal, miscellaneous renovations and automation necessary to monitor Effluent quality, divert reject water to the Reject Pond and return reject flow to the Headworks for retreatment, and return flow from the Part III storage pond to the Lake Filtration System.. Project cost was \$13,053,423.

City of Sarasota, Lift Station 16 rehabilitation — Provide the replacement of existing pumps at Lift Station No 16 with new higher capacity pumps. Provide a new motor control center in the former generator room. Provide a complete Emergency Pump Room to house three diesel powered sewage pumps capable, when pumping together, of delivering the anticipated peak well weather sewage flow. Provide for the site landscaping and irrigation around the lift station. Project cost was \$1,916,749.

City of Sunrise, WTP Improvements - The work performed includes renewal and



Vincent Capouzzi

Senior Estimator

refurbishment of Sawgrass WTP's chemical & mechanical processing equipment, piping, valves, chemical & fuel storage tanks, building, electrical communication and security components & updating of SCADA interfaces with these components. The facility's chemical & mechanical pumps, valves, piling, chemical & fuel storage tanks & associated containment, air compressors & safety fixtures (eye wash) also require refurbishment. The work also includes security improvements to the Sawgrass Utility Complex and consist of installing approximately 6,000 linear feet of chain link fence & improvement to the two entry ways to the complex. Project Cost is \$5,469,501.

Pembroke Pines, Rehabilitation of treatment units #2 & #3 — Rehabilitation of treatment units 2&3, including demolition, earthwork, painting and refurbishment. Removal of existing diffuser systems and installation of new floor cover bubble diffuser systems. Replacement of the connecting air piping, air header, piping in the secondary air and contact sections, and removal and replacement of the structural fabric covers with metal covers. Project cost was \$3,066,689.

Broward County WTP 2A, 4-Log Virus Removal — Includes the furnishing of all labor, materials, equipment for the construction of 4-log virus reduction treatment. To include piping system, flow metering, chlorine solution piping, distribution panels and injection points, chemical mixing and appurtenant systems, chemical dose control, automated compliance monitoring, alarm enunciation and reporting activities, access vaults/housings. Project cost was \$1,971,061.

Veolia Water North America, City of Palmetto Class V ASR test well pump and Treatment Plant — Install, test and commission the Class V ASR Test Well Pumping and Treatment System including the installation of Owner supplied equipment. Associated site work, yard piping, valves, support systems and appurtenances, painting, electrical, instrumentation, shutdown sequencing and tie-ins to existing systems. Project cost was \$1,111,484.

Broward County Master Pump Station 440 Modifications — The construction of upgrades to Master Pump Station 440 including, temporary bypass pumps, primary pumps, jockey pump, seal water system, on site lift station, HVAC system, diesel engine generator. Project cost was \$3,105,464.

City of Sunrise, Sawgrass WTP Rerate Improvements — Construction of sand strainers access platforms and cover plate lifting device, replacement of air compressors, replacement of existing transfer pumps with new pumps and valves, flow meters pressure indicator replacement, replacement of the sodium hypochlorite metering pumps with new pumps and the addition of a new chemical injection point, demolition of the liquid oxygen storage system, Ozone destruct unit and ozone generator equipment replacement of concentrate pumps and valves, and check valve replacement for the first stage and feed pumps. Electrical, instrumentation and controls components. Project cost was \$2,206,535.

City of Tamarac, WTP Emergency Generator Replacement — Removal and Replacement of the existing standby emergency power generator, fuel tank, and main electrical gear at the City's Water Treatment Plant. Removal and replacement of the fuel tank and main electrical gear at the Grant's Plaza Water Booster Station and SCADA system improvements. Project cost was \$1,563,089.

City of Hollywood, Headworks replacement and rehabilitation — Rehabilitation of Bar Screen Facility, Grit Chamber Flow Distribution Box, Grit Chambers 1,2&3, Influent



Vincent Capouzzi

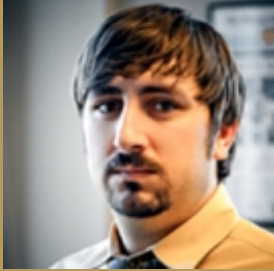
Senior Estimator

Degritting Building, Influent Pump Stations and Interconnecting Piping. Project cost was \$5,875,426.



Dustin Dier, CSP

Corporate Health, Safety & Environment Director

**Firm Name:**

Primoris Services Corporation

Years with this Firm:

3 Years

With Other Firms:

15 Years

Education:

*Colombia Southern University
B.S. Occupational Safety & Health*

Licensing/Training:

Certified Safety Professional (CSP-32072)

Occ. Health and Safety Technologist (OHST)

Certified Occupational Safety Specialist (COSS)

Site Safety Officer (SSO)

Hazardous Waste Operations and Emergency Response / 40 hr. (HAZWOPER)

Baton Rouge Fire Department Training Academy

Leadership Development Program (LDP)

Firefighter – LSU Fire Academy

Role:

Responsible for general Health, Safety and Environmental program management of Primoris Service Corporation businesses including Cardinal Contractors, Inc. and Primoris Mechanical Contractors. Responsible for developing and implementing strategic HSE objectives for the business units. Work directly with group presidents to promote excellence in HSE programs throughout business groups while maintaining appropriate level of HSE professional staff, assisting with case management and supporting in-field projects.

Qualifications:

Mr. Dier is a Certified Safety Professional with 18 years of experience in safety leadership, emergency response and construction management. Typical duties include oversight and strategic planning around inspection of working conditions, facilities, and equipment utilized, employee training, and working closely with clients to ensure compliance with all federal, state, and company regulations in oil and gas, energy, construction, consulting, government, infrastructure and other areas

Experience:

2017 to Present Primoris Services Corporation
Corporate Health Safety and Environment Director (HSE)

Conduct strategic planning to integrate field and core safety programs and initiatives into the assigned business units. Lead safety staff into various lines of business; provide subject matter expertise, guidance and directions to business teams to address safety related issues. Insure regulatory compliance with all safety and health regulations. Monitor and manage overall safety performance. Develop and facilitate training. Develop and implement leading indicators to predict and prevent injuries. Oversee and participate EHS audit functions. Manage the company’s behavioral safety programs. Evaluate contractor safety programs and insure continuous efficiency. Plan and implement programs to reduce or eliminate occupational injuries, financial losses and business risks. Interface with federal and state OSHA officials as appropriate.

2015 to 2017 CH2M Hill Alaska
Regional HSE Manager

Responsible for general Health, Safety and Environmental program management of CH2M businesses including NORCON (union business unit). Hired and sent directly in response to a request by major client for intensive turnaround in HSE performance following several significant events. Change agent for implementation of leadership engagement programs centered on safety and health performance. Responsible for 70% decrease in recordable injuries in first year and 2M savings in direct WC costs. Implementation of accountability programs, leading indicator program, etc. Daily oversight and administration of safety staff (30+HSE professionals), responsibility for work in Alaska and Russia, and team member Sr. Leadership. Responsible for meeting all defined HSE business goals and objectives.



Dustin Dier, CSP

Corporate Health, Safety & Environment Director

(Licensing/Training Continued)

*EMT-B – National Reg. of
Emergency Medical
Technicians*

*AMA – Workplace
Investigations*

*Incident Command –
IS00200 FEMA*

*Oversight Drilling
Competent Person*

*Air Shipment of Dangerous
goods IATA DOT 105*

*Confined Space Entry
Supervisor*

*Excavation Competent
Person*

Memberships:

*National Safety Council
(NSC)*

*American Society of Safety
Engineers (ASSE)*

*Society of Human Resource
Managers (SHRM)*

*Drug and Alcohol Testing
Industry Association
(DATIA)*

John C. Maxwell

2012 to 2015 Jacobs Engineering Group
Area HSE Manager

Area HSE manager for Jacobs Field Services, N.A. health, safety and environmental programs including all HSE staff, maintenance, construction and turnaround work (Refinery, Chemical, Plastic and Lubrication packaging Plant). Large project, change management, team member responsible for identifying improvement opportunities, HSE & Operations related, to initiate change and performance improvement for troubled sites. Daily interface with client regarding safety programs, safety strategy and program management. Overall responsibility for all craft, supervision and management of safety compliance and performance including accident/incident investigation, near loss reporting initiatives, beyond zero culture, HSE planning, staffing, audits, etc. Jacobs leadership representative for key clients regarding continuous presence contract site transformation plans. Experience on large EPC contracts and bringing projects from FEED, Design & Field Construction.

2006 to 2012 The Shaw Group, Inc.
Corporate Environmental Health & Safety Director

This position encompasses a multitude of duties whereby there is responsibility for the entire EH&S staff at project sites with regards to substance abuse testing, occupational clinic support, medical surveillance activities, medical oversight, AED programs, union substance abuse program support and direction and functional assessment program development for outages and transitioning projects/contracts. The position also includes increased responsibilities in the corporate EH&S leadership. The following bullets outline some additional responsibilities:

- *Project manager for ShawMed creation, implementation and contract for Medical Services and Injury Case Management (currently held by CORE Health Networks). Dustin led the effort of creating a custom platform for the housing of medical surveillance, drug testing and IH monitoring results, i.e. ShawMed*
- *Shaw representative for the Nuclear Energy Institutes (NEI) review and revision committee to establish consistency across New Construction of Nuclear Power Plants in relationship to 10 CFR 26 Fitness for Duty by the Nuclear Regulatory Commission*
- *Implementation of functional assessment program to all outages and new projects across divisional lines*
- *Manage Medical Services Department for corporate EH&S. Typical annual budget of approximately \$700K including the following programs: Medical Surveillance & Scheduling, Substance Abuse Prevention, company Automatic External Deliberator (AED) program, ShawMed, and some DOT compliance initiatives.*
- *Safety management experience within each Shaw business family.*
- *Developed and monitored departments SMART objectives and strategic goals*
- *Created and developed Shaw's current international medical surveillance*



Dustin Dier, CSP

Corporate Health, Safety & Environment Director

program and continuous to provide assistance and support as Shaw Nuclear expands into new areas of China.

- *Handled high profile employee complaints involving internal and contracted medical evaluations.*
- *Author of New Employee Orientation policy for Shaw Environmental and Infrastructure.*

2005 to 2016 The Shaw Group, Inc. Operations Manager

Responsible for all field/hourly craft workers located in the South and/or working on projects in the Gulf South region for Shaw Environmental. Responsible for staffing multimillion-dollar projects in Commercial, State & Local and Federal business lines with qualified craft (primarily GF, Foreman, Heavy Equipment Operators, Fitters, Welders, Iron Workers and laborers). Work closely with project managers and business line management to ensure appropriate level of qualified craft are available and placed on location in time to respond to client needs and project schedules. Operations Duties Included:

- *Responsible for recruiting, staffing and maintenance of over 200 hourly employees*
- *Recruiting, sourcing, interviewing, hiring, managing daily activities, employee development and performance management*
- *Terminations for projects (e.g. furlough, reduction in force, terminations, etc.)*
- *Equipment certification & maintenance*
- *HAZWOPER & Medical Surveillance*
- *CSX/eRailSafe and general training of all craft employees*



Richard Holt

Vice President / Design-Build Director

Firm Name:

Cardinal Contractors, Inc.

Years with this Firm:

6 Years

Years in the Industry:

28 Years

Education:

B.S. Civil Engineering
University of Kentucky

Registrations:

Florida Certified General
Contractor (CGC1523063)
Professional Engineer: KY
(inactive)

Other Related Skills:

- OSHA 10-hour training
- U.S. Army Corp of Engineering QC/QA Training
- EPSC Inspectors Training Certificate #8316
- First Aid/Blood Borne Pathogens Training
- Confined Space Training
- Competent Person Training
- Fall Protection

Qualifications:

Mr. Holt has been involved in the construction Industry for more than 28 years serving in roles from general laborer to Division Manager. The experience and qualifications from his education and background in the Industry is ideal for management of design/build projects. Mr. Holt has used this combination of skills to successfully manage various design/build water/wastewater projects throughout the southeastern United States.

Recent Experience:

2018-2020 Cardinal Contractors, Inc.
Design Build Director / VP

2014- 2018 Cardinal Contractors, Inc.
Vice President Operations

2014-2001 Layne, Heavy Civil Division, Fairburn GA (Formerly Reynolds)
Senior Project Manager

2001-1995 Judy Construction Company, Cynthiana KY
Project Manager/Project Engineer

Relevant Project Experience:**City of Sarasota Headworks and Filter Improvement CMAR**

\$6,021,824 – Selective demolition of two existing sand filter and reconstruction utilizing in basin fabric filter technology to increase capacity. Modifications to an existing elevated headworks including partial demolition and construction to accommodate additional mechanical screening. The project additionally required upgrades in the electrical, instrumentation and control of the existing and new equipment. The project included a preconstruction phase where we assisted the owner and design team to obtain the most cost effective end product.

Dallas Central Grit Removal and Screenings Improvements, Dallas TX

\$21,232,820 - Demolition of ten existing vortex type grit systems including classifiers and accessories, and replacement with stacked try type grit removal systems with associated washing and dewatering systems. The project re-used the existing screenings equipment and additionally required upgrades in the electrical, instrumentation and control of the existing and new equipment

Islamorada Wastewater Collection and Transmission DBO Project, Islamorada, FL —

This project includes design and construction of four vacuum pump stations, conversion of a treatment plant to a master pump stations, and installation of approximately 420,000 LF of piping throughout the municipality to collect the wastewater, and transfer to Key largo for ultimate treatment. Project cost for this design/build/operate project was \$97,776,059.

Walnut Creek WRF, Henry County, GA —

This project involved the expansion of an existing extended aeration facility for the Henry County Water and Sewer Authority. Construction facilities included modifications for an advanced sludge digestion process. Project cost was \$25,322,619.

Shenandoah Wastewater Treatment Facility (WWTF), Coweta County, GA —

This project involved the construction of a new extended aeration WWTF. The project consisted of aeration basins, clarifiers, filtration, and sludge disposal. Project cost was \$12,967,000.



Richard Holt

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James Creek Water Reclamation Facility (WRF), Forsyth County, GA — This project involved the construction of an Enviroquip/Kubota flat plate membrane facility for a private developer. The facility was constructed on a design/build basis to rapidly provide for wastewater services prior to completion of the surrounding development. Project cost was \$10,668,427.

Upper Sweetwater Water Reclamation Facility, Paulding County, GA — Construction of a new Enviroquip/Kubota flat plate membrane facility. Project cost was \$7,088,400.

Cauley Creek Water Reclamation Facility Expansion Duluth, GA — This project involved the expansion of the existing Zenon membrane facility under a fast track negotiated method. The Owner purchased approximately \$2.5 million worth of equipment and contracted for the design. Negotiated costs with 5% design documents and constructed facility concurrently with design, permitting, and equipment purchasing being performed. Project cost was \$7,457,000.

Temple Water Reclamation Facility, Carrol County, GA — This project involved the design/build/construction of a 1.0-MGD SBR treatment facility, including sprayfields and reuse piping. Project cost was \$6.1 million.

Hampton Water Reclamation Facility, Forsythe County, GA — This project involved the design/build/construction of a 0.9-MGD Kubota membrane facility for a private developer. This was the first flat plate membrane facility in the Eastern U.S. Project cost was \$3,526,337.

Cauley Creek Water Reclamation Facility, Duluth, GA — This design/build project involved the construction of a 2.5-MGD Zenon membrane filtration facility for a private company. This was the first such plant in Georgia to treat wastewater to near drinking water quality. Project cost was \$14,637,000.

Cedar Creek WWTP, Louisville Jefferson County, GA — This project involved the design/build upgrade of an existing facility for the Louisville Jefferson County Metropolitan Sewer District. Performed the initial estimating, visioning, and assisted in contract negotiations prior to other job opportunities. Project cost was \$12,043,000.

Water Treatment Plant Expansion, Princeton, KY — This project involved the improvements to an existing water treatment plant facility to upgrade to an Actiflo system. Project cost was \$3.3 million.

Floyds Fork Wastewater Treatment Plant (WWTP), Louisville and Jefferson County, KY — This project involved the construction of a new WWTP for the Louisville & Jefferson County Metropolitan Sewer District. This was the first municipal design/build construction project in the state of Kentucky. Project cost was \$15,687,000.

Jeffersontown Wastewater Treatment Plant (WWTP) Improvements, Louisville and Jefferson County, KY — This project involved improvements to an existing WWTP for the Louisville & Jefferson county Metropolitan Sewer District. Project cost was \$3,325,000.

Water Treatment Plan Expansion, Abingdon, VA — This project involved the construction of a new sedimentation basin for the Washington County Service Authority. Project cost was \$1,367,300.



Richard Holt

Vice President / Design-Build Director

Wastewater Treatment Plant Improvements, Knoxville, TN — This project involved the expansion of the existing WWTP for the West Knox Utility District. Project cost was \$4,364,000.

Wastewater Treatment Plant (WWTP) Expansion, Newport, TN — This project involved the expansion of the existing WWTP for the Newport Tennessee Utility Board. Project cost was \$3,970,288.

East Pump Station, Madisonville, KY — This project involved the construction of a new pump station to transfer wastewater to the treatment plant for the City of Madisonville. Project cost was \$1,088,288.

Wastewater Treatment Plant (WWTP), Princeton, KY — This project involved the expansion and improvements of the existing WWTP for the City of Princeton KY. Project cost was \$2,271,530.



David Stambaugh, PE, DBIA

Director of West Palm Beach Office

SUMMARY OF QUALIFICATIONS

With more than seven years of construction experience followed by fourteen years of design and project management, Mr. Stambaugh has developed a strong understanding of the engineering profession and necessary skills to successfully complete a variety of projects with varying degrees of complexity. He is experienced in the design of both public and private engineering projects, including the design of water and wastewater treatment plant expansion and rehabilitation, the design of sanitary sewer collection and transmission systems, replacement and improvements design for drinking water distribution systems and booster stations, and the design of storm water management systems, roadways, and parking lots.

PROJECT EXPERIENCE

DESIGN BUILD WATER TREATMENT PLANT EXPERIENCE

Water Treatment Plant #8 Fluoride System Improvements, Palm Beach County, FL. Managed a team of design consultants to rehabilitate the existing fluoride system that were approaching the end of their useful life. The rehabilitation included complete replacement of all wetted components including bulk storage tanks, day tanks, pump skids, valves, primary and secondary containment piping to the injection location, and recoating of the concrete structure. Additional safety features were incorporated that included new elevated walkways, handrails, kick plates, signage for restricted entry confined spaces, eyewash stations, and instrumentation and controls to allow remote operation and maintenance.

Water Treatment Plant #8 Lime System and Process Improvements, Palm Beach County, FL. Responsibilities included design team management and quality control efforts to deliver the replacement of existing educator style lime feed system with a lime delivery pumping system that included new lime slurry tanks, mixers, progressive cavity pumps on VFDs, reinforced concrete containment structure with canopy structure. The lime slurry pumps were equipped with an automatic potable water flushing system to improve efficiency of the operations staff in maintaining the equipment. Also provided a new pump station to intercept the filtrate from the vacuum filter, used for lime sludge dewatering, and redirect it from discharge to the sanitary sewer system to the on-site lagoon.

Water Treatment Plant #3, #9, and #11 Fluoride System Improvements, Palm Beach County, FL. Managed a team of design consultants to rehabilitate the existing fluoride system that were approaching the end of their useful life. The rehabilitation included complete replacement of all wetted components including bulk storage tanks, day tanks, pump skids, valves, primary and secondary containment piping to the injection location, and recoating of the concrete structure. Additional safety features were incorporated that included new elevated walkways, handrails, kick plates, signage for restricted entry confined spaces, eyewash stations, and instrumentation and controls to allow remote operation and maintenance.

Water Treatment Plant #3 and #9 Valve and Process Improvements, Palm Beach County, FL. Design Manager responsible for managing all design team efforts for the replacement of a 16" raw water blow off valve, installation of dual reduced pressure backflow preventers for the membrane concentrate, rehabilitation of the sulfuric acid dilution system, and replacement of 4 high service pump check valves at WTP #3. The scope of work at WTP #9 included the replacement of 7 high service pump check valves and a 36" sand strainer bypass butterfly valve.

YEARS OF EXPERIENCE

22

YEARS WITH THE FIRM

12

EDUCATION

Bachelor of Science in Civil Engineer, University of Central Florida, 2000

CERTIFICATIONS & LICENSES

Professional Engineer State of Florida No. 70757

Florida Stormwater, Erosion, and Sedimentation Control Inspector

FEMA Introduction to the Incidental Command System, ICS 100

OSHA – 10 Hour Occupational Safety and Health Training Course in Construction Safety and Health

National Safety Compliance – Training Certificate for Confined Space Entry

PROFESSIONAL AFFILIATIONS

Design Build Institute of America (DBIA)

Florida Engineering Society (FES) of Broward County, Florida

American Society of Civil Engineers (ASCE)



Water Treatment Plant #8 Valve Installation and Communication Improvements, Palm Beach County, FL. Design Manager that was charged of overseeing all deliverables produced by the design team for the installation of an owner furnished 30-inch butterfly valve on the influent water main into a 5.0 MG ground storage tank and installation of fiber optic communication for the existing rotary drum vacuum filter that is used to reduce the moisture content of the lime sludge.

Water Treatment Plant #8 Finished Water Improvements, Palm Beach County, FL. Investigated various technologies for the reduction of Disinfection Byproducts (DBP) in the finished water and assisted with the preparation of the final Work Authorization (WA) required to implement these improvements. Upon execution of the WA, I managed all design information and deliverables from the design team to implement the SUEZ Trihalomethane (THM) Removal System (TRS) on two (2)-5.0 MG ground storage tanks (GST). The system was designed to reduce THM(s) by 25% with a through flow rate in each GST of 9.0 MGD.

Water Treatment Plant #8 Lime Slaker, Fuel Storage Tanks, and High Service Pump Replacement, Palm Beach County, FL. The project included the replacement of two (2) lime slakers, replacement of a 2,000 gallon diesel fuel tank in-kind for the wellfield generator, replacement of a 10,000 gallon diesel fuel storage tank for the water treatment plant with a new 20,000 gallon tank to extend the duration for operating on standby generator, replacement of High Service Pump #5, and installation of three (3) mixers on the existing ground storage tanks to reduce the DPB formation in the finished water. I was responsible for all efforts by the design team and coordination with the construction team. Additionally, I ensured that the project's objectives were met by facilitating the procedures for quality control and quality assurance.

Water Treatment Plant #2 Improvements, Palm Beach County, FL. Design Manager responsible for managing all activities from the design team for the installation of owner furnished 350 Hp High Service Pumps #13 and #14 and associated yard piping improvements. The project also included the design of improvements to the lime slurry delivery system which included replacement of the existing lime slaker and installation of a new concrete containment area with lime slurry box and owner furnished lime slurry pumps. The project also included the replacement of the main electrical breaker that required coordination with FPL and PBCWUD Operations Staff to ensure sufficient finished water productions for the customers during the plant shut downs.

Water Treatment Plant #2, #3, and #9 Sodium Hypochlorite and Salt Storage/Brine Maker Replacement, Palm Beach County, FL. Design Manager that was responsible for all design, permitting and construction engineering services that were required for the replacement of sodium hypochlorite tanks used for water disinfection and installation of salt storage/brine makers used for generation of anion exchange media. The project is necessary to maintain the integrity and reliability of the aging sodium hypochlorite tanks and to increase capacity of the salt storage/brine maker system.

Water Treatment Plant #3 Membrane Cleaning, Clearwell and Sand Strainer Improvement, Palm Beach County, FL. Design Manager that was responsible for all design, permitting and construction engineering services for improvements to Water Treatment Plant #3 that are necessary to replace temporary repairs previously undertaken and provide for the replacement of temporary piping repairs under the membrane cleaning building and modifications to the membrane cleaning systems to optimize cleaning. The project also included the application of a protective coating to Clearwell #1 and #2 and the installation of new housings for the odor control system blowers at Clearwell #2 to eliminate a known single point failure. A second sand strainer was also added to increase treatment reliability.

Water Treatment Plant #8 Rotary Drum Vacuum Filter and High Service Pump Replacement, Palm Beach County, FL. Design Manager that was responsible for all design, permitting and construction engineering services for improvements to Water Treatment Plant #8 that are necessary to maintain the integrity and reliability of an aging system. The improvements included the replacement of the existing rotary drum vacuum filter for lime sludge and replacement of High Service Pumps (HSP) #3 and #4. The new vacuum filter contained upgraded materials of construction to increase sustainability and the new HSP(s) will operate more efficiently and will provide an increase in capacity.

Water Treatment Plant #3 Degasifier #3 and Odor Scrubber, Palm Beach County, FL. Responsible for management of all professional consultant activities necessary to provide design build services to the Palm Beach County Water Utilities Department related to the addition of Degasifier #3, replacement of the existing odor scrubber system and structural modifications to the Clearwell #1. The new Degasifier #3 will work in conjunction with existing Degasifiers #1 and #2 and will be provide with a cleaning system to services all three



degasifiers. This project required coordination with another construction contract that will be provide a new permeate pipeline to be connected to new and existing degasifiers.

Water Treatment Plant #9 SCADA Towers, Palm Beach County, FL. Project manager responsible for providing design build services to the Palm Beach County Water Utilities Department. This project includes the installation of a new tower to improve the existing Supervisory Control and Data Acquisition (SCADA) system communication with wellfields and sewer pump stations. The tower will also provide the platform for a new automatic meter reading system that will enable access to real time information on the potable water distribution system. Responsibilities include preparation of the plans and specifications, permitting with applicable regulatory agencies, construction inspection, final certifications and project close out.

Water Treatment Plant #3 Chemical Containment Area, Palm Beach County, FL. This project included the design, permitting and construction of a bulk chemical storage tank for corrosion inhibitor storage, modifications to the existing containment structure and tank discharge piping to feed the existing metering pumps. The project was designed to meet all applicable regulatory agency requirements for use in a potable water treatment and also chemical storage in a wellfield protection area.

Wastewater Reclamation Facility Expansion Design/Build project, Miramar, FL. As the project engineer, prepared plans and specifications for the expansion and modification to the existing aeration basin and process air system, return activated sludge pumping system modifications, addition of a secondary clarifier, and deep well injection pump for the capacity expansion from 10.1 MGD to 12.6 MGD. Assisted with the preparation of a guaranteed maximum price proposal to the City of Miramar. Secured permit from governmental agencies having jurisdiction over the project. Provided documentation of work progress during construction and assisted with project scheduling, equipment startup, preparation of the record drawings and final certification of construction completion.

Water Treatment Plant Improvements Phase III, Pembroke Pines, FL. Served as the project field engineer for the capacity expansion to provide redundancy at the water treatment plant. Coordinated new equipment start up for an upflow treatment unit, lime slaker, multi-media filter, ion exchange color removal system, and sodium hypochlorite storage and injection system. Prepared record drawings, project closeout documents and certification of construction completion packages to governmental permit agencies.

DESIGN BID BUILD WATER TREATMENT PLANT EXPERIENCE

R.L. Pratt Water Treatment Plant Spiractor Replacement, Palm Springs, FL. Project administrator and Engineer of Record (EOR) for the replacement of the existing lime softening treatment units that were originally built in 1985. The lime softening treatment units were constructed of steel which has worn thin over time and has received multiple patch repairs in order to remain in service. The treatment units, also known as Spiractors, were originally manufactured by Permutit Company who is no longer in business and were not available for assistance. As a result, alternative manufacturers were consulted and thoroughly reviewed in order to prepare the plans and specifications for the replacement of the treatment units in-kind.

System III Water Treatment Plant Carbonic Acid System Addition, Davie, FL. Project Administrator for the design and permitting for the addition of a carbonic acid system at the Town of Davie System III Water Treatment Plant. The existing direct carbon dioxide gas injection system was modified to add a pressurized solution feed (PSF) panel, dual carrier water booster pumps and carbonic acid diffuser that will inject the carbonic acid into the treatment process prior to the filters. The existing system injects carbon dioxide gas post filters and consist of a storage tank, gas feed panels, and gas diffuser that will be maintained as back-up. The existing 30 inch diameter pipe that connects the lime softening treatment unit to the filters was replaced and a new baffle box was added to increase reaction time with the carbonic acid.

Water Treatment Plant Sodium Hypochlorite System Rehabilitation and Carbonic Acid Injection System, Pembroke Pines, FL. Project Administrator for the design and permitting for the installation of a new carbonic acid injection system that will reduce the pH of water after the lime softening treatment units. This will allow the pH of the water in the lime softening treatment units to be increased to improve treatment and provide the ability to then reduce the pH after treatment to meet the secondary drinking water standards. The project also included the rehabilitation of the sodium hypochlorite system and the addition of online continuous analytical equipment to enhance controllability for the water treatment plant operations staff.

Academic Village Water Booster Station Improvements, Pembroke Pines, FL. Project Administrator for the



David Stambaugh, PE, DBIA, Page 4

design of a replacement sodium hypochlorite disinfection system. The replacement system consisted of a new bulk storage tank, chemical metering pump skid, modern concrete containment structure with covered roof, and automation and SCADA controls necessary to facilitate remote monitoring and control from a control room approximately 15 miles away.

Holly Lakes Water Booster Station Improvements, Pembroke Pines, FL. Project Administrator for the design of a new sodium hypochlorite disinfection system needed to replace a previously permitted gas chlorination system. The new system consisted of a new bulk storage tank, chemical metering pump skid, modern concrete containment structure with covered roof, and automation and SCADA controls necessary to facilitate remote monitoring and control from a control room approximately 15 miles away. Additionally, this project included design of 24-inch diameter piping intended to provide individual isolation between two 2.5 MG ground water storage tanks necessary to facilitate maintenance and separate maintenance and repair activities.

East Water Treatment Plant Improvements, Miramar, FL. Prepared plans and specifications as the project engineer for the addition of a lime sludge handling facility and modifications to the administration and control building for the City of Miramar. Coordinated preparation of construction documents and services during the bid process. Evaluated the bid proposals submitted by the contractor and provided a recommendation for the most responsive and responsible bidder.

Water Treatment Plant Risk Management Plan, Pembroke Pines, FL. Assisted with the preparation of a Risk Management Plan to prevent and minimize the impact of an accidental release of chlorine gas. Provided training for operations personnel on the standard operating procedures. Prepared submittal to the United States Environmental Protection Agency for compliance with 40 CFR Part 68 Chemical Accident Prevention Provisions.



Emeliz Torres, PE *Project Manager*

SUMMARY OF QUALIFICATIONS

Ms. Torres has over 10 years of experience that includes project management of public and private engineering projects including water and wastewater planning and design, evaluation of water and wastewater treatment plants, distribution and collection systems, site development, preparation of design-build criteria package and environmental site assessment. Responsibilities include site plan development, drainage studies, feasibility studies, water and wastewater facilities inspections, water and wastewater treatment plant and utilities assessment and design, preparation of bid packages including technical specifications, scheduling, construction cost estimates and engineering services during construction. As a Project Manager, her responsibilities include preparing request for qualifications, contract proposals, developing and managing project schedules, and manage subconsultants to achieve project expectations.

EXPERIENCE

WTP 3, 9 and 11 Fluoride System Improvements, Palm Beach County, Florida: Project Manager for the detailed design of the WTP 3, 9 and 11 Fluoride System Improvements project. The project consisted of a design build to replace the existing fluoride system to reduce potential risks of possible accidental spill events. The proposed improvements will require replacement of bulk storage tanks, day tanks and associated chemical piping and controls at each WTP. As Project Manager, the main tasks are team management, plans and technical specifications review.

WTP 8 Fluoride System Improvements, Palm Beach County, Florida: Project Manager for the detailed design of the WTP 8 Fluoride System Improvements project. The project consisted of a design build to replace the existing fluoride system to reduce potential risks of possible accidental spill events. The proposed improvements will require replacement of bulk storage tanks, day tanks and associated chemical piping and controls. As Project Manager, the main tasks are team management, plans and technical specifications review.

Pembroke Pines WTP Clearwell Piping Evaluation, Pembroke Pines, Florida: Project Manager for the evaluation of the proposed modifications to the Pembroke Pines Water Treatment Plant (WTP) clearwell influent chamber, addition of a CO₂ injection system and pH skid, the effects of relocating the existing clearwell chemical injections points, relocation Ion Exchange (IX) system effluent water enters the clearwell, electrical and instrumentation necessary for CO₂ system and structural components for pipe supports, clearwell influent chamber 24-inch core, CO₂ injection system and pH skid concrete pad. The evaluation consists of civil, mechanical, electrical, instrumentation and structural components to provide recommendations of the require improvements with the applicable preliminary cost estimate. As Project Manager, the main tasks are team management, quality control, preparation of technical memorandum and coordination of discussion meetings with Client.

Pembroke Pines WTP Miscellaneous Improvement, Pembroke Pines, Florida: Project Manager and Engineer-of-Record for the detailed design of the Pembroke Pines water Treatment Plant (WTP) Miscellaneous Improvement project. The project consisted of improvements to an existing pump station (PS) that receives the brine waste of the Ion Exchange (IX) System and sewage discharge of the main WTP Operations Building usage; and addition of a new enhanced air scour system to improve the effectiveness and efficiency of the backwashing process for the existing sand filtration units. The PS improvements included removal and installation of new

YEARS OF EXPERIENCE
11

YEARS WITH THE FIRM
2+

EDUCATION

B.S., Civil Engineering,
University of Puerto
Rico, 2008

M.S., Civil Engineering
- Water Resources
and Water Treatment,
Polytechnic University of
Puerto Rico, 2013

CERTIFICATIONS & LICENSES

Florida PE, No. 85897

Texas PE, No. 126866

Occupational Safety and
Health Administration
Certification (OSHA) 30-
Hour Contact

PROFESSIONAL AFFILIATIONS

American Water Works
Association

Water Environment
Federation

AWARDS

Puerto Rico Water &
Environment Association
Professional Leadership
2015



dual suction lift pump, replacement of suction, discharge pipe and emergency by-pass system and new control system. The new air scour system included installation of the air scour system on each filter, blower, stainless steel pipe, instrumentation and control system for the proper operation of the new air scour system and blower. As Project Manager, managed the team, prepared set of plans, technical specifications, engineer opinion of probable construction cost as part of the design criteria package and respond to addendum.

Booster Stations Disinfection System Improvements, Pembroke Pines, Florida: Project Manager for the design services during construction, in charge of shop drawings review, respond request for information (RFI) and overseeing construction progress. Scope of the project includes installation of new bulk-liquid sodium hypochlorite disinfection systems, interconnection of influent and effluent piping, new chemical injection points and related appurtenances.

Sodium Hypochlorite System Rehab and CO2 Injection System, Pembroke Pines, Florida: Project Manager for the design services during construction, in charge of shop drawings review, respond request for information (RFI) and overseeing construction progress. Scope of the project includes replace sodium hypochlorite injection skids and transfer pumps, new carbon dioxide feed system, new turbidity meters, installation of post-clearwell ammonia analyzers, among other improvements to the Water Treatment Plant.

On-site Sodium Hypo Generation System, San Antonio, Texas: Project Engineer - Assisted on the design services during construction for the construction phase of the project, including inspection of civil and structural works involved in the construction of three on-site sodium hypochlorite disinfection systems.

Facility 63 Fuel Storage Improvements, San Antonio, Texas: Project Design Leader, designed the proposed improvements of the fuel storage, including fuel storage tank relocation, fuel double containment supply and return lines and erosion and sediment control. In addition, prepared Water Pollutant Abatement Plan (WPAP) and Aboveground Storage Tank (AST) Facility Plan following the Texas Commission on Environmental Quality (TCEQ) requirements.

Water Main Along Entrance to Encino Pump Station, San Antonio, Texas: Local Project Engineer, provided design services during construction including field work coordination, submittal and RFI review. In addition, assisted with the preparation of technical specifications.

ASR Wells at the New Braunfels Airport, San Antonio, Texas: Project Design Leader, prepared alternatives for a conceptual layout for the proposed nine (9) wells including electrical conduits, water and sewer lines. Evaluated the required capacity of the proposed water and sewer lines. Prepared a conceptual estimate of the proposed project.

North Coast Aqueduct Water Treatment Plant lagoons improvements, Arecibo, Puerto Rico: Project Manager of the Dredging of the Sludge Lagoon project, including coordination of studies, evaluation of alternatives and preparation of the bid package. The project consisted on improvements to two sediment control lagoons; including dredging for sediment control.

PRASA's Consulting Engineering Report (2011-2015), Puerto Rico: The Puerto Rico Aqueduct and Sewer Authority (PRASA) required a Consulting Engineer firm to prepare a Consulting Engineer's Report (CER) to document the current condition and changes in PRASA's operation and condition of the systems. Project Engineer, general tasks included inspections and prepared condition reports of potable water and wastewater infrastructure facilities to evaluate the operation, maintenance, compliance and general conditions of a selected amount of facilities owned and operated by PRASA. These facilities included water and wastewater treatment plants, tanks, water and wastewater pump stations and water wells.

PRASA's Master Plan, Puerto Rico: The Puerto Rico Aqueduct and Sewer Authority (PRASA) required a Consulting Engineer firm to conduct planning work for the update of the PRASA's Water and Wastewater Infrastructure 2012 Master Plan. The project involved reassessing the current and future needs based on recent population, infrastructure, compliance and operational changes. In addition, the project included water demand calculations, water balance analyses, capacity and compliance needs analysis, future projects recommendation and cost analysis. As Project Engineer, also analyzed the water and wastewater data for the entire island for different scenarios utilizing SQL Server Management Studio and developed a report presenting all the findings.



James A. Hart, PE Project Manager

SUMMARY OF QUALIFICATIONS

Mr. Hart is a Professional Engineer with significant experience in several areas of equipment and system design for a wide array of process industries. He is experienced in water pollution remediation, using filtration, ozone application, UV sterilization, and thermo oxidation. He is also experienced in gas scrubbing technology (HCl, H₂S, NO_x, ethanol, ethylene oxide, emergency chlorine, odor control, steel pickling lines) and anaerobic digesters, filtration and evaporation. He has demonstrated his ability to organize work and manage major projects to meet cost and schedule deadlines. He possesses a unique blend of engineering, CAD and computer programming knowledge and experience.

WATER AND WASTEWATER PROJECT EXPERIENCE

WTP #8 Valve Installation and Communications Improvements, Palm Beach County, Florida. Design/Build project adding one valve to a 2 MG ground storage tank for isolation. Install one SCADA switch to provide communications between Control Room and Lime Sludge Thickening facility. Project Cost: \$66,495.00

WTP #8 Finished Water Improvements, Palm Beach County, Florida. Design/Build project providing disinfection by-product reduction by adding one mixer, five aerators and three (3) blowers to each of two 5 MG ground storage tanks, with controls and SCADA connection. Project Cost: \$1,994,800.00

Belle Glade Sludge Thickener and Pahokee By-Pass Improvements, Palm Beach County, Florida. Design/Build project adding passive by-pass to existing headworks facility, and addition of one sludge thickener to existing treatment facility. Both projects included addition of controls and interfacing with exiting plant SCADA. Project Cost: \$1,920,520.00

WTP #8 Slakers, Fuel Tanks, HSP Replacements, Palm Beach County, Florida. Design/Build project replacing 2 existing lime slakers, 2 lime slurry boxes, one 2,000-gallon fuel tank and one 2,000-gallon fuel tank. Above ground fuel was replaced with secondarily contained fuel pipe, with controls and SCADA connection. Two high service pumps were replaced. Project Cost: \$1,906,492.00

WTP #2 Improvements, Palm Beach County, Florida. Design/Build project upgrading lime delivery system from simple box to concrete containment area, with lime slurry mixing box, overhead canopy, lighting, safety shower and safety equipment, pump and piping, with controls and SCADA connection. One existing lime slaker was replaced in kind. Addition of two 350 hp pumps, with overhead canopy, controls and SCADA connection. Project Cost: \$1,911,309.00

WTP #8 System and Process Improvements, Palm Beach County, Florida. Design/Build project upgrading lime delivery system from existing pumped box to concrete containment area, with lime slurry mixing box, overhead canopy, lighting, safety shower and safety equipment, pump and piping, with controls and SCADA connection. Project Cost: \$1,942,000.

WTP #2, #3, and #9 Hypo and Brine Tank Replacement, Palm Beach County, Florida. Tank replacement project, replacing twelve 20,000-gallon sodium hypochlorite tanks and three 16,000-gallon brine maker tanks. Existing tanks are past their useful lives and leaking. New tanks are provided with fall-resistant ladders, and level reading where none existed. Pipe replacement was added at WTP #2. Project Cost: \$1,983,687.00

YEARS OF EXPERIENCE
34

YEARS WITH THE FIRM
12

EDUCATION

Bachelor of Chemical Engineering (Mathematics Minor), Cleveland State University, 1985

Bachelor of Science, Business Administration & Marketing, Bowling Green State University, 1978

CERTIFICATIONS & LICENSES

Professional Engineer, State of Ohio, July 1994, No. E-58285 (Retired)

Professional Engineer, State of Florida, No. PE-65420, December 2006

PROFESSIONAL AFFILIATIONS

Florida Engineering Society

American Institute of Chemical Engineers

Florida Institute of Consulting Engineers

National Society of Professional Engineers

PUBLICATIONS

Proper Design of an HVAC UV System Using UV Technology, RGF Environmental

Cr(VI) Waste Stream Processing in Oahu, Hawaii - Chromium (VI) Handbook, CRC Press 2004

Evaluating Membrane Options for Aquifer Recharge in SE FL, IDA Journal, 4th Qtr. 2011

Pembroke Pines Explores Aquifer Recharge as a Cost-Effective Alternative Water Supply Strategy, FL Water Resources Journal, August 2012



Pahokee Headworks Screen Addition, Palm Beach County, Florida. Replace existing AugerMonster™ with two new automatic screen systems. Project included adding pipe, pumps and controls that interface with existing SCADA system. Project Cost: \$1,977,954.00

WTP #8 Vacuum Filter Replacement and HSP Replacement, Palm Beach County, Florida. Replaced existing EIMCO Vacuum Filter with equivalent WesTech Vacuum Filter. Auxiliary vacuum pump skid and piping were also replaced. An unusual component required analyzing and assuring the existing building structure was still sound enough to support the new equipment. Project Cost: \$1,822,500.00

WTP #3 CIP Replacement, Palm Beach County, Florida. This project was a conglomeration of several separate projects: 1) Replace buried 6" and 8" PVC pipe with HDPE pipe, originally running between cleaning tanks and membrane treatment skids. Heaters were added to the chemical solution storage tanks to warm the cleaning solution to improve the cleaning efficiency. The heaters are to interface with the existing plant-wide SCADA system; 2) Addition of one new sand strainer (purchased by the County) to the existing sand strainer, thereby increasing capacity, adding a flow meter to the backwash pipe and interfacing with the plant-wide SCADA system; and 3) Replacing three existing blower housings with new, hurricane resistant housings, connecting ductwork was redesigned to replace the current common intake header filter with individual filters at each housing. Project Cost: \$1,986,241.00

WTP #3 Degasifier #3 and Odor Scrubber Addition, Palm Beach County, Florida. Replaced existing odor control system with larger unit, to accommodate increased capacity at WTP #3. System included addition H₂S strippers. Combined flow was fed to larger odor scrubber. An additional blower was added with the new degasifier. Ductwork modified to accommodate increased airflow to odor scrubber. Odor control system included 2 recycle pumps, piping, instrumentation, and sampling. Project Cost: \$1,640,915.00

Ray Bullard WRF Reuse Filter #3, City of West Melbourne, Florida. Project added a third filter, a rotating disk type that will allow one existing filter to be decommissioned. The filter controls were added into the existing SCADA system. As part of the SCADA system improvements, additional radio communications were added for future flexibility. Controls (pH, chlorine, and turbidity) were also added into the existing SCADA network.

2MGD WWTP Expansion, Town of Davie, Florida. Project Engineer, coordinated the process design, developed P&ID drawings, instrumentation specifications, and project specifications for \$9 million WWTP expansion.

Water Reclamation Facility Expansion, City of Miramar, Florida. Assisted on all phases of \$14,200,000 Design/Build project for 2 MGD expansion (10.1 to 12.6 MGD) to existing facilities, including aeration, instrumentation, chlorination, and detail design. Tasks included specification writing, process review, site inspections and coordinated between contractor and client for the addition of a 5th concrete Aeration Basin (approx. 250' x 28') containing eight cells, a fourth 100 feet diameter Secondary Clarifier, a third 8,000 gpm Injection Well Pump with appurtenances, RAS pumping system piping modifications, upsizing of two 200 HP Aeration Blowers to 500 HP each, the addition of a 5th 500 HP Aeration Blower, and conversion of four existing Aeration cells and one new basin cell to anoxic operation. Additional improvements include replacement/modernization of the existing plant-wide SCADA system. Modeled entire expansion in 3D that proved invaluable during construction.

Carbonic Acid System for pH Reduction, City of Pembroke Pines, Florida. Design CO₂ pH reduction system for existing 12 MGD facility.

Modify Existing CO₂ Gas Fed System for pH Reduction, Town of Davie, Florida. Modify existing CO₂ gas feed facility to provide carbonic acid for pH reduction of existing 4 MGD facility.

Air Header Replacement, Town of Davie, Florida. Design replacement air header for 1 MGD package plant.

Pump House Design, City of Dania Beach, Florida. Design pump house rebuild using 3D modeling techniques. Evaluate process operating conditions to specify pump, engine, and control equipment.

Troubleshooting Hydraulic Flow Problem, City of Pembroke Pines, Florida. Troubleshoot flow problems for hypochlorite chemical feed process and color removal process to determine the cause of the flow problems.



Nicholas Kanelidis, PE

Project Manager

SUMMARY OF QUALIFICATIONS

Mr. Kanelidis' background experience encompasses site design, civil, geotechnical, surface water management, water, and wastewater services for both the private and public sector. He also had significant involvement with his prior firm in representing Sunshine Water Control District as District Engineer working on numerous Capital Improvements Projects. As a Project Manager at CGA, his responsibilities include preparing contract proposals, developing and managing project schedules, hydrologic and hydraulic modeling, developing quantity take-offs and cost estimates, preparing various engineering plans and technical specifications, permitting, bidding assistance, project management during construction, addressing Contractor RFI's, reviewing shop drawings, negotiating and reviewing change orders, as-built reviews, and final project certifications. As an engineer with design and field experience, he is versatile in his ability to perform the tasks at each individual project stage.

EXPERIENCE

Lift Station No. 48 Rehabilitation and Force Main Replacement, Cooper City, FL.

Project Manager for a municipal sewer pump station rehabilitation project including approximately 1,400 linear feet of force main replacement. Located in a residential neighborhood, the existing station utilizes suction-lift pumps that are housed above the wet well and are nearing the end of their useful service life. Additionally, the existing 4-inch cast iron force main was extremely corroded causing a significant reduction pump performance. The design included a conversion of the station to a submersible type with new pumps, a new valve vault, and a new 4-inch HDPE force main designed primarily for horizontal direction drilling installation. Project scope includes design, permitting, incorporating Geotechnical and SUE findings, preparing a cost estimate, technical specifications, bidding assistance, coordinating and running construction progress meetings, conducting routine inspections, reviewing shop drawings, addressing Contractor RFI's, and final project certification. 2019 – Present.

North Galt Shops Streetscapes and Parking Improvements, Fort Lauderdale, FL:

Project Manager for a streetscapes and parking improvement project that included new landscape, irrigation, decorative light poles, curbing, pavement, striping, signage, sidewalk, drainage infrastructure, and geometric traffic improvements. The existing hardscape and landscape needed replacement due to years of use and harsh environment, and traffic flow and pedestrian crossings left room for improvement. Consequently, the design included new crosswalks and traffic flow patterns. Additionally, the existing drainage system had to be redesigned to accommodate these changes. Project scope included design, permitting, reviewing and incorporating Geotechnical and Subsurface Utility Exploration reports, quantity take-offs and cost estimating, value engineering, preparing technical specifications, and bidding assistance. CGA is currently under contract to provide support services during construction that include conducting construction progress meetings, performing routine site inspections, reviewing shop drawings, responding to Contractor RFI's, assisting the City in reviewing payment requisitions and change orders or claims, reviewing as-builts, performing substantial and final completion walk-through inspections, and closing out permits with final certifications. 2019 – Present.

Lift Station No. 18 Rehabilitation, Davie, FL. Project Manager for a municipal lift station rehabilitation project located within a residential neighborhood. The existing submersible pump configuration did not include a guide rail system nor enough clearance to remove pumps from the wet well to perform inspections. Instead, Town Staff had to enter the confined space to perform such work. Both existing pumps had failed, and the station was using spare pumps. Additionally, the existing valve vault was settling, and the mechanical appurtenances needed replacement. The design

YEARS OF EXPERIENCE

9

YEARS WITH THE FIRM

6

EDUCATION

M.E. Civil Engineering,
University of Florida,
2011

B.S., Civil Engineering,
Florida State University,
2009

CERTIFICATIONS & LICENSES

Professional Engineering
License, Florida No.
78536

Florida Department
of Environmental
Protection
Stormwater, Erosion, &
Sedimentation Control
Inspector Certification
Inspector No. 40536



included new pumps with a guiderail system, new top slab with access hatch, and new aboveground piping and valves on a concrete slab on grade. The project scope included site visit documentation, coordination with pump manufacturers, hydraulic calculations, electrical and instrumentation, cost estimating, preparation of contract documents, addressing Bidder RFI's, evaluating bid submittals, reviewing shop drawings, addressing Contractor RFI's, reviewing and negotiating change orders as needed, performing routine inspections, approving Contractor payment applications, conducting construction progress meetings, reviewing as-builts, and final project certification. 2018 – 2020.

Croissant Park Water Main Replacements, Fort Lauderdale, FL. Project Manager for a residential project to replace 16,000 linear feet of undersized and deteriorating water main with DIP and HDPE pipe. The existing piping did not provide proper fire protection to the neighborhood. Residents were also filing complaints regarding water discoloration caused by corrosion of the existing cast iron mains. The project scope included design, permitting, reviewing and incorporating Geotechnical report findings, coordinating subsurface utility exploration for conflict resolutions, preparing quantity take-offs, cost estimating, preparing technical specifications, addressing Bidder RFI's, and evaluating bid proposals. Most of the infrastructure was installed using HDPE and trenchless methods to minimize disturbance to the neighborhood, including pipe bursting and horizontal directional drilling. CGA also provided services during construction that included attending biweekly construction progress meetings, reviewing shop drawings, addressing Contractor RFI's, conducting interim inspections, reviewing as-builts, and final project certification. 2017 – 2020.

Natalie's Cove Drainage Improvements, Cooper City, FL: Project Engineer for the design and modification of a stormwater conveyance system for drainage improvements in the local neighborhood. A drainage model and analysis were conducted for the entire basin. It was determined that significant stormwater level of service improvements could be attained by increasing conveyance pipe sizes throughout the system and by increasing the existing lake storage capacity via dredging along the bank. In addition to these stormwater improvements, the project consisted of roadway resurfacing and ADA compliance modifications for pedestrian sidewalks. Project responsibilities included hydraulic modeling, design, permitting, addressing permitting agency comments, preparing quantity take-offs, cost estimating, preparing technical specifications, and addressing Bidder RFI's. CGA is currently providing services during construction that include reviewing shop drawings, addressing RFI's, conducting daily inspections, reviewing as-builts, and final project certification. 2013 – 2020.

Phase 2B Water Main Improvements Bal Harbour, FL. Project Manager for a water main replacement project just east and parallel to Collins Avenue in Bal Harbour, Florida. The existing 8-inch water main was undersized and was located within easements on the properties of two high-rise condominiums. The new HDPE 12-inch water main was proposed within the same easement but was designed using primarily horizontal directional drilling methods due to existing hardscape and access limitations. Reconnecting existing services, fire lines, and restoration had to be coordinated with the Health Department, the Fire Department, and the Property Managers for the affected condominiums. The fast-tracked project was completed in about one and a half months. Project scope included design, permitting, incorporating Geotechnical and SUE findings, coordinating and running a preconstruction meeting with all stakeholders, reviewing shop drawings, addressing Contractor RFI's, conducting interim inspections, overseeing testing, preparing record drawings, and final project certification. 2019.

Wastewater Treatment Plant Drying Bed Replacement, Boca Raton, FL. Project Manager for a wastewater treatment plant project to replace and relocate the existing concrete drying bed at the City of Boca Raton's Utility Services Complex. The drying bed structure is used as part of the City's vacuum truck operations for drying sewer solids before properly disposing of the dry sludge. The existing drying bed had reached the end of its useful service life due to its constant use and harsh environmental. A new, larger, and segmented drying bed was designed and constructed to improve daily operations and efficiency. Project tasks included design, verifying turning radii and clearances for vacuum truck operations, reviewing Geotechnical findings, resolving utility conflicts, cost estimating, preparing technical specifications, addressing Bidder RFI's, evaluating bid proposals, attending monthly construction progress meetings, reviewing shop drawings, addressing Contractor RFI's, coordinating minor changes during construction, conducting interim inspections, reviewing as-builts, and final project certification. 2017 – 2019.

Pines Village Water Main Replacement – Phase 1, Pembroke Pines, FL. Project Manager for a residential neighborhood project to replace 20,000 linear feet of undersized and corroded galvanized water main with new PVC and DIP. The buildup of rust in the existing mains resulted in numerous complaints about water discoloration and low pressures. The design also included relocating water meters to the front of the properties and replacing private water services including dual check valves and the installation of thermal expansion



control devices at the house connections. Approximately half of the existing water mains were located in the backyards of the single-family residential properties. Along with the relocations, water meters were also replaced to allow for automatic readings. Project responsibilities included design, permitting, reviewing and incorporating Geotechnical findings, preparing quantity take-offs, cost estimating, preparing technical specifications, addressing Bidder RFI's, evaluating bid submittals, and attending neighborhood meetings with the City to address residents' questions and concerns. 2018 – 2019.

Sanitary Sewer Hydraulic Model and Evaluation, Bal Harbour, FL. Project Manager and primary developer of a hydraulic model and overall evaluation of Bal Harbour Village's sanitary sewer network. Bal Harbour Village owns, operates, and maintains a wastewater collection and transmission system that includes 27,000 linear feet of gravity sewer, 5,000 linear feet of force main, and two pump stations. Wastewater from various customers, including single family homes, oceanfront high rises, multi-family dwellings, and commercial properties, is collected and conveyed through laterals, gravity sewer main, force main, and pump stations. The purpose of the hydraulic study was to provide the Village with the capability to predict peak flows, hydraulic pressures, pump station capacities, and likelihood of surcharged conditions throughout their entire sanitary sewer network and to assess the capacity to serve future proposed demands. The hydraulic model was calibrated using individual domestic water meter readings, force main pressures, and master sewer meter readings. Infiltration and inflow were also estimated using the field data and incorporated into the hydraulic model. 2019.

Bayshore Drive Drainage Improvements, Fort Lauderdale, FL: Project Manager for the analysis and design of drainage system improvements in the Central Beach Alliance Neighborhood located off A1A. The scope included preparation of a drainage model for existing site conditions by using ICPR and utilizing survey, record drawings, and LIDAR for calibration. A full drainage report summarized the different options for improvements in the area with associated costs. Some of the proposed alternatives included exfiltration trenches, drainage injection wells, and tidal check valves. Ultimately, the City tasked CGA to design tidal check valves on the outfall pipes and additional stormwater structures and conveyance piping in areas with significant ponding. Additionally, the City requested traffic improvements by the addition of a median at the unique intersection of Bayshore Drive, Riomar Street, and Antioch Avenue. CGA conducted a traffic safety study to justify the proposed median and sidewalk layout. The intersection design included some re-grading for drainage, pavement markings, signage, and permitting through Broward County. CGA also provided typical services during construction including reviewing shop drawings, addressing RFI's, conducting routine inspections, and reviewing as-builts. 2015 – 2019.

Sewer Pump Station D-41 Replacement, Fort Lauderdale, FL. Project Manager for a municipal sewer main and pump station replacement project. Upgrades to the station's operating capacity were needed due to excessive flows, frequent surcharging, and accommodation for future development sewer contributions. The scope entailed replacement and relocation of the existing station and redirection of the gravity sewer conveyance network. Coordination played a significant role in this project as the proposed location for the pump station and design of the new sewer main had to be planned with the neighboring development and their design team. Specific project tasks included analysis of existing sewer flow contributions, review of existing force main pressures, hydraulic calculations for designing new force main and submersible pumps, valve vault design, electrical and instrumentation design, permitting, coordinating with other disciplines including Geotechnical, preparing technical specifications, bidding assistance, addressing Contractor RFI's, reviewing and negotiating change orders, shop drawing reviews, conducting routine inspections, reviewing as-builts, and final project certification. 2015 – 2018.

Sewer Pump Station B-10 Rehabilitation, Fort Lauderdale, FL. Project Manager for a municipal sewer pump station rehabilitation project. The existing pumps were reaching the end of their service life, and the existing concrete wet well was consistently leaking into the dry mechanical room. Coordinating with the neighboring residents, designating equipment staging areas, and determining proper MOT were crucial, since the station is located in the median of the road. Tasks included analyzing existing flow and pressure conditions, hydraulic calculations, specifying new pumps, new electrical and ventilation design, permitting, preparing technical specifications, bidding assistance, addressing Contractor RFI's, reviewing shop drawings, conducting routine inspections, reviewing and negotiating change orders, as-built reviews, and final project certification. 2015 – 2018.

Lift Station No. 9 Rehabilitation, Davie, FL. Project Manager for a municipal sewer pump station rehabilitation project. The existing pumps failed when the mechanical room flooded with sewage backflow from the adjacent



wet well. Since the station was being operated 24 hours/day by a portable diesel-powered bypass pump in a residential neighborhood, it quickly became a priority project for the Town of Davie. The project was unique in that the station is located within the City of Hollywood. Therefore, additional coordination was required between the two municipalities for permitting and construction scheduling. The project scope included site visit documentation, pump manufacturer coordination and specifications, sewer flow analysis, hydraulic calculations, ventilation system sizing, electrical and instrumentation, sump pump and piping replacement, cost estimating, permitting, preparation of contract documents for bidding, addressing Bidder RFI's, evaluating submitted bids, shop drawings reviews, addressing Contractor RFI's, reviewing and negotiating change orders, construction inspections, reviewing as-builts, and final project certification. 2017–2018.

Lift Station No. 21 Replacement, Cooper City, FL. Project Manager for a municipal sewer pump station replacement project. The station is located within an HOA and required mechanical, aesthetic, and immediate odor control improvements. Due to its proximity with adjacent residences and frequent odor complaints, the station was relocated across the street. This required a sewer conveyance, landscape, and irrigation redesign. Tasks included design, permitting, setting up pressure data loggers, hydraulic calculations, coordinating with pump manufacturers, existing sewer flow analysis, preparing technical specifications, permitting, shop drawing reviews, addressing Contractor RFI's, conducting routine inspections, and final project certification. 2015 – 2018.

Bid Pack 8 Infrastructure Improvements, Oakland Park, FL: Project Engineer for the water and sewer improvements project. Design included approximately 18,000 linear feet of water main replacement, 800 linear feet of drainage with exfiltration trench, 2,500 linear feet of sidewalk, rehabilitation of a sewer pump station, and installation of four sewer combination air valves (SCAV) on the existing force main network. The system upgrades consisted of replacing two-inch and four-inch diameter water main with either six-inch or eight-inch PVC or DIP. Additional fire hydrants were designed to provide adequate fire protection for the residential neighborhoods. In addition to these water main improvements and SCAV's, the sewer pump station improvements were a critical component of this project. The station was experiencing failure due to extended run times because of increases in collected wastewater flows and discharge force main pressures. Electrical upgrades and the design of variable frequency drives were required to handle the various flow conditions. Overall project responsibilities included water main design, checking hydraulic calculations, preparing quantity take-offs, cost estimating, preparing technical specifications, permitting, and addressing Bidder RFI's. 2014 – 2018.

Lloyd Estates Industrial and Residential Improvements, Oakland Park, FL: Project Engineer for the design and modification of a stormwater conveyance system in order to improve flooding within the Lloyd Estates Neighborhood. The project included a stormwater pump station and floodgates for major storm events along with new stormwater structures and exfiltration trenches. New seawalls were designed and constructed downstream of the station that ultimately discharged to the ocean via the South Florida Water Management District (SFWMD) C-13 Canal. The pump station site provided means for erosion control that included rip-rap design. CGA also coordinated and assessed the environmental impacts with SFWMD and the Army Corps of Engineers. In addition to stormwater discharge improvements, several areas included upgrades to the water distribution system for fire protection services. The project funding was driven by a FEMA grant. Project responsibilities included hydraulic modeling, design, review of construction plans, permitting, preparing quantity take-offs, cost estimating, preparing technical specifications, bidding assistance, shop drawing reviews, addressing Contractor RFI's, reviewing change order proposals, reviewing as-builts, and coordinating final project certification. 2013 – 2017.

Bid Pack 9 Infrastructure Improvements, Oakland Park, FL: Project Engineer during the construction phase of a large scale infrastructure improvements project that included replacement of three municipal lift stations, approximately 20,000 linear feet of water main, 5,600 linear feet of force main, over 200 catch basins, and numerous exfiltration trenches and conveyance piping throughout the 500 acre project area. Responsibilities included shop drawing reviews, attending progress meetings, general engineering during construction, reviewing as-builts, validating and negotiating change orders, and preparing final project certifications. 2011 – 2017.

Lift Station No. 52 Rehabilitation, Cooper City, FL. Project Manager for a municipal sewer pump station rehabilitation project. Improvements were needed due to the expiring service life of the pumps and their insufficient operating capacity during peak flows and significant rain events. Tasks included design, permitting, interpreting pressure data logger readings, hydraulic calculations, coordinating with pump manufacturers, existing sewer flow analysis, monitoring geotechnical work, and coordinating with other professional disciplines. 2015 – 2016.



NE 57th Street Water Main Replacement, Fort Lauderdale, FL. Project Manager for a residential water main replacement project where water quality and age of existing infrastructure were the primary issues. Approximately 1,850 linear feet of a new looped system was designed and constructed. Project tasks included design, checking compliance with local and state standards, permitting, conducting routine inspections, reviewing test reports and as-builts, and final project certification. 2015 – 2016.



Steven M. Watts, PSM *Director of Survey*

SUMMARY OF QUALIFICATIONS

Mr. Watts has over 35 years of experience, 31 years as a licensed Florida Professional Surveyor and Mapper. Having spent his entire surveying career working in South Florida, he is extremely knowledgeable of the rules, requirements and specifications for completing surveying and mapping projects in the tri-county area. He specializes in architectural and engineering design type surveys, land acquisition, easements, title research, and computer mapping.

EXPERIENCE

Director of Survey – Calvin, Giordano, & Associates, Inc., Fort Lauderdale, FL: As Director of Survey he is responsible and involved in all aspects of the company's surveying and mapping projects.

General Surveying & Mapping Services – City of North Lauderdale, FL: Boundary and Topographic Surveys, As-Built Surveys, Legal Descriptions, City Limit Determinations and General Surveying Services for the City of North Lauderdale. Additional responsibilities include project surveyor for the topographic survey of the municipal complex, GIS, water control district and utility mapping, Hampton Pines Park and Silver Lakes Middle School ball field renovation.

General Surveying & Mapping Services – City of Coral Springs. Boundary and Topographic Surveys: Wiles Road Terminus Linear Park, Coral Springs City Hall North Site. As-Built Surveys: Westside Maintenance Compound, Sketch and Legal Descriptions: Pedestrian Easement Coral Springs Medical Center. Design Surveys: NW 95th Avenue – Covered Bridge, NW 85th Avenue, Shadow Wood Blvd., Remsberg Dr. Construction Stakeout: University Drive Sidewalk, Art Statue and General Surveying Services for the City of Coral Springs.

General Surveying & Mapping Services – City of Pompano Beach, FL: Boundary and Topographic Surveys: Community Park, Canal Point Park; Legal Descriptions: Avondale Fishing Piers; Topographic Surveys: Pompano Beach Air Park; Taxiway "N" – Pavement Widening, Runway 15- Runway Protection Zone, Magnetic Heading, Runways 6-24, 15-33 and 10-28. Route\Topographic Survey for engineering design of S.E. 14th Street and S.E. 15th Street from Federal Highway to the Intracoastal Waterway.

Town of Palm Beach Plat Review: Project Manager for the survey review of proposed record subdivision plats submitted to the Town of Palm Beach. Tasks include coordination with Town Manager and staff, review of land surveys adhering to the Standards of Practice requirements for Surveying and Mapping in the State of Florida as stated in Rule 5J-17 of the Florida Administrative Code, pursuant to Florida Statutes Chapter 472.027 and any record plats adhere to Florida Statutes Chapter 177, Part I Platting.

General Surveying & Mapping Services – Hallandale Beach, Community Redevelopment Agency (CRA) : Boundary surveys for City owned CRA development parcels.

General Surveying & Mapping Services – City of Coconut Creek, FL: Boundary, Topographic and Design Survey for Facilities Maintenance Area and Copans Road for the City of Coconut Creek.

NE 13th Street Complete Streets Project, Fort Lauderdale, FL: Survey Project Manager for the Complete Streets design of NE 13th Street from NE 3rd Avenue to the FEC Railroad tracks. The design includes lane reductions, bike lanes, enhanced crosswalks, on-street parking and ADA improvements. Survey scope included a full right-of-way way map of the corridor with intersecting side streets, topographic locations of above ground improvements and as-built of utility manhole structures.

YEARS OF EXPERIENCE
35

YEARS WITH THE FIRM
5

EDUCATION
BSLS , Purdue University,
1984

Lambda Sigma: Land
Surveying Honorary

**CERTIFICATIONS &
LICENSES**
Florida PSM No. 4588



GIS Base Mapping- Broward County Property Appraiser's Office, FL: Property Appraiser's GIS-Base Mapping Projects. Work completed to date includes City of Pompano Beach, City of Fort Lauderdale, City of Margate, City of Miramar, and City of Dania. Projects involved precise coordinate geometry mapping and conversion to Arc-Info polygon coverage.

Route Surveys for Streets & Alleyways - City of West Palm Beach, FL: Survey Project Manager for the topographic data collection and route survey for approximately 12,000 liner feet of streets within the project limits including an as-built inventory of storm drainage and sanitary sewer structures. Obtained and reviewed all public records documents as to rights-of-way, property ownership and platted easements.

Lakes of Carriage Hill: Utility Locating and GIS Mapping – Broward County Water and Wastewater Services Engineering Division: Survey Project Manager for the collection of as-built water and sanitary sewer infrastructure in the Lakes of Carriage Hill development. Project involved subsurface utility location of water and sewer mains, state plane coordinates with attribute data collections for all valves, hydrants and sewer manholes compiled into an Arc Info database.

Stormwater Mapping Basin 5 Drainage Improvements – City of Dania Beach, FL: Survey Project Manager for the collection of survey data and as-built drainage and sanitary infrastructure information for the Basin 5, Phase II drainage improvement project for the City of Dania Beach.

Stormwater Drainage Design SW/SE Quadrant – City of Hallandale Beach, FL: Topographic data collection and route survey for approximately 28,000 liner feet of streets within the project limits including an as-built inventory of storm drainage and sanitary sewer structures. Obtained and reviewed all public records documents as to rights-of-way, property ownership and platted easements.

General Surveying & Mapping Services – Town of Lantana, FL: Boundary and Topographic survey for Public Library and Route survey for Iris Avenue and Euclid Avenue.

Construction Stakeout, As-Built & Final Surveys - West Palm Beach Fire Station No. 4, City of West Palm Beach, FL: Survey Project Manager as a sub-consultant to the General Contractor for the construction of the new West Palm Beach Fire Station No. 4, 1718 Parker Ave., West Palm Beach. Tasks included construction stakeout of building, parking lot and utilities. Upon completion of construction responsible for spot surveys, as-builts survey and final survey for Certificate of Occupancy.

3D Scanning & As-Built Survey, Passenger Gangway Port of Palm Beach - Alan Gerwig & Associates, Inc.: Utilizing a Leica 3D Scanner prepared as-built survey of the passenger gangway foundation and bolt patterns for structural engineering design of a new gangway.

Stormwater Drainage Design Natalie's Cove – City of Cooper City, FL: Topographic data collection and as-built inventory of all drainage structures and appurtenances within the Natalie's Cove/Flamingo Garden Drainage Improvement area. Street route survey include cross sections, all above ground improvements within right-of-way including trees and vegetation.

General Surveying & Mapping Services – City of Coral Springs, FL: Survey project manager for: Boundary and Topographic Surveys: Wiles Road Terminus Linear Park, Coral Springs City Hall North Site. As-Built Surveys: Westside Maintenance Compound, Sketch and Legal Descriptions: Pedestrian Easement Coral Springs Medical Center. Design Surveys: NW 95th Avenue – Covered Bridge, NW 85th Avenue, Shadow Wood Blvd., Remsberg Dr. Construction Stakeout: University Drive Sidewalk, Art Statue and General Surveying Services for the City of Coral Springs.



OBJECTIVE

Mr. Nixon has 15+ years of experience including providing Environmental, Geotechnical and Construction Materials Testing Services for low and high-rise structures, single family residential developments, bridges, piers, buried structures, transmission towers, silos, roadways, etc.

He prepares and reviews geotechnical and materials engineering inspection reports, coordinates and supervises engineering staff and drilling personnel, and conducts foundation observations, foundation design reviews and geotechnical instrumentation monitoring.

Mr. Nixon's skills include also completing and supervising pile inspections, helical pier inspections, fireproofing inspections, load tests, and monitoring specialty ground improvement techniques such as vibrocompaction, vibro-replacement and dynamic compaction. He has conducted and supervised several Preconstruction Video Surveys and Vibration Monitoring Programs.

He has provided oversight of field and laboratory testing programs during the construction phase of a variety projects and supervised other engineers in the Construction Materials Testing Department. The testing programs typically included the performance of earthwork inspections, field and laboratory testing of soils, and field sampling of concrete. Mr. Nixon has also inspected and supervised testing programs during the construction of various roadway projects.

PROFESSIONAL REGISTRATION AND CERTIFICATIONS

- Professional Engineer, Florida, #71458
- OSHA 40-hour Health and Safety / OSHA, 29 CFR 1919.120 (HAZWOPER)
- Qualified Stormwater Management Inspector, Inspector # 27919

EDUCATION

B.S. Ocean Engineering, Florida Atlantic University, Palm Beach County, Florida

AFFILIATIONS

- Florida Engineering Society
- National Society of Professional Engineers
- Florida Engineering Leadership Institute Alumni
- American Society of Civil Engineers

CAPABILITIES

- Project Management
- Cost Estimating
- Geotechnical Engineering
- Earthwork Inspection
- Construction Materials Testing
- Quality Control
- Vibration Monitoring
- Design Recommendation & Review
- Foundation System Design
- Environmental Engineering
- Phase I & II Environmental Site Assessments
- Report Preparation
- Site/Contamination Assessment Reports

REPRESENTATIVE EXPERIENCE

FDOT Broward MPO – Lauderdale Lakes Greenway (NW 39th Street), Broward County, Florida

Senior Project Engineer – Provided geotechnical engineering services for the design of decorative lighting on east side of SR-5/US-1 from 11th street to 27th street, and the design of noise wall along I-95.

FDOT SR-25/US-27 from the Broward/Palm Beach County Line to MP 12.599, Palm Beach County, Florida

Senior Project Engineer – Provided geotechnical engineering services for roadway improvements, which included milling, resurfacing, shoulder widening, and installation of rumble striping, replacement of guardrail and upgrading signing and pavement markings.

SFWMDL-8 Reservoir Project, Palm Beach County, FL

Provided subsurface explorations and geotechnical engineering services for the proposed reservoir project, which involved the installation of facilities to allow filling of the L-8 Reservoir with water from the adjacent L-8 Canal, and the pumping of reservoir water into the L-8 Canal through a separate pump station as needed. Also, provided construction engineering and inspection services for the SFWMD during the construction phase of the project.

USACE Herbert Hoover Dam Rehabilitation Project, Palm Beach County, FL

Senior Project Engineer – Provided subsurface explorations geotechnical engineering services and materials testing services for the Contractor.

Village of Wellington Roadway Improvement Projects, Wellington, Florida

Senior Project Engineer - Inspected various roadways for the Village Wellington to identify roadways in disrepair; provided geotechnical engineering services and pavement evaluations; managed the testing and inspection programs during repairs/repaving projects.

Palm Beach County – Continuing Services contract for Geotechnical Engineering, Material Testing and Inspection Services, FL

Senior Project Engineer - Provided geotechnical and environmental engineering for this continuing contract. Relevant projects included: Acreage Branch Library - Government Center Chiller Replacement - Historic Courthouse Renovation - Palm Beach County Courthouse - South County Courthouse Parking Garage - Jupiter Library Expansion.

South Florida Water Management District, FL

Senior Project Engineer – Provided geotechnical and environmental engineering services for multiple SFWMD projects. Projects include levees, reservoirs, water control structures and water quality projects.

Florida Power & Light, South Florida

Senior Project Engineer - Provided geotechnical engineering services for a variety of projects including transmission and cell towers, substations, clean energy centers (power plants), as well as various improvement projects to Corporate Headquarters in Juno Beach.

Ballpark of the Palm Beaches, West Palm Beach, Florida

Senior Project Engineer – Provided geotechnical and environmental engineering services for the construction of a spring training facility on a former landfill site.

Village at Mangonia Lake Project, West Palm Beach, FL

Senior Project Engineer - Provided geotechnical engineering services for the construction of a multifamily residential development. Provided recommendations and supervised the implementation of the Vibrocompaction soil improvement technique to allow the support of the mid-rise buildings on shallow foundations.

City of West Palm Beach – Multiple Roadway and Drainage Improvement Projects, West Palm Beach, FL

Senior Project Engineer – Provided geotechnical and environmental engineering services for various roadway