City of Key West

General Engineering Services

Request for Qualifications

amec foster wheeler

RFQ No.: 17-002
Date: April 19, 2017
Time: 3:00 p.m.
Copy

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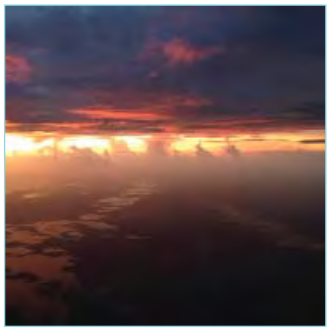
General Engineering Services



"...I am very pleased to say that on ALL counts and only with the Amec Foster Wheeler project manager's assistance were we able to complete the design and construction of the project ON TIME and WITHIN Budget!!!..."

Walt Eastmond
Transportation Project Manager
Citrus County

Amec Foster Wheeler

5845 NW 158th Street
Miami Lakes, Florida 33014
phone: 305.826.5588
web: amecfw.com

April 19, 2017

City Clerk
City of Key West
1300 White Street
Key West, Florida 33040

RE: RFQ No. 17-002 – General Engineering Services

Dear Selection Committee Members:

Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is pleased to submit our qualifications to you for the City of Key West's General Engineering Services contract. Amec Foster Wheeler is a focused supplier of consultancy, engineering, and project management services to its customers in the world's environment and infrastructure, oil and gas, minerals and metals, and clean energy markets. With 36,000 people in approximately 55 countries worldwide, 100 of whom work and reside in the South Florida area, we have a strong reputation for balancing global excellence with local, cost-effective delivery.

With an office located in Miami since 1994, Amec Foster Wheeler is a multidisciplinary engineering and geologic services firm with lengthy roots in the South Florida area and includes the firms previously operating under the names MACTEC Engineering and Consulting and BCI Engineers & Scientists. Amec Foster Wheeler is highly interested in providing the City of Key West the following under the City's General Engineering Services contract:

- Civil Engineering Services
- Utility Engineering Services
- Solid Waste Engineering Services
- Coastal Engineering Services
- Structural Engineering Services

We have reviewed the City of Key West's RFQ and understand the need to provide an exceptionally qualified team to perform the requested services. Amec Foster Wheeler has been providing master engineering services to many Florida municipal and regional governmental agencies for more than 30 years . We are confident our extensive experience will provide the City of Key West with a cost-effective team to provide solutions to your engineering needs. A few of our active municipal and/or government clients include:

- City of Dade City
- City of Fort Lauderdale
- City of Key West
- City of Lakeland
- City of St. Petersburg
- City of Tampa
- Citrus County
- Florida Department of Transportation (FDOT)
- Florida Department of Environmental Protection (FDEP)
- Hillsborough County
- Lake County
- Miami-Dade County
- Monroe County
- Pinellas County
- Southwest Florida Water Management District
- Volusia County Master Water Resources Services
- South Florida Water Management District
- Polk County

Throughout Monroe County, Amec Foster Wheeler has completed many projects with other public agencies, including City of Key West, Monroe County, the Village of Islamorada, City Electric Systems, FDOT District 6, and FDEP (Greenways and Trails). Our management performance record for these agencies is reflected by the fact that we have been re-selected for additional contract terms on several of the above contracts.

Our project team represents some of the most qualified engineers and scientists in the state with extensive knowledge and expertise directly correlating to the City's anticipated scope of services. Our team for this project includes four LEED-certified professionals who are supported by a network of nearly 60 similarly-certified Amec Foster Wheeler professionals throughout the United States. Additionally, we have extensive familiarity with FDOT's Certification and Qualification Program (CTQP) and we have invested significantly in the training and technical development of more than 130 personnel obtaining field and laboratory certifications. We also employ 21 Maintenance of Traffic (MOT)-certified personnel in Florida alone.

Amec Foster Wheeler has direct experience on the key issues of these projects which may include:

- Working with property owners along the various corridors whose properties may encroach upon the right-of-way
- Ability to assist the contractor with field adjustments that meet ADA requirements when space is limited
- Knowing when to consult the designer of record when the intent of his drawings cannot be met due to actual field conditions
- Keen ability to facilitate the project to keep construction moving forward
- Our team has performed quality control and verification testing on hundreds of lanes, miles of roadway, and thousands of feet of sidewalks/bike paths for a multitude of City, County, FDOT, and FDEP projects
- Our previous experience with this type of work will allow us to monitor contractor operations to ensure compliance with stormwater pollution prevention plans (SWPPP)

Amec Foster Wheeler Miami Lakes Office Manager **Mr. Michael Nardone, PG,** will be assigned as the Principal-in-Charge of this engagement to ensure all of Amec Foster Wheeler's resources are fully available to assist in the successful implementation of any task and is authorized to negotiate with the City of Key West. Included on the following page is a letter from Mr. Lytle Trout, Amec Foster Wheeler's Senior Vice President and Group Manager, indicating Mr. Nardone has authority to bind the respondent.

Mr. Gregory Corning, PE will be the Contract Manager for this opportunity and will be the local point of contact for the City. Mr. Corning is a qualified professional with extensive experience and will remain fully accessible throughout this engagement. The Project Manager who will be responsible for coordinating the daily tasks for this contract will be **Mr. David Soler, PE,** who is a highly experienced and uniquely qualified engineer. Mr. Soler is a Civil Engineer experienced in site design. His 22 years of experience includes performing advanced civil site design of roadways, buildings, and parking facilities; as well as gravity sewer design, recreational facilities design, including bicycle trails and passive parks. Past duties have included preparation of engineering documents, including project specifications. He has also provided construction administration services, including submittal review, technical inspections, and preparation of site visit reports.

We are pleased to submit this proposal, highlighting our staff, past performances, required forms and overall qualifications of our team. On behalf of Amec Foster Wheeler, we would like to thank you and the City of Key West for considering us for this assignment. Should you have any questions or comments regarding the information provided please feel free to contact us.

Respectfully,
Amec Foster Wheeler Environment & Infrastructure, Inc.

Michael Nardone, PG
Principal-in-Charge
954.591.3995 (cell)
michael.nardone@amecfw.com

Gregory Corning, PE
Contract Manager
314.920.8359 (cell)
greg.corning@amecfw.com

Evidence of Authority

April 19, 2017

City Clerk
City of Key West
1300 White Street
Key West, Florida 33040

Subject: Signature Authority for RFQ No. 17-002, General Engineering Services

You requested documentation of signature authority within Amec Foster Wheeler Environment & Infrastructure, Inc. for the subject services listed above. In response, I provide the below table of generic delegated contractual authorities for your reference. These authorities apply to Federal, State or Local Government entities. Additionally, any level of these general authorities may also further delegate signature authority to an individual for a specific action. This is usually done for convenience when the responsible manager is away or otherwise unavailable to sign a contract document.

Please be advised that Mr. Michael Nardone and Mr. Michael Phelps have Office Manager authority and Mr. David Goershel has Region Manager authority to sign on behalf of Amec Foster Wheeler Environment & Infrastructure, Inc.

As an officer of Amec Foster Wheeler Environment & Infrastructure, Inc., I can verify that the limits outlined in the table below are valid for your use:

	No Limitation of Liability in contract		**Limitation of Liability in contract**	
Managerial Level	**Time & Materials Contract Amount**	**Fixed Price Contract Amount**	**Time & Materials Contract Amount**	**Fixed Price Contract Amount**
Office Manager	$3,000,000	$1,000,000	$5,000,000	$3,000,000
Region Manager	$5,000,000	$3,000,000	$10,000,000	$5,000,000
Group Manager	$10,000,000	$5,000,000	$20,000,000	$10,000,000
Project Delivery Director	$15,000,000	$10,000,000	$25,000,000	$15,000,000
President	>$15,000,000	>$10,000,000	>$25,000,000	>$15,000,000

Please do not hesitate to contact me at (615) 333-0630 or lytle.troutt@amecfw.com should you have any questions.

Regards,

Lytle C. Troutt, Jr.
Sr. Vice President
East US and Latin America Group Manager

Tab 1
Specialized Experience and Technical Competence of the Firm

Specialized Experience and Technical Competence of the Firm

Amec Foster Wheeler supports clients in accomplishing their business objectives by providing innovative solutions using unmatched expertise, up-to-the-minute technology, and uncompromising integrity. From concept to construction, compliance to cost management, Amec Foster Wheeler is distinctively qualified to help clients meet the demands of today's complex architecture and engineering and projects.

Company Profile

Headquartered in Atlanta, Georgia, Amec Foster Wheeler Environment & Infrastructure, Inc. (Amec Foster Wheeler) is an engineering and architectural design, environmental consulting, and construction company operating with more than 3,300 professionals in 90 locations across the United States. Serving the clean energy, federal, industrial/commercial, mining, oil and gas, transportation, and water sectors, we provide services to both public and private clients worldwide. This entity is part of the larger division of Amec Foster Wheeler plc, a publically-traded company based in London. Amec Foster Wheeler plc is a focused supplier of high-value environmental, engineering, and project management services to the world's natural resources, nuclear, clean energy, water, and environmental sectors. Since 2000, Engineering News Record magazine has ranked Amec Foster Wheeler plc among the top international design firms.

Amec Foster Wheeler's Florida operation employs nearly 400 people in offices located in every region of the state. We can draw on our experienced local managers and geographical reach to support the needs of clients, regardless of project size and complexity. Amec Foster Wheeler's depth of global resources allows us to provide our clients with innovative solutions engineered to fit perfectly with your business challenges.

Amec Foster Wheeler has 11 full-service offices in the state, including four in South Florida. Our staff brings specialized Florida knowledge and experience to our clients with aided service delivery driven by Amec Foster Wheeler's expansive financial, project management, and IT systems. Utilizing these combined services allows us to draw on vast resources of personnel and experience to meet our clients' needs.

Amec Foster Wheeler's Florida operation offers full-service solutions to clients throughout North America and internationally. We are dedicated to the consistent achievement of industry leading standards of excellence in consulting, including:

- Air quality
- Architecture
- Civil engineering
- Construction engineering and inspection
- Construction management
- Construction materials testing
- Ecological and permitting services
- Emergency management
- Energy services
- Environmental services
- Facilities services
- Forensic engineering and science
- Fuel services
- Geotechnical engineering
- Laboratory services
- Mining
- Steel services
- Survey and mapping
- Water resources

Amec Foster Wheeler's Florida operation is home to many of the most talented and dedicated individuals serving the architecture, engineering, and scientific communities today. We are renowned for our expertise and professionalism, our sustainable integration of engineering and science methodologies, and our innovative approaches to finding solutions which fit within the complexities of any project assignment.

Notably, we currently have a local presence in the Keys, with several of our professionals managing projects in Monroe County.

Company Qualifications

We understand the challenges facing government agencies today with an ever increasing demand for services while operating under budget constraints and shortfalls. We have

firsthand experience with the City of Key West's varying project needs and our wealth of knowledge and expertise delivered by our skilled professionals will provide you with the assurance that tasks will be completed competently, professionally, on time, and within budget. In our daily activities our professionals strive to become transparent extensions of your staff so that together we can tackle any challenge effectively, efficiently, and in a way that satisfies our ultimate clients - the citizens you serve.

As a single-source consulting firm, Amec Foster Wheeler offers our municipal clients a diversity of engineering, environmental, and surveying services ranging from stormwater master planning to roadway design. Our depth of global resources allows us to provide our clients with innovative solutions engineered to fit perfectly with your business challenges.

Amec Foster Wheeler has provided sustainable and comprehensive solutions to challenges that affect our communities for more than 30 years. Our civil engineering team has worked on 100+ continuing master engineering services contracts for local governments throughout Florida during the past few decades, which have included community redevelopment and revitalization, utilities engineering and roadway design, stormwater retrofit and drainage design, streetscaping, stormwater master planning, and parks and recreational facilities. Our experience also includes working with municipalities similar in size to the City of Key West (approximately 25,000 residents), including Groveland, Lady Lake, Inverness, St. Cloud, LaBelle, Stuart, Arcadia, Highland Park, Dundee, Avon Park, Sebring, and Fort Meade.

Amec Foster Wheeler won first place for its implementation of the Florence Villa Redevelopment project in Polk County from the American Planning Association, and Common Ground Park and Playground in Lakeland recently received an award from the Florida American Planning Association for the facility's innovative design, contribution to the community, and impact on neighborhood revitalization.

Critical Services

Amec Foster Wheeler's team is comprised of a group of uniquely qualified and experienced professionals who possess a comprehensive understanding of all of the services that may be required under this contract including roadway design and redevelopment services, intersection improvement projects, sidewalk and pedestrian facilities, parks and recreational facilities, utilities engineering, stormwater management, site design, permitting, and construction phase assistance. Additionally, as we are a full service A/E/C firm we are able to supplement our team with additional in-house resources if needed. The following sections contains descriptions of our extensive expertise providing civil, utilities, and environmental engineering services.

Civil Engineering and Infrastructure Services

Amec Foster Wheeler's Civil Engineering Group has successfully provided state and local government, Community Redevelopment Areas (CRA), and private corporations with civil and infrastructure-related design and management services. Our services have spanned the full gamut of engineering and scientific support from due diligence assessments and project planning to post construction monitoring. Within Florida, our Civil engineering group has been providing these services for more than 30 years. **Our staff has developed a reputation for its ability to work closely with our client - completing our services on schedule and within budget.**

We are proficient in the following work areas:

- Compliance management and maintenance
- Utilities engineering (water, sewer, and reuse)
- Roadway and intersection design
- Parks and recreational facility design
- Community and neighborhood redevelopment
- Stormwater services (retrofit, master planning, monitoring, compliance)
- Recreational boardwalks, walk paths, and pedestrian trails
- Construction management technology
- Site/land development engineering
- Streetscaping, traffic flow optimization and calming
- Construction administration/construction engineering and inspection (CEI)

Our staff has the experience and expertise to provide economical solutions to a wide variety of general civil engineering tasks. We have extensive experience working with local municipalities and counties in the areas of grant support, project planning, property due diligence, engineering design, regulatory permitting, public education and awareness, and comprehensive construction management. We have completed numerous grant related projects including Community Redevelopment Block Grant (CDBG) (El Nino Grande, Community Redevelopment, and Economic Development), FDEP (Water Facilities and 319 stormwater), Florida Recreational Development Assistance Program (FRDAP), Environmental Protection Agency (EPA) Grants and others. Additionally, we have worked successfully

with a number of grant administrators in obtaining funding and completing engineering, permitting, and construction support for a variety of projects.

Amec Foster Wheeler's civil group has completed numerous award-winning projects involving community based recreational facilities. We thoroughly understand the need to work closely with community groups in developing park plans. Our experience involves amenities such as:

- Boardwalks, walk paths, and trails
- Pedestrian bridges
- Playing fields (soccer, football, baseball, softball)
- Stormwater parks
- Educational kiosks and displays
- Restroom facilities
- Innovative special needs playgrounds

Our designs focus on providing the highest quality recreational facilities/areas possible within the allocated budget. Cost estimates are provided as early as possible in the design process to allow the client and design team to make decisions as to the level of improvement and or expansion possible. Trails, boardwalks and access areas are designed to meet current American Disability Act (ADA) compatibility requirements. We have also assisted our clients in the selection of equipment (lighting, playground, and pre-manufactured amenities such as gazebos, pedestrian bridges, trash receptacles, etc.). Parking areas are designed to be user friendly, compliment the overall vision of the community, and satisfy the requirements of the owner (paved or stabilized green areas).

Many of our projects involve a dedicated educational element including kiosks and special displays, educational gazebos and demonstration areas. Several of our most recent projects involve the design and permitting of boardwalks that traverse wetlands, water bodies, estuaries, and other environmentally sensitive areas. In fact, one project required the creation of a boardwalk that weaves and winds through the tree tops of a very unique wetland/lake system.

Roadway and Intersection Improvement

Amec Foster Wheeler's professional engineers are well versed in the design of roadway projects, which have included everything from alleys to major arterial roadway improvements. Elements of our roadway and transportation proficiencies involve evaluation of roadway infrastructure to determine traffic volume and flow, topographic survey, soil borings, pavement design, geotechnical investigations, right-of-way control mapping, roadway plans, drainage plans, signing and pavement marking plans, signalization plans, utility relocation, drainage design, intersection design and improvements, and traffic safety upgrades.

Members of our team have designed new roadway alignments through both undeveloped and developed areas including the widening and/or rehabilitation of existing roadways. Projects have consisted of both rural and urban typical sections and an assortment of "blended" typical sections. Our design complies with FDOT standards while incorporating the details and specifications desired by our clients. Much of our experience with local street design involves the retrofit and upgrade of all associated infrastructure including drainage, stormwater management, water and sewer utilities, and traffic flow optimization.

Site Design and Permitting

Amec Foster Wheeler routinely provides site planning and design services to municipal and private clients. Our Project Team members possess the skills and expertise to take a site development project from start to finish. These services typically include:

- Feasibility analysis
- Boundary and topographic survey
- Phase I and Phase II environmental evaluations
- Land-use planning
- Conceptual design
- Geotechnical investigation and analysis
- Stormwater management design
- Landscape architecture
- Agency permitting
- Public meetings
- Contractor bid phase services
- Construction observation
- Site certifications

In addition to our site design and permitting services, Amec Foster Wheeler offers architectural design services for new construction and renovation projects.

Commercial Revitalization, Economic Development and Streetscaping

Our streetscape projects have included areas requiring extensive utility relocation to provide necessary pedestrian access and satisfy current ADA and Florida Accessibility Code for Construction. Much of our past experience in streetscape work has involved downtown historical business areas that were developed many years ago. As a result, these areas are characterized by narrow and obstructed pedestrian walkways, little or no landscaping, numerous overhead utilities, inadequate parking capacity and inefficient traffic

patterns. Our design team has worked very closely with various municipalities and counties to understand their needs and share their vision. It is our goal to fully support our clients in developing the ambiance and overall image they desire for their city, county or neighborhood.

Some of our recent designs have included major modifications to the roadway systems and related traffic flow patterns, reconstruction of sidewalks and pedestrian cross walks, landscaped common areas, medians, and islands, improved pedestrian safety, traffic calming elements, signage and marking, optimization of parking capacity, and supplemental lighting for aesthetics and personal safety. Many times these activities lead to opportunities to enhance and upgrade existing infrastructure to accommodate future growth.

Our staff has extensive experience working with various grant administrators by providing documentation, budget summaries, and design details to satisfy the needs of the funding agencies. We provide accurate cost estimates at specified intervals in the design process that allows the City to optimize improvement plans while remaining within the limited funding allotment. Keeping close tabs on expected construction costs is often critical in a grant funded activity since communities often opt to supplement outside funds with other available fund sources during the design phase of the project. We also value engineer all of our plans and have sometimes outsourced our plan constructability reviews to qualified contractors. This allows us to obtain a realistic and independent plan review and avoid costly surprises.

Structural Engineering

Amec Foster Wheeler has designed, rated, repaired, retrofitted, and inspected bridges, culverts, foundations, retaining walls, floodwalls, weirs, spillways, and other related structures. We have designed all facets of bridge structures with spans from 20 feet to 1500 feet, including all commonly acceptable geometries, materials and construction methods. Our clients vary from private owners to local agencies, state DOTs, federal agencies, design/build teams and joint venture partners. We have certified fracture critical inspectors for steel bridges and has experience proof load testing bridges and other structures. Our team has designed with steel,

concrete, aluminum, wood, and heavy timber on projects, such as large commercial/industrial warehouses, commercial office buildings, master-planned residential developments, churches, and government buildings. Other notable experience includes forensic engineering for residential and commercial buildings, as well as the renovation of existing structures for expansion/rehabilitation.

Construction Phase Assistance

The Amec Foster Wheeler Project Team is composed of various staff who have prepared construction cost estimates and bid specifications for numerous government/public works projects. As such, we are aware of municipal procedures for completing projects of this nature. We currently use software that assists us in providing comprehensive specifications in the Engineers Joint Contract Documents Committee (EJCDC) Construction Specifications Institute (CSI) Master Format. Our work with various county, municipal, and FDOT clients has enabled us to recognize situations where special provisions are required to supplement standard specifications.

Having been responsible for plan and specification quality reviews we can attest that a solid, well-prepared construction plan set and accompanying specification package can lead to minimal confusion and misinterpretation which, in turn, results in a reduction of overall construction costs.

In addition, we maintain a library of current construction cost information that allows us to develop accurate cost estimates for all project elements. Historically, our construction cost estimates are within 10% of actual construction cost for our civil engineering projects.

The Amec Foster Wheeler Team has significant experience in providing comprehensive construction engineering inspection (CEI) services. We strive to develop good working relationships with all project participants by encouraging an open and frequent line of communication. Our services generally include material and compaction control, soil density measurements (laboratory and field), concrete sampling and testing, overall construction quality control, review and approval of change order and payment requests, review and approval of shop drawings and alternative materials, photographic and narrative documentation development, dispute resolution, and comprehensive contract management.

Much of our CEI experience has included work on multi-million dollar civil works projects such as large earth dams and new mining facilities. However, we also routinely provide CEI/Construction Management Technology (CMT) services for our master engineering and redevelopment contracts, such as the City of St. Cloud's neighborhood revitalization that included the inspection of potable water, stormwater and sewer replacement, and subsequent road replacement for 14 streets in an existing residential neighborhood.

Most of our technicians are FDOT and American Concrete Institute (ACI) certified in various testing and construction management elements. Our construction engineering inspection and management services are supported via

our in-house USACE-validated soil and materials testing laboratory at our Miami location. In addition, we also maintain certification in confined space entry and rescue to enable us the flexibility to legally access and inspect manholes, inlets, pipes, and other confined spaces. We own and maintain all of the specialized equipment necessary for such inspections.

Utilities/Stormwater Engineering

From a utilities/environmental engineering standpoint our services include feasibility and engineering reports, design, permitting, bidding assistance and construction management for water, wastewater and water reuse facilities. During the last 15 years our staff has been continuously involved on a number of projects related to the renewal and replacement of aging water and wastewater infrastructure. We also assist our clients with the design, permitting and management of new capital improvements necessary to support Florida's growing population.

Our team has extensive experience working with various grant administrators, providing the necessary documentation to satisfy the needs of the funding agencies. We provide accurate cost estimates at specified intervals in the design process that allows the City to optimize improvements with the available funds. We also value engineer all of our plans and have on occasion outsourced our plan constructability reviews to qualified contractors. This allows us to obtain a realistic and independent plan review and avoid costly surprises.

Plans developed by our team are typically provided to the client at various stages throughout the project (30, 60, 90, and 100 percent completion). This allows the client sufficient time for review and comment. Plans are generally provided in hardcopy and digital (CD) format, and are available in any software the City may choose, including AutoCAD, MicroStation, or GIS (Arcview and ArcInfo). Our design and plans will accommodate FDEP, City, and FDOT standards.

A recently completed example includes our firm's work with the City of Groveland on a CDBG funded project, which involved the design of approximately 2,200 linear feet of gravity sewer with two lift stations, as well as 1,900 linear feet

of force main and 1,400 linear feet of water main. A portion of the roadway within the project's right-of-way was completely replaced and the remainder was milled and resurfaced. A challenge faced by the project team was the narrow right-of-way, which could have created conflicts with other water and sewer utilities and separation requirements without careful planning and implementation.

Utility Locate

To prevent possible conflict with existing underground utilities, prior to performing any subsurface exploration we will contact the Florida State Sunshine Utility Location Service and will contact the City's Utility Department to verify the locations of their existing underground utilities on the site. In order to minimize risk, Amec Foster Wheeler will also review the the City's plans of private utilities, not members of Sunshine, and to check for conflicts with existing private utilities at the proposed test locations. After review of the available utility information, staking of the test locations is performed, which consists of using a hand held GPS locator to identify locations for the boring, paying attention to overhead lines and various other limitations that would make the boring location unacceptable. Once an area has been staked, a Sunshine Ticket is called in by staff engineer with proper descriptions to help locator clear the ticket, which will allow us to drill the locations found within the Sunshine Ticket. Once the staked area is cleared by Sunshine Ticket, the drilling package is compiled by the Field Supervisor. The package consists of the clear Sunshine Ticket, Pre-Job Brief Attendance Sheet, field boring log with appropriate sampling protocol using the appropriate ASTM standards, and sampling protocol sheet, with the depth of the boring.

An example of Amec Foster Wheeler's comprehensive approach to clearance of utilities is the Florida Department of Transportation (FDOT) I-595 Corridor Improvement project in Broward County which consisted of drilling approximately 2,700 boring locations with no time lost claims from any drill teams that participated in this program. The drilling was provided in an accelerated schedule to ensure that the design teams could meet the tight timelines established on the onset of this project. Amec Foster Wheeler believes in safety first when providing the subsurface exploration services and maintained a very safe workplace environment throughout this project. This safety culture was created on the first day of the project with team meetings and team building activities, which consisted of a comprehensive health and safety plan, daily tailgate meetings, and a team of engineers that ensured the boring locations chosen for drilling were called into Sunshine Ticket clearance system. These professionals met in advance of any drilling to adjust chosen locations if the clearance team identified any underground or above ground safety concerns.

Surveying and Mapping

Within the Florida operations of Amec Foster Wheeler exists an established and experienced surveying and mapping group. Formed and developed over the past 24 years by **Mr. Michael Jones, PLS, CFedS** and **Mr. Charles Gardiner, PLS, CFedS,** the surveying and mapping group consists of seven

professional land surveyors, five field crews, four survey technicians, and two administrative assistants.

Our surveying and mapping group has a remarkable record of continuity with the management function remaining intact for 24 years and all key staff having a minimum of 12 years of working together. It is important to note that this group has remained together and working as a team through several acquisitions and mergers.

Our firm has been providing surveying and mapping services in the state since 1987. We have focused on providing our services to public sector clients and, as a result, we have established and maintained successful business relationships with a number of governmental clients through continuing surveying and mapping service contracts, including:

- Seminole County: 1992 to 1996, 2002 to Present
- Orange County: 1999 to Present
- City of Ocoee: 1999 to Present
- Orlando Utilities Commission: 1998 to Present
- City of Orlando: 1993 to 1999, 2001 to 2008, 2011 to Present
- Florida Department of Environmental Protection: 1992 to Present
- St. Johns River Water Management District: 1994 to Present
- South Florida Water Management District: 2002 to Present
- Southwest Florida Water Management District: 2005 to Present
- Tampa Bay Water: 2008 to Present
- Florida Department of Transportation: 1992 to Present
- U.S. Army Corps of Engineers: 2002 to Present
- U.S. Department of the Interior, National Park Service: 2004 to 2009
- U.S. Department of Agriculture/Natural Resources Conservation Service: 2005 to Present

We offer the City a consultant with continuity of management and staff with a proven record of successful performance on similar continuing surveying and mapping services contracts.

Stormwater Management and Water Quality

The Amec Foster Wheeler project team is comprised of staff having extensive drainage and stormwater related project design and construction experience. We have developed numerous stormwater management facilities for public and private entities. We are recognized around the state for having the experience and qualifications necessary to efficiently and effectively plan, design, and implement stormwater related projects. On the other end of the spectrum, we have completed all aspects of very large regional projects from concept design through as-built certification including post construction monitoring. Amec Foster Wheeler is recognized as pioneers in the stormwater management arena. We have the unique ability to seamlessly accommodate both the science and engineering aspects of stormwater and receiving waterbody quality dynamics. We are also unique in our breadth of stormwater expertise that includes:

- TMDL development and compliance
- Basin management action planning
- WMD/FDEP rule making support via TAC involvement
- Regional scale watershed management planning
- Stormwater master planning
- Stormwater utility development
- Minimum flows and levels
- NPDES program management
- Comprehensive compliance and maintenance management

Our team often recommends and incorporates a multiple use approach to stormwater management and flood abatement projects. Much of our experience involves the development of facilities that provide multiple benefits including flood attenuation, water quality improvement, wildlife habitat, educational opportunities, passive recreational uses and stormwater reuse. In this manner, our clients are able to broaden their funding opportunities and maximize the overall benefit of any project to the community.

Over the years, Amec Foster Wheeler's project team has assisted numerous clients secure funds for water quality related projects. We have tapped into various funding sources including FDEP, CDBG, State Revolving Fund (SRF), Section 319, and Florida Forever. In addition, our team has also assisted communities in the development of stormwater utilities and Municipal Separate Taxing Unit (MSTU)/Municipal Separate Benefit Unit (MSBU) taxing districts.

Solid Waste Management

Amec Foster Wheeler's solid waste professionals have assisted in the development of innovative, cost-effective methods to treat landfill leachate. By finding financially favorable treatment systems, we can help our clients drastically cut landfill operation costs.

Amec Foster Wheeler staff includes engineers, geologists, and environmental scientists who combine their expertise to develop effective and environmentally responsible landfill leachate management programs. We work with our clients to meet regulatory guidelines and create systems that lessen the landfill's impact on the environment by reducing its

carbon footprint. Our solid waste team has practiced in the private and public waste management field for more than 30 years and offers engineering, geologic, and environmental assistance for permitting, monitoring, and maintenance of solid waste facilities.

Amec Foster Wheeler's engineers and scientists have a thorough knowledge of applicable local, state, and federal regulations. In addition, we work with stakeholders to evaluate and develop strategies to meet the long-term solid waste needs of the community that produce a minimum impact to the environment. Our solid waste team also provides operational support through the development of maintenance plans, pollution prevention plans, training, geotechnical laboratory testing, and scheduled updates.

Soil Contamination Assessment and Waste Facilities

Amec Foster Wheeler works to meet the assessment or remedial strategy, including: mitigation of health and environmental risk, and reduction of environmental liability for each client's specific goal and objective. Our practitioners evaluate remedial options, feasibility studies, and design remediation programs to remediate contaminated media. Our approach to environmental management focuses on integrating environmental issues with safety, quality, and productivity to the benefit of our clients and the environment. Our expertise allows clients to effectively identify contaminated areas, determine appropriate site reuse, and provide critical information needed to successfully advance projects.

Our services include:

- Soil contaminant assessment and remediation
- Environmental audits
- Groundwater impact assessments
- Monitoring well design, placement, and sampling
- Petroleum storage and handling
- Solid waste handling and landfill design
- RCRA, CERCLA, and Superfund projects

Our experience relates to a wide array of remediation activities and technologies such as the installation and operation of in-situ remediation systems for underground storage tank (UST) sites and operating and abandoned waste sites. We have also completed long term monitoring of remedial activities and extensive source removal projects, including a recent source removal beneath an operating facility. Amec Foster Wheeler project managers have decades of experience in site characterization, pathway evaluation, feasibility studies, and corrective action implementation as well as highest/best use analysis of remediation sites. We have successfully obtained tier I and II residential, commercial, and industrial closures of USTs under Part 213. We also have experience closing numerous USTs that are not regulated under Part 213.

Amec Foster Wheeler's solid waste professionals have assisted in the development of innovative, cost-effective methods to treat landfill leachate. By finding financially favorable treatment systems, we can help our clients drastically cut landfill operation costs. Amec Foster Wheeler staff includes scientists, engineers, geologists, and environmental scientists who combine their expertise to develop effective and environmentally responsible landfill leachate management programs. We work with our clients to meet regulatory guidelines and create leachate systems that lessen the landfill's impact on the environment by reducing its carbon footprint. Our solid waste team has practiced for more than 30 years and offers engineering assistance, geologic, and environmental assistance for permitting, monitoring, and maintenance of solid waste facilities. Amec Foster Wheeler's engineers and scientists have a thorough knowledge of applicable local, state, and federal regulations. In addition, we work with stakeholders to evaluate and develop strategies to meet the long-term solid waste needs of the community that produce a minimum impact to the environment. Our solid waste team also provides operational support through the development of maintenance plans, pollution prevention plans, training, geotechnical laboratory testing, and scheduled updates.

Coastal Engineering

More than 70% of the earth surface is ocean and more than half of the world's population lives within 200 km of the coastline. Effective management of the world's marine and coastal environments has never been more critical. Understanding the complex interactions between humans and other organisms that inhabit marine and coastal ecosystems requires a diverse knowledge base and expertise, coupled with a multidisciplinary approach. Amec Foster Wheeler's team of dedicated professionals provides comprehensive marine and coastal services to public and private-sector clients around the world.

From marine biologists to engineers, Amec Foster Wheeler's professionals provide innovative solutions to meet our clients' changing needs. Amec Foster Wheeler offers a full range of services in support of marine-based projects and developments, including biophysical surveys, habitat mapping, oceanographic monitoring and modeling, environmental impact assessments, regulatory and permitting support, and marine archaeology. Our ports

and marine engineers provide comprehensive engineering services for bulk and break bulk businesses, container ports, ferry and passenger terminals, marine infrastructure, transmission lines, waterfront developments and the oil and gas industry. The following list not only illustrates Amec Foster Wheeler's comprehensive suite of coastal capabilities and experience, it provides a sense of Amec Foster Wheeler's capability to deliver on a promise of "world class capabilities delivered to your doorstep." In the case of this proposal, local leadership in Mobile will be supported by local and southeastern region staff. It is not anticipated we would need any other expertise, but if we do, we have 36,000 colleagues to pick from.

Marine ecology

- Coastal, estuarine and marine ecological studies
- Eelgrass, kelp, benthic invertebrates and fish surveys
- Habitat mapping (towed video cameras, ROVs, divers, aerial photography), characterization and ecological sensitivity analysis
- Marine baseline surveys and environmental impact assessments
- Habitat compensation plan design, implementation and monitoring
- Wetland/estuarine enhancement/restoration
- Environmental effects monitoring

Marine wildlife (mammals and birds)

- Aerial/vessel-based marine mammal surveys
- Baseline surveys and monitoring studies
- Ecological impact assessment on migratory birds and marine mammals

Water and sediment quality studies

- Water quality monitoring
- Effluent dispersion modeling
- Sediment sampling (surface grab/MudMole™/vibracorer) and characterization
- Sediment remediation design and permitting
- Dredging plan, dredge material disposal management and permitting

Met-ocean services

- Oceanographic equipment supply and installation
- Physical environment monitoring
- Atmospheric and ocean forecasting
- High-resolution wind and wave modeling
- Bow wave modeling
- Sediment transport modeling (dredging or construction)
- Emergency response: hurricane, oil spill, ice
- Coastal flooding risk assessment
- Climate impact analysis

Ecological risk assessment

- Toxicological studies
- Bioavailability testing
- Sediment toxicity testing
- Fate and transport modeling
- Risk communication
- Risk management plans and strategies
- Contaminated sites remediation planning

Coastal and marine archaeology

- Archaeological overviews
- Archaeological impact assessments
- Archaeological mitigation
- Archaeological monitoring of shoreline and dredging operations
- Underwater archaeology

Ports and harbour engineering

- Port master planning, detailed design and construction management
- Site selection, feasibility studies
- General cargo, bulk, LNG and container terminals
- Port infrastructure planning
- Shoreline management
- Coastal hydraulic assessments
- Risk management
- Geotechnical investigations
- Discrete event simulation modeling for berth occupancy and peak congestion levels in harbors

Geographic information systems and information management

- Environmental information consulting
- Spatial data analysis and modeling
- Application development
- CAD capabilities
- Remote sensing
- Real-time data transmission and visualization
- Web page support
- 3-D project visualization

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Tab 2
Professional Qualifications of Staff Personnel

Professional Qualifications of Staff Personnel

The Amec Foster Wheeler team offers a diverse and comprehensive skill set of experts covering all of the required discipline areas. Our expert staff brings in-depth technical knowledge and comprehensive field experience, thus eliminating the inefficiencies and costly learning curves of less-experienced engineering consulting firms.

Amec Foster Wheeler's project team is composed of individuals with expertise in a variety of disciplines, many of whom are widely recognized as experts in their respective field. A brief description of the experience of selected key project team members, as well as an organizational chart and detailed resumes of all proposed project team members are provided in this section. Professional licenses are included in the Additional Information section of this submittal.

Principal-in-Charge

Key personnel for the City of Key West's project team includes Principal-in-Charge **Mr. Michael Nardone, PG**. He has more than 30 years of experience in the Florida engineering consulting industry and has served in the capacity of office manager, regional manager, and national director during the course of his career. His broad areas of expertise include program and construction management, civil engineering, ecological permitting, and architectural design.

Mr. Nardone has also performed as Principal-in-Charge for numerous multi-million dollar contracts with local governments, as well as state and federal agencies, the private sector, and for design and construction activities associated with the expansion of the Panama Canal for the Panama Canal Au-thority (ACP). As principal-in-charge, his primary responsibilities have been to provide contract man-agement, serve as client liaison, and provide senior technical support. Mr. Nardone has also been re-sponsible for developing multiple business lines and strategic marketing plan initiatives across Florida, along the east coast of the United States, and internationally in the Caribbean and Central and South America.

Contract Manager

Mr. Gregory Corning, PE provides technical input and engineering analysis for projects involving project management, facility assessments, stormwater design and permitting, environmental design and permitting, and construction administration, engineering, and inspection. Mr. Corning has been the contract manager for multiple continuing service contracts which includes local, state, and federal clients. He currently holds the contract manager position for the Monroe County General Engineering Services Contract, City of Marathon GES Contract, and Village of Islamorda GES Contract. Mr. Corning also possesses experience in the development of grant applications and construction documents such as request for proposals, drawings, technical specifications, and cost estimates.

Project Manager

Mr. David Soler, PE is experienced in civil site design of industrial, com-mercial, and residential facilities. His 22 years of experience includes site layout and site grading design for buildings, roadways, parks, bikeways, and parking facilities; earthwork calculations; sanitary and storm sewer design; erosion and sedimentation control design; as well as preparation of facilities condition assessment reports. Mr. Soler duties have included the preparation of engineering documents, including plan drawings, notes, details, and project bid specifications. He has also provided construction administration services for large-scale institutional, commercial, and industrial projects; these services include project supervision, submittal review, technical inspections, and the preparation of pro-ject site visit reports.

QA/QC Advisor

Mr. Michael D. Phelps, PE has more than 20 years of experience with a wide variety of engineering projects related to parks and recreational facility projects, watershed restoration, transportation, inter-section improvements, utility system design, and civil engineering for public facilities. Mr. Phelps is an experienced quality control reviewer and manages the quality management program for his business unit. He has managed several contracts for a number of local cities and counties. Mr. Phelps routinely provides principal-level management to Amec Foster Wheeler's consulting teams as part of our many continuing contracts for engineering and other pro-fessional services for counties and cities.

Local Liaison

With more than 25 years of experience, **Ms. Zully Kathleen Hemeyer** has managed various types of projects and contracts from concept to funding and program development through design and construction close-out. Ms. Hemeyer possesses a high level of proficiency in research, data analysis, technical writing, financial reporting, and budget development. As a resident of the Florida Keys for more than 17 years, her local knowledge, diligence, and care in handling customer service as relates to projects benefits the Amec Foster Wheeler team, as well as the clients she serves in the region. Ms. Hemeyer participates in numerous local community groups, including Mentor Monroe County Schools and Beautification Islamorada. She also is a volunteer firefighter with the Village of Islamorada Fire Department. She has received numerous awards and recognition for her work, including Environmental Project of the Year for the Village of Islamorada Indian Key Fill Stormwater Project.

Civil Engineering Services

Mr. Jeffrey D. PeQueen, PE, CFM, CPSWQ is a dedicated professional with 24 years of experience in civil engineering and project management. He has extensive experience with all aspects of storm sewer design, stormwater design and permitting, wetlands permitting, hydrologic and hydraulic modeling, flood studies, and FEMA map revisions. His continued expertise in stormwater issues has allowed him to forge strong long-term relationships not only with his clients but also with the regulatory agencies such as the FDOT, SWFWMD, St. Johns River Water Management District (SJRWMD), U.S. Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), as well as various municipalities and counties. He is a respected member of the local engineering community and maintains excellent relationships as a result of effective design and projects with many in the regulatory community. Mr. PeQueen has first-hand additional insight into the regulatory process due to his former employment with SWFWMD where he served as a senior professional engineer.

Utility Engineering Services

Mr. David Butcher, PE, LEED AP is a senior civil project manager with more than 20 years of experience. He serves as a lead project engineer on many public and private projects dealing with all aspects of civil engineering including: water resources, general civil, roadway design, potable water and sanitary sewer design, lift station designs, bridge scour analysis, bridge hydraulic reports, and permitting with multiple agencies throughout Florida. In addition, Mr. Butcher excels at assisting our clients with public meetings and project education to both permitting agencies and constituents. His award-winning design work has been recognized for its excellence and contribution to community rehabilitation.

Coastal Engineering Services

As a senior dredging engineer, **Mr. Joe Wagner, PE, DNE** has worked on a variety of dredging engineering projects that have included developing long-range dredged material management plans; designing upland dredged material containment facilities; creating dredging management plans, economic evaluations, and reports; evaluating alternate dredging technologies; and assisting with site inspections and evaluations of nearly 60 dredged material management facilities.

Mr. Wagner has also served as a project manager responsible for marine projects, including waterfront design and development of plans and specifications. In this capacity, Mr. Wagner has coordinated with government representatives and regulatory agencies in property acquisition, planning, permitting, designing, and construction administration of numerous dredged material management areas and dredging projects in Florida, the southeastern United States, South America, and the Caribbean.

Solid Waste Engineering Services

Mr. Phil Scott is a technical director and one of Amec Foster Wheeler's most experienced project managers/directors in the waste sector. He is responsible for the direction and

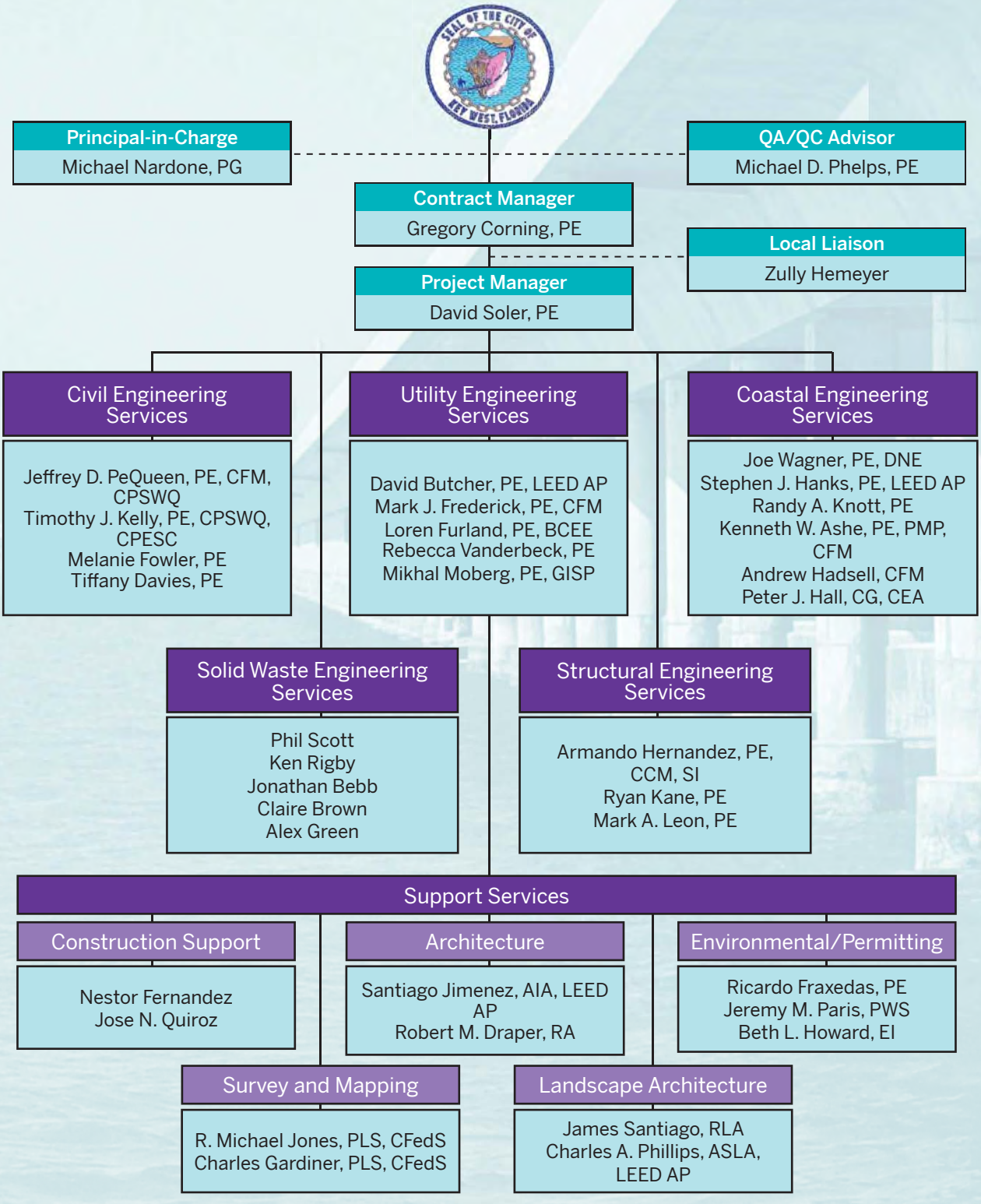
management of a portfolio of consultancy projects with a combined fee income of approximately $1 million pa and is highly experienced in running multidisciplinary project teams being an APM qualified project manager. Mr. Scott also acts as Lead Advisor to several local authorities on waste procurement and management issues. His work in this capacity has included the production of waste management strategies for West Berkshire DC, Sandwell MBC and Hertsmere DC and other local authorities. He has contributed to the procurement of waste management contracts, including collection, recycling, composting, disposal, Civic Amenity Site and integrated contracts ranging in value from $1.8 million to more than $620 million.

Structural Engineering Services

Mr. Armando Hernandez, PE, SI is a senior project manager and civil engineer with experience in the construction management and engineering of complex technical projects with expertise in civil/structural/architectural design, analysis, and specification writing; quality assurance/quality control (QA/QC); construction management and engineering; and project engineering. With more than four decades of experience, Mr. Hernandez has been responsible for the management of dozens of renovation, construction, and infrastructure projects, including improvements for a 1.5-million-square-foot hospital, university, and research institution. He directed the design and construction of one of the first MRI clinics in mid-Manhattan and the piping interconnection and controls of chillers in five buildings. This effort saved $575,000 a year in energy and operating costs and $3.4 million in avoided chiller construction. He also led a construction program in Puerto Rico that included the upgrading of more than $18 million of commercial facilities.

Project Team

General Engineering Services



Michael Nardone, PG

Principal-in-Charge

Relevant projects

- City of Miami Gardens General Civil Engineering Consultant
- Miami-Dade Stormwater Master Plan
- City of Hialeah Gardens SSES/Peak Flow Study

Core skills

Program and construction management, principal oversight, hazardous waste management, ecological permitting, homeland security and emergency management, architectural design, and civil engineering

Professional summary

Mr. Michael Nardone has more than 30 years of experience in the Florida engineering consulting industry. He has served in the capacity of office manager, regional manager, and national director during the course of his career. His broad areas of expertise include program and construction management, hazardous waste management, ecological permitting, homeland security and emergency management, architectural design, and civil engineering.

Mr. Nardone has also performed as Principal-in-Charge for numerous multi-million dollar contracts with local governments, as well as state and federal agencies, the private sector, and for design and construction activities associated with the expansion of the Panama Canal for the Panama Canal Authority (ACP). As principal-in-charge, his primary responsibilities have been to provide contract management, serve as client liaison, and provide senior technical support. Mr. Nardone has also been responsible for developing multiple business lines and strategic marketing plan initiatives across Florida, along the east coast of the United States, and internationally in the Caribbean and Central and South America.

Representative projects

General Civil Engineering Consultant, City of Miami Gardens, Florida. Principal-in-Charge. Utilized roadway and drainage engineers to supervise roadway and drainage construction plans review; construction engineering inspection of roadway and drainage projects; and survey plat review.

Stormwater Master Plan, Miami-Dade Department of Environmental Resource Management, Florida. Principal-in-Charge. Under this general engineering contract, four stormwater master plans were completed for the C-102, Goulds, C-3, and C-5 basins in Miami-Dade County. The C-9 basin stormwater master plan was completed in January 2007. The purpose of these plans was to evaluate the existing and future flooding and water quality problems and recommend improvements to the system to mitigate impacts and provide modeling for the revision of FEMA flood plain mapping.

SSES/Peak Flow Study, City of Hialeah Gardens, Florida. Principal-in-Charge. Managed a four-week flow monitoring study for 16 sanitary sewer pump stations to determine the collection system's infiltration and inflow (I/I) and rainfall dependent I/I. Used MS-Access and ArcView software to manage the data. Recommendations were made for the rehabilitation of the system.

New Municipal Complex, City of Miami Gardens, Florida. Principal-in-Charge. This project was the total architectural design and engineering for a new LEED Platinum Municipal Complex for the City of Miami Gardens. The complex includes the design of a new city hall, police station, commission chambers, and an associated parking garage. The construction budget was $38 million and all of the design work was completed in 12 months.

Education

Bachelor of Science, Geology, Florida State University, 1983

Professional qualifications/ registration(s)

Professional Geologist, Florida No. PG1171

Experience

Amec Foster Wheeler: 2011

Industry: 1984

Memberships/affiliations

Miami Beach Chamber of Commerce

Miami-Dade County Local Mitigation Strategy Steering Committee

Continued.

Amelia Earhart Park, Outdoor Aquatic Facility and Park Improvements, Miami-Dade County Parks and Recreation Department, Florida. Principal-in-Charge. This project included the design and development of approximately 100 under-utilized acres in the northern section of an existing park in the County park system. The work included the review and coordination of environmental, ecological, and archaeological services in the development of the property into a family-orientated water park and mountain bike facility. The proposed facility improvements included a water park with lazy river; water splash area; water slides and wave pool with supporting locker/toilet rooms; administration areas; concession areas; and a mountain bike facility with administration and toilet facilities. Responsibilities included the general coordination of the specialists involved in the project and the design of the supporting facilities through construction. The construction budget was $9 million and the project was temporarily halted for lack of funding in 2011 at the design development phase.

Trail Glades Range, Phases I and II, Miami-Dade County Park and Recreation, Florida. Project Manager and Principal-in-Charge. This project included the renovation and upgrade of the existing County-owned 600-acre gun range located in western Miami-Dade County on the edge of the Everglades National Park. Much of the work was to design and supervise the construction of park shooting and clubhouse facilities on environmentally sensitive land and perform contaminated soil removal activities. The scope of the project consisted of a clubhouse design; range master building located at each range; three shelters; an action pistol range; a 100-yard rifle and pistol range; trap and skeet ranges; a sporting clays range; and a lead clean-up.

Miami-Dade Park and Recreation Department, Park Trails, Miami-Dade County, Florida. Principal-in-Charge. A general engineering contract for various Miami-Dade Park and Recreation (MDPR) Department improvements. Projects included three pedestrian bridges more than 100-feet canals and two multi-purpose park trails totalling 5.5 miles.

Stormwater Engineering Design Improvements, City of Doral, Florida. Principal-in-Charge. Responsible for the design and construction administration of 14 projects listed in the City of Doral Stormwater Master Plan as critical infrastructure improvements or flooding "hotspots." Upon completion of design, prepared contract documents for construction and served as owner's representative during contractor selection.

American Senior High School, Miami-Dade County Public Schools, Florida. Principal-in-Charge. Project included renovation of multiple buildings, which consisted of general construction, civil, structural, mechanical, electrical, and plumbing for the school; renovation of the auditorium; and ADA compliance and redesign of site access to improve and control traffic flow.

General Program and Construction Management, City of Miami Beach, Florida. Principal-in-Charge. Responsible for administering the City's contracts with design professionals and construction contractors, document control, budgeting, support for defense of claims and litigation, contract scoping, plans review, payment submittals, and site construction observations. Projects under this program included golf courses, fire stations, the Miami Beach Convention Center, various parks, and public works facilities.

Construction Management and Oversight Services, Collier County, Florida. Principal-in-Charge. Responsible for project management and construction oversight services for Collier County for vertical construction site works and landscaping. Responsible for assisting the County project manager and design professionals with the development of contract documents, conceptual planning and scheduling, total project budget estimating, and contract negotiations. One project example included a landfill scale-house construction with landfill monitoring and management, a new office building, three new scales, an improved digital weighing system, a camera system, an odor monitoring and response center, and a weather station with field analysis center.

Fort Jefferson Dry Tortugas/Dredging, National Park Service, South Florida. Principal-in-Charge. The dredging of storm-driven sand from two locations within the moat surrounding Fort Jefferson at the Dry Tortugas National Park. The park is located 70 miles west of Key West and includes seven remote islands composed of coral reefs and sand. The dredging was undertaken to restore the historic setting and improve water quality within the moat. Following mechanical dredging, dredged material was placed in an upland disposal area on the northern side of the fort and used to replenish an eroded beach on the southern side of the fort.

Gregory Corning, PE

Contract Manager

Relevant projects

- Monroe County Canal Restoration Demonstration Program
- Village of Islamorada Canal Restoration Demonstration Program
- City of Naples Stormwater Master Plan Update Project
- USDA NRCS Albritton Wetland Restoration Project

Core skills

Project management, facility assessments, environmental engineering design and permitting, and engineering and environmental field investigations

Professional summary

As a Project Engineer, Mr. Gregory Corning provides technical input and engineering analysis for projects involving project management, dredging and dewatering planning and design, stormwater design and permitting, environmental design and permitting, and construction administration, engineering, and inspection. Mr. Corning has participated in the design of dredging and dewatering projects, the analysis of dewatered sediments for potential beneficial reuse, the analysis of surface water quantity and quality stormwater pollutant loadings systems, and treatment of agricultural runoff by wetland systems throughout Florida. He has conducted field exploration and research on several environmental projects, such as sediment analysis for potential contaminants that affect disposal options, surface water assessment and monitoring, and wetland evaluations. He has assisted in the management and planning for dredging and dewatering, stormwater, and wetland projects from the design and permitting stage through construction and final certification. Mr. Corning also possesses experience in the development of grant applications and construction documents such as request for proposals, drawings, technical specifications, and cost estimates.

Representative projects

Monroe County Canal Restoration Demonstration Program, Monroe County, Florida. Project Engineer. Amec Foster Wheeler is working closely with Monroe County and the Canal Restoration Advisory Subcommittee of the Florida Keys National Marine Sanctuary Water Quality Protection Program to implement a canal restoration demonstration program consisting of implementation of various residential canal water quality improvements. The technologies to be implemented include weed barriers, organic removal, backfilling, culvert installation, pumping, and combinations of these technologies. The scope consists of preparation of the design and permit packages for all the restorations; assistance with bidding the construction; and engineering support services during construction. Amec Foster Wheeler is obtaining all required permits, including a SFWMD ERP, a USACE individual permit, and a Florida National Marine Sanctuary permit. As part of the design scope, Amec Foster Wheeler is completing all required environmental surveys, bathymetric and topographic surveys, sediment characterization, geotechnical evaluations, and hydraulic modeling. Amec Foster Wheeler is also coordinating all homeowner approvals for staging areas and equipment installation.

Chassahowitzka Headspring Restoration Project, Southwest Florida Water Management District, Homosassa, Florida. Project Engineer. Responsible for design, permitting, and construction administration and engineering inspection services for the restoration of the Chassahowitzka headspring, which forms the headwaters of the Chassahowitzka River, an Outstanding Florida Water (OFW). Restoration activities included removal of the fine sands, silt, and organic matter that has accumulated throughout the headspring area. Technical challenges included minimization of impact to water quality (headsprings area is an OFW), the West Indian Manatee, and cultural resources. As such, the sediment removal plan was permitted through FDEP, FWC, USACE and SHPO. The final sediment removal design incorporated a dewatering plan that minimized turbidity impacts caused by the dewatering

Education

Bachelor of Civil Engineering, Florida Atlantic University, 2009

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 79293

Experience

Amec Foster Wheeler: 2010

Industry: 2009

Memberships/affiliations

American Society of Civil Engineers

American Water Resources Association

Florida Stormwater Association

Software proficiency

Stormwater Modeling/Design: ICPR

GIS

AutoCAD

Continued.

return water, a schedule that would not impact the wintering activities of the manatees in the headspring area, and a cultural resource screening and recovery plan. Amec Foster Wheeler provided construction administration and engineering and inspection services which included weekly site visits, monthly progress meetings, and review of contractor progress to ensure the project met the agreed upon contract schedule.

City of Naples Stormwater Master Plan Update, City of Naples, Florida. Project Engineer. Amec Foster Wheeler has been subcontracted by AECOM to assist in the preparation of a comprehensive, and forward looking Master Plan that encompasses the City's stormwater management program, presents a detailed investigation into key components of stormwater as it is related to the City of Naples, establishes goals and provides a foundation for future policy decisions, and guides the City's stormwater management program. The primary responsibility involves the evaluation of the water quality and ecology for the updated stormwater master plan. Responsibilities also include a review of documented changes in water quality and ecology of waters affecting the City of Naples, identification of regulatory standards affecting the stormwater master plan, evaluation of the City's water quality monitoring program, and water quality level of service analysis.

Village of Islamorada Canal Restoration Demonstration Program, Village of Islamorada, Florida. Project Engineer. Amec Foster Wheeler is working closely with the Village of Islamorada and the Canal Restoration Advisory Subcommittee of the Florida Keys National Marine Sanctuary Water Quality Protection Program to implement a canal restoration demonstration program consisting of implementation of various residential canal water quality improvements. The technologies to be implemented include weed barriers, organic removal, backfilling, culvert installation, pumping, and combinations of these technologies. The scope consists of preparation of the design and permit packages for all the restorations; assistance with bidding the construction; and engineering support services during construction. Amec Foster Wheeler initially assisted Monroe County in selecting the top ranked list of demonstration canals to be included in the program. Amec Foster Wheeler is obtaining all required permits, including a SFWMD ERP, a USACE individual permit, and a Florida National Marine Sanctuary permit. Amec Foster Wheeler is also working with the Canal Restoration Advisory Subcommittee to develop a streamlined permitting process for the restorations. As part of the design scope, Amec Foster Wheeler is completing all required environmental surveys, bathymetric and topographic surveys, sediment characterization, geotechnical evaluations, and hydraulic modeling. Amec Foster Wheeler is also coordinating all homeowner approvals for staging areas and equipment installation.

Albritton Wetland Restoration, U.S. Department of Agriculture/Natural Resources Conservation Service, Okeechobee, Florida. Project Engineer. Assisted with the design of the restoration system and construction drawings. Prepare permit applications, technical specifications, operation and maintenance plan, quality assurance plan, and bid specifications. Developed a conservation plan that identified how wetland functions and values will be restored, enhanced, protected, maintained, and managed to accomplish the goals of the USDA NRCS WRP. The plans were modeled to evaluate the effectiveness of the restoration elements in terms of long-term hydrologic restoration using the USDA-NRCS developed Soil Plant-Air-Water (SPAW) and Interconnected Channel and Pond Routing (ICPR) model. The models development included delineation of sub basins, spillway elevations, seepage rates, upstream/downstream relationships, and other applicable parameters for the model. The model outputs are used to develop inundation and depth maps depicting the extent and duration of the modeled hydrologic improvements. Project efforts include assessment of the general health and condition of the various habitats, identification of the presence of exotic and invasive species, and evaluation of current site hydrology. Project goals include development of conservation plan for the restoration of historical habitats, based on proper hydrology and vegetation community structure.

Ichetucknee Trace Mining Reclamation and State Park Design, Florida Department of Environmental Protection, Lake City, Florida. Project Engineer. Responsible for the civil design of the infrastructure of the recreational park which included the stormwater system, on-site septic system, and potable water system. The purpose of this project is to design and permit the Ichetucknee Recreational Facility, which includes a swim beach, fishing platforms, boat ramp, trails, restroom facilities, maintenance building, entrance roadway with gatehouse, and a dive platform with loading area. The project area, which is approximately 660-acres, proposed for the facility is located within Columbia County in Sections 16, 17, 20, and 21, Township 5 South, and Range 16 East.

David Soler, PE

Project Manager

Relevant projects

- John Pennekamp Coral Reef State Park
- Lignumvitae Key State Park
- Windley Key State Park

Core skills

Civil site design, supervision of designers and draftsmen, advance site layout and grading design, gravity sewer design, and erosion and sedimentation control plan design

Professional summary

Mr. David Soler is a civil engineer experienced in site design of industrial, commercial, and residential facilities. His 22 years of experience includes performing advanced civil site layout and grading design for buildings, roadways, and parking facilities; sanitary and storm sewer design; and recreational facilities design, including bicycle trails and passive parks. Duties include preparation of preliminary and final engineering documents, including drawings and project specifications. He has also provided construction administration services, including project supervision, technical inspections, and preparation of project reports.

Representative projects

John Pennekamp Coral Reef State Park, Florida Department of Environmental Protection, Monroe County, Florida. Project Manager. Managed the survey, engineering design, and construction of a new sewer collection system from the park ranger station to the existing lift station. Duties included site visits, site conditions reports, and meetings with the client and contractors.

Lignumvitae Key State Park, Florida Department of Environmental Protection, Monroe County, Florida. Project Manager. Managed the survey, engineering design, and construction of a new sewer collection system, a new lift station and connection to the public sanitary sewer system. Duties included site visits, site conditions reports, and meetings with the client and contractors.

Windley Key State Park, Florida Department of Environmental Protection, Monroe County, Florida. Project Manager. Managed the survey, engineering design, and construction of a new sewer collection system, a new lift station and connection to the public sanitary sewer system. Duties included site visits, site conditions reports, and meetings with the client and contractors.

Resource Recovery Park Master Plan, Collier County Board of Commissioners, Naples, Florida. Senior Civil Engineer. Developed a preliminary master plan design for a resource recovery park in Collier County. The project includes facilities for the processing of white goods, tires, household hazardous waste, and biosolids composting. The site design includes various administration buildings, truck scales, parking areas, a large vehicles fueling station, and a solar farm. Building Information Modeling (BIM) was used to help visualize and convey the desired intent to potential stakeholders. Prepared typical street sections, and overall building and road grid alignment.

Eagle Creek Weir Refurbishment Design, Collier County, Florida. Senior Civil Engineer. Provided civil site design for a remote canal weir maintenance enclosure. Prepared engineering drawings, including geometrical layout and site grading. Duties included preparation of demolition, engineering plans, civil site notes, erosion control plan, mangrove trimming plan, and site details.

Education

Bachelor of Science Civil Engineering, University of Puerto Rico – Mayaguez Campus, 1995

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 68468, Puerto Rico No. 15717

Certifications and training

FEMA Public Assistance Operations I and Debris Operations I

Practical Guidelines for Asphalt Placement Inspection

Experience

Amec Foster Wheeler: 2015

Industry: 1995

Memberships/affiliations

Florida Board of Professional Engineers

Puerto Rico Professional College of Engineers and Land Surveyors

Continued.

Lake Gwyn Park Design and Engineering Services, Polk County Parks & Natural Resources, Wahneta, Florida. Civil Engineer. Presented proposed County park alternatives to non-English speaking audience, translated presentation slides, and collected audience members questions and concerns.

Collier County Public Utilities Department Roofing Inspections, Naples, Florida. Civil Engineer. Performed roof surveys and prepared findings reports. A comprehensive report was prepared based on the findings including a summary of roof conditions, roof plans, a photographic log with deficiencies, and repair recommendations.

South Dade Landfill, Kimley-Horn & Associates, Inc., Miami, Florida. Senior Civil Engineer. Provided civil site design for a household chemicals drop off area. Prepared engineering drawings, including geometrical layout. Duties included preparation of demolition, engineering plans, and earthwork calculations.

Unmanned Facility Assessments, Collier County Board of Commissioners, Naples, Florida. Civil Engineer. Prepared facility condition assessment reports to optimize long term facilities investment in Collier County. The analysis included walk-through visual inspections to collect the baseline data. Once the walk-through data was collected, appropriate estimates to correct any deficiencies were prepared. The expected renewal/correction costs were based on industry models. The findings were sorted, grouped together, and presented in a useful format, along with photo logs of each facility inspected.

U.S. Postal Service Roofing, Various Locations in Southern Florida. Civil Engineer. Project included 22 roof replacements. Performed site investigation, and prepared 30% design and final solicitation package (100% design). Upon award, performed construction administration, which involved submittal review, preconstruction meeting, change order review, onsite observation of replacement, and daily reports. All deliverables were submitted in accordance with the client's commitment schedule.

Wahneta Infrastructure Master Plan, Polk County Parks & Natural Resources, Wahneta, Florida. Civil Engineer. Performed a community workshop to discuss future improvement to the roads, drainage, and community sidewalks located within the Wahneta Community with the non-English speaking portion of the audience, translated presentation slides, and collected audience questions and concerns.

Roof Testing and Consulting, School Board of Broward County, Florida. Senior Civil Engineer. Performed a comprehensive roof conditions assessment including survey and testing services at multiple school facilities for the School Board. Surveyed the roof and prepared as-built drawings, and roof condition reports, including recommendations for repairs and replacement.

Collier County Facilities Condition Assessment, Naples, Florida. Senior Civil Engineer. Responsible for conducting on-site condition assessment of unmanned facilities. Duties included evaluation of building envelope, such as plumbing, structural integrity, roofing, general site conditions, and building finishes. The output provided information to Collier County personnel that was used as a planning tool for short- and long-term maintenance budget requests.

New Generator and Propane Tank Site, Bartow, Florida. Senior Civil Engineer. Prepared civil site plans for an emergency communications antenna site expansion including, new fences, gates, a power generator pad and a propane tank pad. Duties included project management, meetings with client, preparation of site plans, details, and visit report.

Jonathan Dickinson Park Concession Stand Construction, Florida Department of Environmental Protection, Martin County, Florida. Senior Civil Engineer. Provided civil site design for a new park concession and restrooms building, including all related hardscape, grading, and drainage strategy. Prepared engineering drawings, including geometrical layout and site grading. Duties included preparation of demolition, engineering plans, civil site notes, and site details.

Municipal Complex, City of Miami Gardens, Miami, Florida. Senior Civil Engineer. Provided civil engineering design for a new government center. The project included city hall, police headquarters, and a multi-story parking garage. The project incorporated sustainable design and state-of-the-art green technology to achieve a LEED Platinum certification by the U.S. Green Building Council (USGBC). Duties included the following:

- Preparation of engineering plans, project specifications, technical inspections, and preparation of visit reports
- New roundabout for tractor trailers, geometrical improvements to NW 27th Avenue, and a new boulevard for city hall
- Use of porous concrete and block pavers to reduce runoff from courtyards and off-street parking areas

Michael D. Phelps, PE

QA/QC Advisor

Relevant projects

- Florida Department of Environmental Protection
- Polk County Transportation Division
- City of Lakeland Various Municipal Projects

Core skills

Project management, developing and refining hydrologic and hydraulic models, watershed evaluation and planning, GIS data development, developing construction plans, and quality management programs

Professional summary

Mr. Michael Phelps has more than 20 years of experience with a wide variety of civil engineering projects. He has completed transportation projects, intersection improvements, utility system design, parks and recreational facility projects, and civil engineering for public facilities. Mr. Phelps is experienced in cost estimation, preparation of contract documents and specifications, project management, and field inspections.

He has managed several continuing contracts for engineering services for counties and cities. In that role, he has successfully prepared team management plans to properly staff multiple, concurrent task assignments to maintain schedules and budgets to meet client needs. He is highly-experienced in managing the overall contract as well as individual task assignments for municipal continuing services contracts.

Representative projects

Florida Department of Environmental Protection, Bureau of Design and Construction, Florida. Quality Assurance Manager. Responsible for the development and implementation of the quality management program. Recent projects include roadway improvements at Hugh Taylor Birch State Park and septic to central sewer conversions for three sites in the Florida Keys.

Polk County Transportation Division, Polk County, Florida. Contract/Project Manager. Responsible for several projects including stormwater management projects for roadways throughout Polk County. Projects include, Garden Grove Feasibility Study, West Hancock Street Drainage Improvements, Experiment Station Road Improvements, and Crystal Lake Drive Improvements.

Various Municipal Projects, City of Lakeland, Florida. Contract/Project Manager. Responsible for municipal projects including stormwater management, water quality projects, parking studies, and construction inspection services. Most recently completed the award winning project, Lake Hollingsworth Westside Stormwater Treatment Project. This project included the preliminary project development, design and permitting, and construction phase services for roadway, pedestrian trail, and stormwater improvements.

Polk County Parks and Natural Resources Division, Polk County, Florida. Contract/Project Manager. Involved in the successful completion of more than 40 projects. Representative projects include the Inwood Neighborhood Drainage Study and Improvements, Simmers-Young Park, Christina Park, Woodland Area Drainage Improvements, Garden Grove Drainage Improvements, Country Village Stormwater Master Plan, Circle B Bar Reserve Trail, Lake Gwyn Water Restoration and Flood Protection, Village Park Drainage Improvements, Red Hawk Neighborhood Drainage Improvements, and FEMA Hazard Mitigation Grant Funding (HMGF) assistance.

Miscellaneous Water Projects, Polk County Utilities, Florida. Project Manager. Involved with utility system design and rehabilitation projects throughout Polk County. Completed

amec foster wheeler

Education

Master of Science, Water Resources, University of Central Florida, 1994

Bachelor of Science, Civil Engineering, University of Central Florida, 1992

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 53315

Experience

Amec Foster Wheeler: 2011

Industry: 1994

Memberships/affiliations

American Society of Civil Engineers, Florida Section President, 2007-2008

Florida Engineering Society

Florida Floodplain Managers Association

American Water Resources Association

Lakes Education Action Drive

National Society of Professional Engineers

Software proficiency

Modeling: SWMM, HEC-1, HEC-2, HEC-RAS, HEC-HMS, HEC-6, HEC-UNET, AdICPR, WSPRO, ACES

WaterCAD

ArcView GIS

Honors and awards

Past President, American Society of Civil Engineers, Florida Section, 2007-2008

Engineer of the Year, American Society of Civil Engineers, Ridge Branch, 2008

Continued.

several water main projects including the Polk County Utilities and Haines City Water Main Interconnect, Lily Lake Water and Wastewater Transmission System Design, Waverly Water Transmission System Design, Frostproof Water Main Extension, U.S. 27 Water System Improvements, SR 540 Water Main Extension, Moore Road Water Main Extension, and Pine Glen Subdivision Water Service Retrofit.

Various Municipal Projects, City of Bartow, Florida. **Contract/Project Manager.** Responsible for municipal services projects for the City. Recent projects included the U.S. 98 Water Main Relocation and U.S. 17 Water Main Repair projects. Both projects were completed in accordance with FDOT Design Standards as well as the Standard Specifications for Road and Bridge Construction. The projects also required FDEP permitting and certifications.

Various Municipal Projects, City of Eagle Lake, Florida. **Project Manager.** Responsible for municipal projects and on-call services. Recent projects include the Eagle Avenue Stormwater Improvements and the U.S. 17 Sidewalk Improvement projects. The U.S. 17 Sidewalk Improvements were completed in accordance to FDOT and ADA requirements.

Various Municipal Projects, City of Haines City, Florida. **Project Manager.** Responsible for municipal projects including water mains, streetscapes, and construction inspection services.

Miscellaneous Water Projects, City of Haines City, Florida. **Project Manager.** Completed several water projects including 27 Water Main Extension, U.S. 27/SR 544 Water Main Extension, Haines City Water System Master Plan Update, and Holly Hill Road Water Main Design/Build.

Various Municipal Projects, City of Auburndale, Florida. **Contract/Project Manager.** Responsible for capital improvements and municipal services for the City of Auburndale. Recent projects include the Main Street Streetscape and the Signalization Improvements for Main Street at Bridgers Avenue. The signalization improvements project included development of plans to replace the existing concrete poles with mast arm assemblies. The project also required FDOT approval for the design and Polk County Transportation approval for the operation and maintenance aspects.

Florida Polytechnic University, Lakeland, Florida. **Contract/Project Manager.** Responsible for the management of a continuing contract for civil engineering services. Recent project include the preparation of the Campus Master Plan and development of campus-wide recreational facilities. The recreational facilities included preparation of design plans and construction documents for a multi-purpose soccer field, basketball courts, beach volleyball area, site lighting, and pedestrian access in accordance with ADA standards.

City of Orlando Civil Engineering Continuing Services, Orlando, Florida. **Contract Manager.** Provided oversight of design, plans preparation, permitting, and specifications for Lake Lancaster to Lake Davis drainage improvements. Oversaw several projects in which Amec Foster Wheeler prepared maintenance of traffic plans for internal City projects. Currently overseeing Wilshire Drive bridge improvements.

Polk State College, Lakeland and Winter Haven, Florida. **Contract/Project Manager.** Responsible for the management of a continuing contract for civil engineering services including the preparation of complete civil engineering plans and bid documents for the construction of a soccer field facility. The project included surveying, civil engineering and construction management services for the soccer field that is intended to serve the Polk State College women's soccer team as a practice facility. The project involved working in conjunction with SWFWMD to obtain an ERP and Water Use Permit. Construction phase services included the preparation of contract documents, bidding assistance, and construction administration to ensure the project was constructed to meet the needs of the College in accordance with contract specifications.

U.S. 17 Sidewalk Project, City of Eagle Lake, Florida. **Project Manager/Design Engineer.** Responsible for the pedestrian safety improvements along U.S. 17 in Eagle Lake. The project included new sidewalks to promote safety and access. The design was completed in accordance with FDOT design standards including American with Disabilities Act (ADA) requirements. New curb cut ramps were installed along with improved pavement markings. The project also included FDOT permitting, preparation of bidding documents, and construction administration.

Zully Hemeyer

Local Liaison

Relevant projects

- City of Marathon Wastewater and Stormwater Departments
- Village of Islamorada Public Works and Utilities
- City of Coral Gables Public Works

Core skills

High level of proficiency in research, data analysis, technical writing, financial reporting, and budget development

Professional summary

With more than 25 years of experience, Ms. Zully Kathleen Hemeyer has managed various types of projects and contracts from concept to funding and program development through design and construction close-out. Ms. Hemeyer possesses a high level of proficiency in research, data analysis, technical writing, financial reporting, and budget development. As a resident of the Florida Keys for more than 17 years, her local knowledge, diligence, and care in handling customer service as relates to projects benefits the Amec Foster Wheeler team, as well as the clients she serves in the region. Ms. Hemeyer participates in numerous local community groups, including Mentor Monroe County Schools and Beautification Islamorada. She also is a volunteer firefighter with the Village of Islamorada Fire Department. She has received numerous awards and recognition for her work, including Environmental Project of the Year for the Village of Islamorada Indian Key Fill Stormwater Project.

Representative projects

Wastewater and Stormwater Departments, City of Marathon, Florida. Utility Manager. Administered construction completion for the City's wastewater system and system start-ups; supervised operations and maintenance for wastewater and stormwater utilities, including building department staff; and provided training and evaluation, customer service and budget preparation and reporting.

Public Works and Utilities, Village of Islamorada, Florida. Assistant Director of Public Works and Utilities. Responsible for maintenance and improvements for municipal rights-of-way, buildings, and grounds, including supervising staff, managing contracts, customer service and budget preparation and reporting. Obtained more than $3 million in grant funds for wastewater, stormwater, canal and park improvement project, a Community Development Block Grant and $2 million in grant funding for lands acquisition to create three municipal parks, including writing the maintenance and inspection programs for each. Project included the following:

- Emergency Management Preparation and Response including Debris Removal
- Anne's Beach Boardwalk Retrofit
- Plantation Hammock Preserve Kayak/Canoe Launch
- Old Highway Stormwater Paving and Drainage Project
- Lower Matecumbe Key Fire Station 19
- Green Turtle Hammock Park Improvement Project
- Lower Matecumbe Key Stormwater
- Indian Key Fill Stormwater and Bikepath Demonstration Project
- Annual Roadway Improvement and Maintenance Program
- Stormwater Management Master Plan

Public Works, City of Coral Gables, Florida. Administrative Supervisor. Supervised clerical staff for public works department performing customer service, payroll, grants preparation, downtown maintenance program, emergency management, employee training, appraisals and recognition program, and budget preparation and reporting.

Education

Bachelors in Public Administration, Florida International University

Masters in Business Administration, Construction Management, Everglades University, in-process

Professional qualifications/ registration(s)

Wastewater Plant Operator Class C, license No. 0022972

Certified Stormwater Operations Inspector

Certified Advanced Maintenance of Traffic

Experience

Amec Foster Wheeler: 2016

Industry: 1999

Memberships/affiliations

Construction Management Association of America

Florida Water & Pollution Control Operators Association, South Florida Chapter

American Public Works Association, South Florida Branch

American Public Works Association, Florida Chapter

American Water Works Association

American Society of Public Administration

Jeffrey D. PeQueen, PE, CFM, CPSWQ

Civil Engineering Services

Relevant projects

- All Aboard Florida
- Putnam County Industrial Park
- Lake Conine Treatment Wetland Modification

Core skills

Design of water resources projects and stormwater systems serving proposed and existing rail, highway, and commercial systems; state, local, and federal environmental impact mitigation and permitting; civil site development and drainage retrofits

Professional summary

Mr. Jeffrey PeQueen is a dedicated professional with 28 years of experience in civil engineering and project management. He has extensive experience with all aspects of storm sewer design, stormwater design and permitting, wetlands permitting, hydrologic and hydraulic modeling, flood studies, and FEMA map revisions. His continued expertise in stormwater issues has allowed him to forge strong long-term relationships not only with his clients but also with the regulatory agencies such as the Florida Department of Transportation (FDOT), Southwest Florida Water Management District (SWFWMD), St. Johns River Water Management District (SJRWMD), U.S. Army Corp of Engineers (USACE), Florida Department of Environmental Protection (FDEP), as well as various municipalities and counties. In recent years, Mr. PeQueen has also worked on numerous rail projects and has worked closely with various regulatory agencies to accommodate the special restrictions and dynamics of rail projects throughout the southeast.

Mr. PeQueen has developed an extensive history of designing stormwater systems and water resource projects and permitting them through all levels of local, state (SWFWMD, SJRWMD and FDEP), and federal (FEMA and USACE) regulatory agencies. He is a respected member of the local engineering community and maintains excellent relationships as a result of effective design and projects with many in the regulatory community. Mr. PeQueen has first-hand additional insight into the regulatory process due to his former employment with SWFWMD where he served as a senior professional engineer.

Representative projects

All Aboard Florida, Florida East Coast Railroad, Statewide, Florida. **Project Manager.** Provided stormwater analysis, design, and strategy for proposed high speed rail project from Miami to Orlando International Airport with a total projected budget of $1.5 billion. The scope of work included coordination and permitting through multiple regulatory agencies and crossing multiple jurisdictional boundaries. Directed team of engineers in multiple offices on procedures and design approaches in order to meet high profile, aggressive schedule required for the project.

Putnam County Industrial Park, Putnam County, Florida. **Project Manager.** Redesigned, permitted, and produced construction drawings of new phased Industrial Park master plan and $1.5 million road design. Met County's required short schedule for production of plans and acquisition of required permits.

Lake Conine Treatment Wetland Modification, Polk County Parks & National Resources, Lakeland, Florida. **Project Manager.** This is a jointly funded project between SWFWMD, City of Winter Haven, and Polk County to restore approximately 20 acres of low quality, dehydrated wetland along the southeast shore of Lake Conine in Winter Haven, Polk County. The project involves re-routing several existing storm sewers and excavating multiple treatment ponds and wetland cells to be replanted/restored to functional wetland status. The project also includes construction of embankments upon which an unimproved pedestrian trail will be provided for public enjoyment of the facility. The restored wetland

Education

Master of Science, Biomedical Engineering, University of South Florida, 2006

Master of Environmental Engineering, University of Florida, 1991

Bachelor of Science, Physics, Furman University, 1987

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 47664, Maryland No. 46145, Pennsylvania No. PE082834, Alabama No. 34975, Georgia No. 040811

Certified Floodplain Manager

Certified Professional in Storm Water Quality

Experience

Amec Foster Wheeler: 2011

Industry: 1989

Memberships/affiliations

Association of State Floodplain Managers

Software proficiency

Modeling: ICPR, HEC-RAS, PONDS, BRN, MODRET

Hydraflow Storm Sewers

Honors and awards

MENSA

Phi Beta Kappa

Continued.

will provide improved wildlife habitat and wetland function as well as best management treatment for a total contributing drainage basin area of approximately 357 acres of existing developed area that currently drains untreated into Lake Conine.

Woodland Area Drainage Improvements, Polk County Parks & Natural Resources, Lakeland, Florida. Project Manager. Provided comprehensive stormwater analysis, flood routing, modeling and design, as well as construction administration for retrofit of approximately 340-acre drainage area subject to persistent flooding in the Saddle Creek area. The primary causes of the flooding to be addressed were that the area was built in a historic slough; existing storm sewers and ditches were vastly undersized; and the area receives discharge from 150 acres through double 6-feet by 4-feet box culverts draining from FDOT right-of-way with inadequate receiving capacity. Designed improved storm sewer system (up to 72 inches equivalent pipes); multiple surge ponds; upgraded box culvert and improved ditches; as well as appropriate wetland mitigation to resolve the flooding concern.

Miscellaneous Drainage Retrofit Projects, Polk County Parks and Natural Resources, Polk County, Florida. Project Engineer. Provide on-call service to parks and natural resources division for drainage retrofit projects affecting properties other than existing roads. Projects typically include analysis and determination of causes of flooding, alternatives analysis for addressing the problem and development of design plans to construct improvements. Undersized conveyances and/or surge ponds are typically required to reduce the flooding but not cause problems downstream from the increased flows. This requires compromises between an optimal design and working with and tying into other existing, often undersized, facilities. Stormwater and environmental permitting differ for each specific project.

Tenoroc High School, Polk County School Board, Polk County, Florida. Project Engineer. Provided design engineer and construction services for new high school north of Lakeland. Tasks included analysis of off-site floodways and floodplains that entered the property; incorporation of floodplain compensation areas with wetland mitigation areas and stormwater systems; stormwater system design and permitting; and environmental permitting including addressing secondary wetland impacts to adjacent wetlands due to proposed stadium lighting and pedestrian traffic.

Polk State College, Polk County, Florida. Project Engineer. Provided design engineering and construction services for multiple expansion and improvement projects. Projects include due diligence for potential new campus locations, new athletic fields, building expansions, the Collegiate High School Building, recycling center design and permitting, and on-call services as drainage issues arise. Represented college in negotiations with City of Winter Haven to have city correct flooding problems on the college campus caused by city's recent construction of adjacent soccer complex. Coordinated with both city and college personnel to arrive at an amicable solution – including modification of the city's own pond, well pointing, and installation of new storm sewer and underdrains system throughout the warning track of an existing baseball field to eliminate the flooding.

Lake Hunter TMDL/NPDES MS4 Support Services, City of Lakeland, Florida. Project Engineer. On the project team that has developed the TMDL monitoring and assessment plan for Lake Hunter to assist the City in compliance efforts of its MS4 permit. Ongoing tasks include pollutant load development, prioritization of outfalls, development and implementation of the automated stormwater sampling program, and evaluation of the findings.

Lake Gwyn Water Restoration and Flood Protection, Polk County Parks and Natural Resources, Polk County, Florida. Project Engineer. Conducted flood study; developed ICPR hydrologic model incorporating a previously-developed watershed-wide model with site specific details; and designed proposed structural improvements to re-hydrate a historic lake that had been dewatered by the introduction of a large ditch in the 1940s. Project was jointly funded by multiple regulatory agencies to restore wetland and wildlife habitat as well as to improve regional water quality. Conflicting goals of maintaining flood protection for surrounding and contributing areas were also addressed through multiple flow paths and control structures to maintain desired minimum flows while also raising water levels to re-hydrate the historic wetland.

Wild Turkey Strand – Hydrologic Restoration, Lee County, Florida. Project Engineer. Performed engineering analysis with hydrologic and hydraulic modeling to support hydrologic restoration of large environmental land project that had previously been impacted through construction of a utility access road severing historic flow conveyances. Designed culverts and low flow conveyances to continue to allow utility trucks to pass through area while restoring conveyances to replicate historic sheet flow.

Timothy J. Kelly, PE, CPSWQ, CPESC

Civil Engineering Services

Relevant projects

- Stormwater Master Plan
- Lake Bonny Monitoring and Assessment
- Lake Carroll Outfall

Core skills

Stormwater system assessments, BMP effectiveness optimization, field data collection, developing and refining hydrologic and hydraulic models, NPDES programs, MS4 permit compliance, and watershed planning

Professional summary

Mr. Timothy Kelly is a certified Professional Engineer with more than 30 years of experience spanning the realm of civil engineering design representing city, municipal, private, county, and state clients. Mr. Kelly previously served as a stormwater regulatory reviewer where he permitted, inspected, and evaluated the performance of stormwater BMPs. His experience with capital improvement, redevelopment, and infill development projects includes all aspects of civil design including roadway and pedestrian transportation improvements, potable water distribution, wastewater collection and transmission, and utility conflict management. Many of the public works projects Mr. Kelly has managed have required interaction with the public including public meeting participation. Mr. Kelly has been responsible for the preparation of the exhibits and presenting the information to the public at many of these meetings. He has developed an effective way of turning technical jargon into terms the general public understand.

Throughout his career, he has assisted clients in implementing and achieving permit compliance in all aspects of their National Pollutant Discharge Elimination System (NPDES) programs. His expertise includes Best Management Practices (BMP) design, inspection, maintenance management, and retrofit. He has served his MS4 clients in all other aspects of their Cycle 1, Cycle 2, Cycle 3, and now Cycle 4 - 5 year MS4 permit including erosion and sediment control inspections/training, illicit discharge program development/training, MS4 inventory collection/database management, new projects permit compliance, pollution prevention/good housekeeping inspections, and annual report preparation.

He has participated in Basin Management Action Plan (BMAP) activities for clients including project documentation and pollutant load reduction credits calculations. Mr. Kelly's long term MS4 and ERP experience facilitates his ability to seamlessly ensure his clients' capital improvement projects or pollutant source control efforts result in positive and cost effective progress to meeting Total Maximum Daily Load (TMDL) allocations or MS4 Maximum Extent Practicable requirements. He has provided training in Erosion and Sediment Control, Illicit Discharge Detection and Elimination, general NPDES education, and TMDL seminars (for client's senior leadership).

Representative projects

Stormwater Master Plan, City of Dade City, Florida. Project Manager. Oversaw the update of the City's 1965 master plan that was outdated and of little utility. Update included level of service development, capital improvement project development for flood relief and water quality improvements, NPDES MS4 compliance, and recommendations for funding.

Lake Bonny Monitoring and Assessment, City of Lakeland, Florida. Project Manager. Oversaw the construction, monitoring, and maintenance of stormwater sampling stations utilizing ISCO 3700 series samplers, and Campbell scientific data loggers and software to collect and transmit data through telemetry. Telemetry provides system water levels, advance notification of potential storm events, and system operation status and was cost

Education

Bachelor of Science Engineering (Agricultural Engineering), University of Florida, 1984

Classes taken for M.S.C.E.

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 44721, Alabama No. 32848-E

Certified Professional in Stormwater Quality No. 0338

Certified Professional in Sediment and Erosion Control, CPESC No. 6267

Certifications and training

FDEP Certified Storm Water Management Inspector No. 104

Experience

Amec Foster Wheeler: 1990

Industry: 1986

Memberships/affiliations

Florida Stormwater Association

Florida Association of County Engineers and Roadway Superintendents

Southeast Stormwater Association

Professional development

Advanced Maintenance of Traffic, Florida

Confined Space Entry and Rescue

Proposed Florida Statewide Stormwater Rule Water Quality Calculation Methodology

Continued.

effective as it helped the project team to avoid costly "false starts" for non-qualifying storm events. Lake sediments were assessed for potential TP releases into the water column relative to the TP loads from stormwater. Developed recommendations relative to the stormwater contribution from the City's MS4 to the lake including conceptual retrofit projects for the highest ranking stormwater outfalls. The City will use the information to ensure it is compliant with its MS4 permit as well as the TMDL for Lake Bonny.

Lake Carroll Outfall, Hillsborough County, Florida. Project Manager. This capital improvement project is for the elimination of frequent flooding and improving the drainage level of service in the area around Lake Carroll. Project tasks included design and permitting of a regional drainage improvement project stretched over several miles. Improvements include converting a deeply incised ditch with a box culvert, replacing old CMP pipes (or relining others), addition of a storm sewer on an FDOT highway, and reconstruction of a sheetpile weir structure on Channel H. Water quality aspects for the project were incorporated through the expansion of Channel H for additional hydraulic residence time and nutrient uptake prior to discharge to impaired downstream waters. Permitting and coordination was required from multiple agencies and Amec Foster Wheeler assisted County staff in securing cooperative grant funding from the SWFWMD. Utility coordination was provided and adjustments were negotiated with the utility owners. Project is planned for construction in 2017.

Lake Thonotosassa Watershed, Hillsborough County, Plant City, Florida. Senior Engineer. Directed the design, installation and management of several stream monitoring stations for this pollutant tracking project. Project uses telemetry to allow staff to manage the sites remotely reducing operation costs for the client. Currently assisting with system volume and pollutant load estimations for priority nutrient pollutant load contributor identification.

Lower Green Swamp Preserve, Hillsborough County, Plant City, Florida. Project Manager. Managed the design of hydraulic modifications in the Lower Green Swamp Preserve to improve the hydroperiod of more than 200 acres. Project included survey, hydrologic/hydraulic design, close coordination with the regulatory agencies, management of subconsultants, plans preparation, permitting, and limited construction management assistance.

Piermaj Lane Drainage Improvements, Hillsborough County, Lutz, Florida. Project Manager. This capital improvement project is for the elimination of frequent flooding and improving the drainage level of service on several roadways in the Lutz area. Project tasks included design and permitting of a regional drainage improvement project. Improvements include the addition of roadway storm sewer and an attenuation BMP to relieve flooding of the roadways while at the same time not impacting the downstream systems. Design scope includes survey, subsurface utility engineering, modeling, final design, permitting, and limited construction management assistance. The project is currently in the design phase and is planned for construction in late 2017.

Tanglewood Lane Design and Permitting, Hillsborough County, Tampa, Florida. Project Manager. This capital improvement project is for the elimination of frequent flooding and improving the drainage level of service on several roadways in the Town and Country area. Project tasks included design and permitting of a regional drainage improvement project. Improvements include the addition of a large 60 inch storm sewer, drainage inlets, utilities relocations, and roadway improvements. Design scope includes survey, subsurface utility engineering, modeling, final design, permitting, and limited construction management assistance. Utility coordination was critical for the success of this project due to the highly developed condition of all of the rights-of-way that the storm sewer had to traverse. Amec Foster Wheeler also assisted with the preparation of a funding grant application that was successful for Hillsborough County. The project is currently planned for construction in early 2017.

Lake Manatee Dam Supply Inspection, Carollo Engineers, Inc., Bradenton, Florida. Senior Project Engineer. Performed quality assurance review of the Contractor's pollution prevention efforts.

MS4 Pollutant Load Modeling Analysis-Countywide, Florida Department of Transportation, Hillsborough County, Florida. Project Manager. Oversaw stream flow data collection and coordinated with HCEPC on water quality data. A user-friendly model was finalized that assisted the MS4 operators in the County to estimate pollutant loads discharged from various creeks segments within the County based on observed flows and collected water quality data. This helped the MS4 operators in lending credible support of observed trends within the waterbodies and associations of those load changes with the implementation of the MS4 operators' Stormwater Management Plans.

Melanie Fowler, PE

Civil Engineering Services

Relevant projects

- City of Belle Isle Continuing Engineering and Planning Services
- Pollutant Loading and Removal Analysis
- Domestic Wastewater Pump Station Design

Core skills

Permitting, compliance assessment, stormwater management, utility design, site development, project management, planning, design, and construction phase services

Professional summary

Ms. Melanie Fowler has more than 20 years of civil engineering experience, specializing in permitting, compliance assessment, stormwater management, utility design, and site development projects. She has provided project management, planning, design, and construction phase services for various projects. She has completed numerous water resources, solid waste, and site development projects for a variety of private, local, and state clients in Florida.

Representative projects

Continuing Engineering and Planning Services, City of Belle Isle, Florida. Project Manager/Engineer. Provided field inspection for drainage problems, stormwater utility tax assessment, development review for code compliance, and QA/QC reviews for internal design projects. Additionally, administered the City's compliance with the NPDES MS4 (co-permittee in a Phase I NPDES) program for four years. Also developed the City's annual report and provided inspection services, as needed, for potential violations. Services provided included engineering design; environmental management; zoning; permitting; mapping; GIS; bidding and construction administration; assistance with the stormwater and solid waste ad-valorem tax assessment coordination; assistance with the reporting requirements and necessary compliance measures as part of the City's MS4 NPDES co-permittee status with Orange County; and other on-call support services. Provided client management, design, bid phase, and construction phase services. Each of the following civil engineering projects for the City required careful design, being mindful that each roadway served existing traffic:

- Nela Drive/Homewood Boulevard Flooding Improvements
- Lagoon/Trimble Park Drainage Improvements
- Belle Vista Drive and Lake Drive Outfall Improvements
- Horizon Court Outfall Improvements
- Willoughby Lane Outfall Improvements
- Cullen Lake Shore Drive Road Repair and Outfall Improvements
- Wind Drift Road Outfall Improvements
- Phase O Roadway Improvements

Pollutant Loading and Removal Analysis, City of Casselberry, Florida. Design Engineer. Developed the calculations necessary to evaluate the pollutant removal potential for Type 2 Baffle Boxes and prepared the water quality loading report to be submitted to SJRWMD as part of the permit package. The boxes were installed in a residential area that does not have existing water quality treatment. Calculations were developed based on a countywide study of water quality pollutants.

Domestic Wastewater Pump Station Design, Lee County, Florida. Design Engineer. Prepared calculations, specifications, and design for the pumps, wet well, and valve vault of a small sanitary lift station. Coordinated with the electrical design to meet the power

amec foster wheeler

Education

Bachelor of Science, Environmental Engineering, University of Central Florida, 1995

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 56133

Certification and training

FDEP Stormwater, Erosion, and Sedimentation Control Inspector, Florida No. 22193

Experience

Amec Foster Wheeler: 2016

Industry: 1995

Memberships/affiliations

American Society of Civil Engineers

Professional development

Interconnected Pond Routing (ICPR) V4, October 2016

Continued.

requirements of the station. Also coordinated with the pump manufacturer to ensure an appropriate pump selection. The pace of this quick turn-around project required constant communication with the affected parties.

Various Stormwater Projects, Seminole County, Florida. Quality Control. Provided QC reviews for several stormwater retrofit projects for the County. These reviews included engineering design, modeling, and agency criteria compliance. The Grace Lake project presented several challenges to the ICPR modeling. Overall, the system was extremely complex and required the assimilation of several existing models, as well as incorporation of housing developments constructed after the previous modeling efforts. Solutions were provided for demonstrating realistic conditions during the storm event. Another project, Bear Gully Drive, initially seemed to be a very straightforward stormwater retrofit. However, with changing groundwater conditions, this project required a creative solution of routing stormwater through an existing pond. QA services were provided for the development of the routing strategy and stormwater modeling effort. Design development was also provided for a third project for Seminole County. Sun Drive was constantly flooding at Lake Mary Boulevard, a major thoroughfare. The modeling and design team worked to develop a strategy to increase the volume of runoff collected by the existing stormwater pond. Coordination with the engineer of record to develop a proposal to SJRWMD to provide water quality mitigation at an off-site facility was necessary.

North Winter Park Drive Bridge at Gee Creek Civil Engineering Services, Casselberry, Florida. Quality Control. Large amounts of rain caused erosion along the side slopes of the creek and undermined the bridge area causing roadway failure. Fast-track engineering services for this bridge redesign were provided. In order to comply with the grant funding, design drawings were finalized in less than one week. As the quality controller of the project, it was necessary to ensure that the design drawing could immediately be translated into construction in the field.

Electrical Substation Site Development, TECO, Temple Terrace, Florida. Project Engineer. Designed and permitted the site civil plans for a proposed electrical substation. This facility required the siting of several transmission lines with special care required for the pole height and location. Permitting through FDEP, City of Temple Terrace, and Hillsborough County was required. Successfully negotiated the use of a No-Notice Environmental Resource Permit (ERP), which saved the project money through substantially lower permit fees and was completed ahead of schedule due to shorter review times.

Richloam State Fish Hatchery, Florida Fish and Wildlife Conservation Commission, Withlacoochee, Florida. Construction Phase Engineer's Representative. Provided local field support for the out-of-state design office, made routine site visits to review construction progress and review pay applications, and successfully coordinated with the design office, resulting in a satisfied client and reduced cost (local travel) to the project.

Due Diligence for Site Development, Florida Fish and Wildlife Conservation Commission, Brevard County, Florida. Task Manager. Performed a site development review for the siting of a marine fish hatchery. Stormwater, wetlands, and floodplain considerations made this project especially challenging. A coordinated effort from local and federal agencies provided opportunities to explore unique solutions, such as land swaps, to achieve a pleasing outcome to all parties. Participated in the Regulatory Agency Visioning session and presented the site development challenges and proposed solutions. Performed an analysis of a previous engineer's design and was able to increase the buildable acreage for the client.

Stormwater Permitting Services, Volusia County, Florida. Task Manager. Provided permitting compliance services for the ERP and NPDES permitting for Volusia County's solid waste facilities. The facilities include a solid waste transfer station and the landfill. The landfill's NPDES Multi Sector General Permit required the preparation of a SWPPP. Also, a modification to an existing Transfer Station ERP was obtained. This modification required careful negotiation and purposeful communication with the review agency.

Engineering Services for Solid Waste Northwest Transfer Station, Orange County, Orlando, Florida. Task Manager. Served as a task manager for site selection of a new solid waste transfer station in Orange County, Florida. Assisted with the development of selection criteria including federal, state, and local regulations. Additionally, criteria were developed for other elements, including proximity to residential and school uses. Also helped to administer the public participation program to involve the stakeholders. When the client decided to shelve the design of the project, assisted with developing strategies for increasing throughput of the existing facilities and expected future tonnages of waste.

Tiffany Davies, PE

Civil Engineering Services

Relevant projects

- All Aboard Florida Passenger Rail
- City of Lakeland Master Services Agreement for Lakes and Watershed Management
- City of Gainesville Slope Stabilization and Restoration of Beville Creek at Cofrin Nature Park

Core skills

Wetland restoration, stormwater design, hydrologic and hydraulic modeling, site layout and designs, and storm water structures and facilities

Professional summary

Ms. Tiffany Davies has been responsible for the design, permitting, and construction phase services of numerous wetland restoration and civil site development projects entailing thousands of acres of wetland restoration, design of recreational facilities, modeling and design of stormwater management systems, design of roadways, layout and design of residential developments, and site development services for commercial sites. She has extensive permitting experience in all levels of government from federal to state and local permits. Ms. Davies is experienced with completing site layout and designs, including parking lot design, potable water and wastewater design, boat ramp and dock facilities, and stormwater structures and facilities, which have included wet detention lakes, dry retention ponds, and underground vault and underdrain systems.

Representative projects

All Aboard Florida Passenger Rail Environmental Permitting and Civil Engineering Services, Florida. Senior Engineer. All Aboard Florida (AAF), a subsidiary of Florida East Coast Industries, Inc. (FECI), is developing a privately owned, operated, and maintained passenger rail that will connect South Florida to Orlando. Amec Foster Wheeler was selected to provide environmental permitting and civil engineering services. The project is composed of two distinct segments; a 200-mile north-south segment of the existing Florida East Coast Railroad right-of-way (ROW), from Cocoa to Miami, and a 40-mile east-west segment along SR 528 that connects Orlando to the FECI mainline. Responsible for USCG permitting for the entire project, providing assistance for third rail drainage reports, permit preparation, and project management.

Master Services Agreement for Lakes and Watershed Management, City of Lakeland, Florida. Civil Engineer. Provided environmental and engineering services under a master services agreement, including support for lakes and watershed management for the Lakes and Stormwater Division, involving various lake, stream and watershed areas. Services included water quality statistical trends analysis, hydrologic and hydraulic modeling, nutrient load estimates, BMP nutrient reduction estimates, prioritization of BMPs, conceptual designs, land acquisition cost estimates, and construction cost estimates.

Slope Stabilization and Restoration of Beville Creek at Cofrin Nature Park, City of Gainesville, Florida7. Senior Civil Engineer. The project included stabilizing the creek bank of Beville Creek to a more historic condition, specifically in the vicinity of the historic on-site house at Cofrin Nature Park, and restoring a portion of Beville Creek to its historical condition. The foundation of the on-site house was in jeopardy due to the stability of various portions of Beville Creek, causing the foundation to be undermined. The restoration included bank stabilization, slope grading, natural creek bed elevation restoration, and debris and blockage removal. Services included survey, geotechnical engineering, preliminary basin review, basin assessment of the 113 ac basin, creek restoration design, slope stability design, hydraulic analysis using ICPR modeling to review proposed design versus existing conditions, and technical specification preparation. A basin assessment was performed for the 113-acre basin, creek restoration design was performed for the 700-foot portion of the

amec foster wheeler

Education

Bachelor of Science, Civil Engineering, University of Florida, 2003

Professional qualifications/ registration(s)

Professional Engineer, Civil, Florida No. 68370

Certification and training

Haested Methods, WaterCAD Computer Software Training

SWFWMD SHWL Determinations Training

Experience

Amec Foster Wheeler: 2009

Industry: 2003

Memberships/affiliations

American Society of Civil Engineers

Software Proficiency

AutoCAD Civil 3D 2010

ICPR

XPSWMM

HEC-HMS

HEC-RAS

Haested Methods WaterCAD
Haested Methods SewerCAD
Haested Methods StormCAD

Modret

Continued.

creek, and an existing conditions model and a proposed model were prepared to analyze the restoration and slope stabilization. Responsible for the overall concept and proposal submittal, hydraulic and hydrologic model setup, construction plan design, technical specifications, engineering cost estimate, construction phase services, and overall client interaction.

May River Watershed Action Plan, Town of Bluffton, South Carolin. Senior Civil Engineer. Services included the development and implementation strategy of an action plan for the May River watershed as a result of rising fecal coliform levels. A watershed action plan will provide the guidance necessary to identify and implement action that can improve and protect the water quality. The phased approach to the action plan includes making use of information currently available, to meet the budgetary and scheduling constraints; developing a revised action plan with prioritized now-term-projects, and short- and long-term projects/programs; stakeholder facilitation to support final list of recommended short- and long-term projects/programs; and the development and implementation of more complex projects/program elements. Senior Engineer responsible for conceptual project location and creation throughout the watershed to reduce the loading into the May River. Also assisted in creation of the May River Watershed Action Plan, designed to improve water quality throughout the watershed.

Riverside Filter Marsh, City of Naples, Florida. Senior Civil Engineer. Provided engineering services to prepare designs, permits, and provide construction services for a filter marsh to treat stormwater discharge from the Goodlett Road Pump Station.

South Lake Conine Watershed Restoration and Stormwater Treatment Services, City of Winter Haven, Florida. Senior Civil Engineer. Provided design and permitting services for the development and restoration of watershed facilities on a 34-acre, city-owned lakefront parcel. The lake was impaired with nutrient TMDL. Design included a regional stormwater pond and treatment train, finishing with polishing wetland before discharge into the lake. The design was intended to improve lake water quality via nutrient load reductions. Design effort included wetlands delineation/assessments, geotechnical investigations, boundary and topographic survey, watershed modeling, stormwater pollutant load modeling, stormwater treatment train design, and park design. Services also included bidding and construction services and post-construction water quality monitoring. Responsible for project design, hydrologic modeling, permit preparation, client interaction, and construction plan preparation.

Colt Creek State Park Hydrologic Restoration, Southwest Florida Water Management District, Lakeland, Florida. Senior Civil Engineer. The project consisted of the assessment, design, and environmental permitting in an effort to restore hydrologic and natural systems within the Colt Creek State Park area to a more historic condition. The District hired Amec Foster Wheeler to conduct these services, including a hydrologic model analysis to determine baseline hydrologic conditions, as well as both on-site and off-site effects of proposed restoration alternatives. The primary objective of the project was to recover the hydrologic functions of storage and conveyance and the ecological value of wildlife habitat diversity in wetland systems that lost or degraded due to disturbance by on-site ditching and farming practices. Responsible for the oversight and design of the wetland restoration. Developed hydrologic and hydraulic models for pre- and post-development, wrote the hydraulic report detailing wetland improvement, provided design oversight for wetland restoration construction plans, and was responsible for client interaction and response to comments.

Ichetucknee Trace Mining Reclamation and State Park Design, Florida Department of Environmental Protection, Lake City, Florida. Senior Civil Engineer. The project included the design and the permiting of the Ichetucknee Recreational Facility, which included a swim beach, fishing platforms, boat ramp, trails, restroom facilities, maintenance building, entrance roadway with gatehouse, and a dive platform with loading area. The facilities are located on land owned by the FDEP. The project area, which is approximately 660-acres, proposed for the facility is located within Columbia County, Florida, in Sections 16,17,20, and 21, Township 5 South, and Range 16 East. The project area extended from the existing access road off of Carpenter Road and continues through the existing mine quarry pits to the intersection of the existing paved Kirby Pit Road. Stormwater runoff from the proposed improvements were contained on-site. Due to all stormwater being contained on site, water quantity was not a design criterion, although water quality was part of the design for proposed new pavement surfaces. To account for the water quality treatment of the proposed impervious areas, earthen swales along with drop structures and reinforced concrete pipes were designed throughout the proposed areas to direct the runoff to the proposed stormwater ponds, which will utilize percolation to treat the designed 1-inch of runoff. For the existing paved roads the stormwater runoff will sheetflow through existing vegetation in a drainage pattern similar to the existing site conditions and will discharge into the existing on-site lakes, as they do in the existing conditions. Responsible for project design, permitting, technical specifications, engineering cost estimate, site visits, and client interactions.

David Butcher, PE, LEED AP

Utility Engineering Services

Relevant projects

- City of Clermont Engineering Services
- Polk County Utilities Continuing Services Contract
- CRUSA Water Main Distribution Improvement

Core skills

Project management and civil engineering including water resources, general civil, roadway design, potable water and sanitary sewer design, lift station designs, bridge scour analysis, bridge hydraulic reports, and permitting

Professional summary

Mr. David Butcher is a Senior Civil Project Manager with more than 20 years of experience. He serves as a lead project engineer on many public and private projects dealing with all aspects of civil engineering including: water resources, general civil, roadway design, potable water and sanitary sewer design, lift station designs, bridge scour analysis, bridge hydraulic reports, and permitting with multiple agencies throughout Florida. In addition, Mr. Butcher excels at assisting our clients with public meetings and project education to both permitting agencies and constituents. His award-winning design work has been recognized for its excellence and contribution to community rehabilitation.

As a LEED AP Civil Engineer, Mr. Butcher has been responsible for managing engineering and design staff for nearly 10 years on a variety of civil and water resources projects for both public and private clients Throughout his career, he has been responsible for managing engineering and design staff on a variety of civil engineering projects for both public and private clients.

Representative projects

Engineering Services, City of Clermont, Florida. **Senior Project Manager.** Provided ecological, environmental, geotechnical, survey, utility, roadway, and stormwater engineering services for various capital improvement projects located in the City of Clermont. Projects are in various stages of completion from design, permitting, and construction.

Continuing Services Contract, Polk County Utilities Division, Polk County, Florida. **Project Engineer/Quality Assurance.** Involved with utility system design and rehabilitation projects throughout Polk County. Completed several water main projects including the Polk County Utilities and Haines City Water Main Interconnect, Lily Lake Water and Wastewater Transmission System Design, Waverly Water Transmission System Design, Frostproof Water Main Extension, U.S. 27 Water System Improvements, S.R. 540 Water Main Extension, Moore Road Water Main Extension, and Pine Glen Subdivision Water Service Retrofit.

CRUSA Water Main Distribution Improvement, Polk County Utility Division, Florida. **Quality Assurance.** The project consisted of providing civil engineering design, geotechnical engineering, and land surveying services to design a new 12-inch water main to loop the existing system in the Central Regional Utility Service Area (CRUSA). The 8,600-foot water main connects an existing 12-inch water main at Sheffield Road with the existing 12-inch water main at Thornhill Road.

Citrus County Master Engineering Services, Citrus County, Florida. **Project Manager.** Amec Foster Wheeler has provided comprehensive, as-needed engineering support to the County for more than 10 years. Services to date have included wetland delineation; permitting and agency coordination with SWFWMD and FDOT; pavement design; utilities coordination; construction materials testing; geotechnical investigations; bid documents and technical specifications; and construction management assistance.

Education

Bachelor of Science, Civil Engineering, University of South Florida, 1995

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 55431 and Idaho No. 17134

LEED Accredited Professional

Experience

Rejoined Amec Foster Wheeler: 2008

Amec Foster Wheeler: 1999 to 2004

Industry: 1994

Memberships/affiliations

American Society of Civil Engineers

Chi Epsilon National Civil Engineering Honor Society

Florida Redevelopment Agency

American Water Works Association

American Public Works Association

U.S. Green Building Council

Honors and awards

Community Award for Excellence – Hillsborough County Planning

Continued.

Eloise Neighborhood Revitalization, Polk County, Florida. **Project Manager.** Designed the reconstruction of nine city streets. The design included changing the typical roadway section from a rural ditch section to an urban curb and gutter typical section. The profile for each street was modified to provide the optimal stormwater management system, while maintaining driveway connections. An underdrain was added to provide separation between the roadway base and the water table. Potable water was relocated, and sanitary sewer was added to provide residents access to remove existing septic systems. Project elements included roadway plans, drainage plans, utility design, permitting, bid documents, and construction administrative assistance. This was a CDBG-funded project.

Cranberry Lane Drainage Improvements/Stormwater Pump Station, Hillsborough County, Florida. **Project Engineer.** The project includes the addition of an outfall connection from Cranberry Lane to the Parsons Avenue stormwater management system to relieve historical flooding along Cranberry Lane. In addition to the new stormwater management improvements at Cranberry Lane, an existing wetland (Crabtree Pond) that receives the additional flows from the project was expanded to provide zero impacts to downstream parcels. The project also included the design of a new stormwater pump station to assist in the recovery of Lake Meade (downstream of the wetland) by pumping stormwater to the north via a forcemain to a more direct connection to the Tampa Bypass Canal.

Tanglewood Lane Drainage Improvements, Hillsborough County, Florida. **Project Engineer.** The project includes the design and permitting of a new stormwater trunk line along Tanglewood Lane, Civic Drive, and Memorial Highway in Tampa, Florida. The design included a new stormwater management system, the addition of a new gravity sanitary sewer collection system along Tanglewood Drive, and the relocation of a potable water main along the alignment of the new stormwater trunk line. Amec Foster Wheeler provided PD&E, design, survey, subsurface utility engineering (SUE), geotechnical investigation, utility relocation coordination, regulatory permitting, bid assistance, and construction engineering and administration assistance.

Neighborhood Revitalization, City of St. Cloud, Florida. **Project Manager.** Developed a multi-phase stormwater master plan with improvement projects designed to eliminate the downtown residential area's drainage problems. Designed, permitted, and completed construction for phase I improvements and completed the design for phase II which included the reconstruction of approximately 10 miles of city streets. The design included geotechnical evaluation of the existing base, removal of up to 5-feet deep muck sections, changing the roadway profile to provide the optimal stormwater management system, and providing an urban typical section with 11-feet travel lanes and curb and gutter. Water and sanitary sewer utilities were relocated to provide room for the new stormwater management system. Project elements included topographic survey, right-of-way control mapping, roadway plans, drainage plans, signing and pavement marking plans, utility design, permitting, bidding, and construction administrative assistance. This was a CDBG-funded project.

Haines City Industrial Park Development, City of Haines City, Florida. **Project Manager.** Amec Foster Wheeler completed a site plan that incorporated site grading and drainage systems, driveway and access roads, water distribution and sewer collection systems, on-site lift station design, off-site force main design (utility records and as-builts), landscape and irrigation design, and lighting. Amec Foster Wheeler also prepared a preliminary plat, an impact statement for Haines City's review, and plans for a CSX railway spur and pipeline crossing. Also responsible for several municipal projects for City of Haines City including water mains, streetscapes, and construction inspection services. This was a CDBG-funded project.

Enterprise Boulevard Design, DeSoto County, Florida. **Project Manager.** Designed approximately 10,000 linear feet of roadway for the Wal-Mart Distribution Center and added a southbound left turn lane to SR 17 at the intersection of the new county road. Prepared construction plans for the improvements. Project elements included topographic survey, right-of-way control mapping, traffic study, roadway plans, drainage plans, signing and pavement marking plans, signalization plans, utility accommodation, drainage design, permitting, bidding phase services, and construction administration assistance.

Space Fence Design Build, Lockheed Martin, Kwajalein Atoll, Marshall Islands. **Civil Design Engineer of Record.** This project involved the development of a 6 acre site at the United States Army Kwajalein Atoll (USAKA) installation in the Marshall Islands. The site development was part of the $915 million project to replace the 1960s Air Force Space Surveillance System to improve the way objects are tracked in orbit and increase the ability to predict and prevent space-based collisions. Project responsibilities included general civil, utilities, and drainage design. The project was designed per Unified Facilities Criteria (UFC) and USAKA Design Criteria.

Mark J. Frederick, PE, CFM

Utility Engineering Services

Relevant projects

- City of Groveland Eagle Ridge Reclaimed Water System Phase II
- Polk County SR 33 Force Main Relocation
- City of Lake Wales C-Street Area Sewer Replacement

Core skills

Site development, stormwater management system design, roadways design, utility system design, streetscape and parks design, watershed model development, and surface water modeling

Professional summary

Mr. Mark Frederick works in Amec Foster Wheeler Central Florida's Civil Engineering group on a variety of civil site development, stormwater, roadway, utility system design, and streetscape projects for federal, state, county, municipal, and private clients. Mr. Frederick is familiar with all aspects of the land development process and is able to effectively work with all members of the development team including clients, architects, agency reviewers, and construction contractors. He has been involved in site development projects at all stages of completion, from due diligence reviews to construction administration. Mr. Frederick has designed and permitted numerous stormwater management and water utility systems to serve redeveloped and new construction sites. His experience allows him to quickly understand and adapt to the specific requirements of local review agencies throughout Florida.

Mr. Frederick's experience includes more than 10 years of diverse engineering experience in stormwater management system design and watershed model development. He is able to incorporate GIS software to streamline development of model parameters for the ICPR computer software for surface water modeling, and is familiar with MODRET and PONDS software for groundwater modeling. Mr. Frederick also has experience with hydrologic and pollutant load modeling, design of retrofits for older stormwater management and collection systems, maintenance and field collection of GIS data, and preparation of water management district environmental resource permit applications. He has successfully permitted projects involving wetlands, surface water impacts, and discharges to TMDL-listed waterbodies.

Representative projects

Eagle Ridge Reclaimed Water System Phase II, City of Groveland, Florida. Engineer of Record. This project was partially grant funded by SJRWMD and involved the 1.6± mile extension of a 12-inch reclaimed water main within the SR 50 right of way. The project was designed in accordance with FDEP, FDOT, and City of Groveland criteria. The project involved coordination with the City of Clermont regarding a potential future interconnection. Responsibilities included engineering design, permitting, utility coordination, and construction phase services.

SR 33 Force Main Relocation, Polk County Natural Resources Division, Lakeland, Florida. Project Engineer. Utility relocation project to accommodate the FDOT and City of Lakeland Joint Participation Agreement project involving the widening of SR 33 from a two-lane highway to a four-lane divided highway. The project involved design and coordination for the relocation of approximately 4,000 linear feet of 18-inch stormwater force main. Responsibilities included agency permitting, specifications preparation, FDOT coordination, utility coordination, evaluation of utility conflicts, evaluation of field revisions, and as-built survey review.

C-Street Area Sewer Replacement, City of Lake Wales, Florida. Project Engineer. This project involved preliminary engineering involving the analysis of approximately five miles

Education

Master of Science, Civil Engineering, University of Florida, 2014

Bachelor of Science, Civil Engineering, Purdue University, 2005

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 70671

Certified Floodplain Manager No. US-07-03155

Certifications and training

NASSCO Pipeline Assessment Certification

NASSCO Manhole Assessment Certification

NASSCO Lateral Assessment Certification

FDEP Qualified Stormwater Management Inspector

FDOT Advanced Maintenance of Traffic

FDOT Specification Package Preparation

CSX Contractor Safety and Roadway Worker Protection

Florida East Coast Railway Contractor

Envision Sustainability Professional

Experience

Amec Foster Wheeler: 2010

Industry: 2000

Memberships/affiliations

Florida Engineering Society, Ridge Chapter State Director

National Society of Professional Engineers

American Society of Civil Engineers

Continued.

of sanitary sewer within a residential area of Lake Wales. Designed per FDEP and City of Lake Wales criteria. Responsibilities included completing a preliminary engineering report to identify existing system deficiencies and proposed corrective alternatives, coordinated with the client regarding the preferred route and other design aspects, and completed detailed analysis of the selected design alternative.

La Estancia Fire Main Connection, WNC, Inc., Hillsborough County, Florida. Project Engineer. Project involved the restoration of fire protection to an existing apartment complex by replacing a deficient fire supply pump with a connection to a nearby water main. The project was designed in accordance with Florida Department of Environmental Protection and Hillsborough County criteria. Responsibilities included an analysis of the existing and proposed fire distribution systems, preparation of a utility design report, utility coordination, construction plans preparation, coordination of subsurface utility engineering services, and construction administration. Following construction, Amec Foster Wheeler coordinated with the contractor for a flow test of the fire line system to verify that sufficient fire flows were available. The project resulted in a functional and reliable fire protection system for the apartment complex.

Sanders Road Water Main Improvements, City of Haines City, Florida. Project Engineer. Project involved the extension of approximately 4 miles of public water main facilities within the Haines City Water Utility Service area. Designed in accordance with FDEP, City of Haines City, and Polk County criteria. Responsibilities included an analysis of conceptual water main route alternatives, design of proposed improvements, construction plan preparation, and permit coordination.

Bay Pines Medical Center Water Distribution System Study, United States Department of Veterans Affairs, St. Petersburg, Florida. Project Engineer. Project involved the analysis of the existing water distribution system throughout the 170+-acre medical campus with approximately 35,000 employees in addition to hospital patients and permanent residents. Responsibilities included hydraulic analysis involving the evaluation of the existing system's sufficiency for water distribution and fire protection needs under several design scenarios.

U.S. 27 from Barry Road to U.S. 192, Central Florida Gas, Polk County, Florida. Project Engineer. This project involved the coordination of gas main relocations within the 3.2± mile project area to accommodate proposed FDOT improvements. Amec Foster Wheeler prepared gas main relocation plans, the FDOT Utility Work Schedule, and the FDOT Utility Permit Application in accordance with the FDOT Utility Accommodations Manual and Central Florida Gas specifications.

Main Street Power Line Relocation, City of Auburndale, Florida. Project Engineer. This project involved the directional bore installation of electrical conduit to accommodate the relocation of overhead power lines to a below ground crossing of Main Street. Responsibilities included preparation of construction details, coordination with the electric utility service provider, Tampa Electric Company (TECO), and FDOT Utility Permit coordination.

SR 17 Force Main Relocation, City of Lake Wales, Florida. Engineer of Record. This project involved the preparation of construction plans for the relocation of sanitary force main to accommodate proposed roadway improvements within the SR 17 Right of Way. The force main relocation was designed in accordance with FDEP, FDOT, and City of Lake Wales criteria. Responsibilities included civil engineering design, permitting, and construction phase services.

FKRAD State Park Sanitary Sewer Connections, Florida Department of Environmental Protection, Monroe County, Florida. Engineer of Record. This project involved the abandonment of on-site sewage treatment and disposal facilities at three state parks located in the Florida Keys. Each of the three sites (John Pennekamp Coral Reef State Park, Lignumvitae Key Botanical State Park, and Windley Key Geological State Park) involved the design of a low pressure grinder pump station to connect to the Key Largo Wastewater Treatment District (KLWTD). Responsibilities included pump station design in accordance with FDEP and KLWTD regulations, permitting, and construction phase services.

Sunshine Wastewater Treatment Facility Permit Renewal, City of Groveland, Groveland, Florida. Project Manager. This project involved the renewal of the Florida Department of Environmental Protection permit for the Sunshine Skyway Wastewater Treatment Facility (WWTF). The WWTF was constructed in 2012 and has a permitted capacity of 0.15 MGD. Responsibilities included project management.

Loren Furland, PE, BCEE

Utility Engineering Services

Relevant projects

- Bay Pines VA Healthcare System Water Distribution System Analysis
- Palisades Water Plant Well and Pumping System
- Biosolids Handling Improvements

Core skills

Water/wastewater reclaimed water treatment; transmission, distribution, and collection; business development; technical approaches; project planning; and project team management

Professional summary

Mr. Loren Furland has extensive operations, program/project management, design, planning, technical direction, and construction management experience spanning more than 40 years of professional practice. In that time, he has had direct responsibility for business development, technical approaches, project planning, project team management, and construction management of major water/wastewater reclaimed water treatment, collection, and transmission facilities. His experience includes numerous design projects for water authorities, industrial companies, and several municipalities involving the design of raw water and booster pump stations, water supply and distribution pipelines, and drinking water treatment and storage facilities, and wastewater and water reclamation treatment facilities.

Mr. Furland has been accountable for compliance with quality assurance and quality control procedures, and for assuring quality of all related work and deliverables produced for eastern sector clients. He has served as a client service manager for Pasco County, the Cities of St. Petersburg, Clearwater, and Hialeah, as well as Tampa Bay Water. Mr. Furland's experience also includes serving as a technical design leader for water supply and distribution, sludge handling, and industrial wastewater projects within the United States and internationally.

Representative projects

Bay Pines VA Healthcare System Water Distribution System Analysis, Gator Engineering and Aquifer Restoration, St. Petersburg, Florida. Senior Engineer. Responsible for the capacity and quality analysis of the existing water distribution system and recommending improvements to infrastructure and operating procedures for safe drinking water regulated quality compliance for more than 3,000 drinking water system users, throughout the more than 170-acre Bay Pines Veterans Administration Healthcare System Campus.

Palisades Water Plant Well and Pump, City of Groveland, Mineola, Florida. Senior Engineer. Designed replacement of an existing failed well, including new vertical turbine pump, flow meter, discharge valves, and piping connection to existing system. Worked with City staff to locate the new well on site and to provide a larger diameter well to accommodate a lower speed pump. Provided permitting assistance, and engineering services during construction and construction inspection.

Biosolids Handling Improvements, Blue Plains Wastewater Treatment Plant, DC Water/ Brown and Caldwell, District of Columbia. Technical Advisor. Member of project review team to recommend improvements in preparation of design-build contract documents for main process train, including CAMBI and anaerobic digestion at a 370-mgd-capacity wastewater treatment plant. Also served as the technical advisor for the preparation of a preliminary engineering report for final sludge dewatering associated with the same project.

Upgrades, Expansions, and Improvements to Snapfinger Creek and Pole Bridge Creek Water Reclamation Plants, Dekalb County, Georgia. Technical Advisor/Quality Control Reviewer. Included the design of screening, raw wastewater pumping, grit removal, primary

Education

Master of Science, Environmental Engineering, University of Iowa, 1976

Bachelor of Science, Civil Engineering, Iowa State University, 1968

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 39121, Texas No. 96922

Certifications and training

Board Certified Environmental Engineer, American Academy of Environmental Engineers

Experience

Amec Foster Wheeler: 2012

Industry: 1968

Memberships/affiliations

Water Environment Federation

Florida Water Environment Association

American Water Works Association Florida Section

National Society of Professional Engineers

Honors and awards

Listed in Marquis "Who's Who in America," "Who's Who in Science and Engineering," and "Who's Who in Business and Finance," recent edition

Continued.

clarifier, membrane bioreactors (MBR), and solids processing upgrades and improvements to Dekalb County's 40-mgd Snapfinger Creek and 25-mgd Pole Bridge Creek water reclamation plants.

Reverse Osmosis Water Treatment Plant, City of Hialeah, Florida. Project Director. Directed the project planning and preparation of procurement documents, including 30 to 40% complete design, for the design-build-operate project delivery of a 17.5-mgd-capacity brackish groundwater reverse osmosis (RO) plant. Initial constructed capacity is 10 mgd. Also directed the preparation of the final design documents for 14 brackish water production wells and two deep disposal wells. Project was financed by South Florida Water Management District, the Miami-Dade Water and Sewer Department, and the City of Hialeah; and is a public private partnership between these government entities and an international construction organization.

North District Wastewater Treatment Plant Water Reclamation Facility Planning and Design, Miami Dade Water and Sewer Department, North Miami Beach, Florida. Technical Director. Directed the design of a 7-mgd-capacity reclaimed water production facility at a 112-mgd wastewater treatment plant (WWTP).

EAA Reservoir A-1 Construction, South Florida Water Management District, Palm Beach County, Florida. Technical Advisor. Served as the advisor for the preparation of guaranteed maximum price construction packages, design reviews, and procurement assistance for the EAA Reservoir construction. This was a construction management at-risk project in partnership with Barnard Construction. Project was terminated for client's convenience at about 50% completion

Fred Hervey Water Reclamation Plant Improvements, El Paso Water Utilities, El Paso, Texas. Project Manager. Led the value engineering team for $25-million improvements project for a 12-mgd advanced water reclamation plant.

Kay Bailey Hutchison Brackish Water Desalination Plant, El Paso Water Utilities, El Paso, Texas. Project Manager. Led two value engineering teams for a 25-mgd-capacity RO brackish water desalination plant and reject water pumping, transmission, and deep well disposal facilities.

West Pasco Improvements, Tampa Bay Water, New Port Richey, Florida. Project Director. Directed the design for a 30-mgd capacity booster pumping station and 40,000 feet of 36-and 42-inch pipeline.

Water Supply Master Plan, City of Clearwater, Florida. Project Director. The scope of work included master planning for the City's potable water supply and delivery system.

Biosolids Anaerobic Digester Rehabilitation Project, City of Clearwater, Florida. Project Director. Project included the rehabilitation of the digestion process at two wastewater treatment plants with permitted capacities of 10-mgd and 12-mgd. Services included planning, design, and engineering/inspection during construction.

Master Plan Phase I, Albert Whitted Water Reclamation Facilities, City of St. Petersburg, Florida. Project Director. Provided a feasibility analysis of elimination of the 12-mgd Albert Whitted Water Reclamation Plant with transfer of raw wastewater to three other existing City water reclamation plants.

Seawater Desalination, Tampa Bay Water, Hillsborough County, Florida. Design-Build Proposal Coordinator. Provided technical leadership in preparing bids for the design-build-own-operate-transfer RO seawater desalination facility with a 25-mgd capacity, including pretreatment testing, facilities engineering and design, and cost estimating.

John E. Preston Water Treatment Plant, New Chemical Storage and Feed Facilities, Miami-Dade Water and Sewer Department, Miami, Florida. Technical Director. Provided design and engineering services during construction of the new chemical feed systems for enhanced lime softening, including ferric sulfate, caustic, polymer, carbon dioxide, and lime slaking and feed systems for 165-mgd lime softening water treatment plant (WTP).

Solids Contact Clarifiers Replacement Project at Cosme Water Treatment Plant, City of St. Petersburg, Tampa, Florida. Project Director. Project included replacement of 53-mgd clarifier capacity, including new lime sludge pumping and polymer feed facilities. Replaced four old solids contact basins with two new more efficient basins.

Rebecca Vanderbeck, PE

Utility Engineering Services

Relevant projects
- Utilities Planning
- Plans Review
- Water and Wastewater Treatment Facilities Permitting

Core skills
Utilities planning, development review, wastewater treatment plant design, wastewater collection and conveyance, stormwater control, site civil design, and site investigation and soil characterization

Education
Bachelor of Science, Environmental Engineering, University of Central Florida, 2001

Professional qualifications/ registration(s)
Professional Engineer Florida No. 64804, Wisconsin No. 39521-006

Certification and training
40-hour HAZWOPER

Institute for Sustainable Infrastructure Envision Sustainability Professional

Experience
Amec Foster Wheeler: 2016

Industry: 2001

Professional development
Stormwater Professional Development Course (Federation of Environmental Technologists, Wisconsin)

Sustainability Professional Development Course (Federation of Environmental Technologists, Wisconsin)

Professional summary
Ms. Rebecca Vanderbeck has more than 15 years of experience in environmental engineering, including site investigations and soil characterization, environmental compliance, water and wastewater treatment systems design and permitting, management of utilities and infrastructure improvement projects, storm water control and site civil design, pipeline routing, corporate sustainability reporting, and other aspects of environmental engineering design. In addition to her experience in consulting, Ms. Vanderbeck has served as Environmental Programs Engineer for Midwest Airlines and Assistant City Engineer for the City of Clermont.

Representative projects

Utilities Planning, City of Clermont, Florida. Assistant City Engineer. Member of the team responsible for long range future planning of the City's utilities and infrastructure; work included preparing water demand and wastewater flow projections, analysis of capacity of utilities, and monthly concurrency management reports, and participating in the review of the capital improvements budget for the utility.

Plans Review, Clermont, Florida. Assistant City Engineer. Responsible for the review of projects constructed within the City's utility service area for conformance with City codes and ordinances, land development regulations, and utilities design standards. Also responsible for updating City codes, ordinances, and/or specifications as needed based on changes to rule requirements, availability of new products, or the need for additional clarification.

Water and Wastewater Treatment Facilities Permitting, Clermont, Florida. Assistant City Engineer. Responsible for maintaining the City's permits with the Florida Department of Environmental Protection (FDEP) for water and wastewater treatment facilities. Related tasks included preparing the necessary reports and applications associated with permit renewals, capacity analysis reports, and capacity rerating requests. Also responsible for obtaining necessary permits for construction of the City's utilities and infrastructure improvements projects.

Wastewater Treatment Plant Capacity Analysis Reports, Cities of Winter Garden, Lake Wales, and Clermont, Florida. Project Engineer. Prepared Capacity Analysis Reports, as required by FDEP, with the information necessary for timely planning, design, permitting, and construction of wastewater facilities. Responsible for population, flow, and loading projections, as well as recommendations for scheduling facility expansions.

Operation and Maintenance Performance Reports, Cities of Winter Garden, Lake Wales, and Clermont, Florida. Project Engineer. Prepared operation and maintenance (O&M) reports, as required by FDEP, to establish reasonable assurance that the plant would be able to meet the permit requirements for the length of the issuance of the permit. Responsible for field evaluations and analysis of the physical condition of the plant, overall plant treatment efficiency, and the O&M program used by the operating staff.

Continued.

Wet Weather Treatment System, City of Rock Island, Illinois. Project Engineer. Project included design of major upgrades to the City's wet weather treatment system and construction support services. Responsible for the site civil design portion of the treatment plant improvements, including evaluation of LEED credits for sustainable site design, stormwater management, site grading, demolition, paving and landscaping, and rerouting of utilities throughout the plant site.

Phase 1 Long-Term Control Plan Wet Weather Improvements, City of Auburn, Indiana. Project Engineer. Project involved improvements to the City's wastewater treatment facility to address deficiencies and increase wet weather capacity. Responsible for the site civil design, including stormwater management, site grading, and routing of force mains and gravity sewer lines through the plant site. Also provided engineering services during construction, including RFI responses and submittal review, related to design responsibilities.

Iron Bridge Water Reclamation Facility Sludge Handling Improvements, City of Orlando, Florida. Project Engineer. Participated in wastewater treatment facilities design, including preliminary design report preparation; unit process mass loading evaluations; layout and selection of equipment; layout and routing of process and yard piping; permitting; and preparation of technical drawings and specifications for modifications to the sludge handling facilities, including new belt filter presses, conveyors, polymer system, lime stabilization unit, and other associated equipment.

Wastewater Treatment Facility Expansion, City of Winter Garden, Florida. Project Engineer. Participated in the design for expansion of plant capacity and upgrade of the treatment process to a 5-stage Bardenpho process, including plant hydraulic analysis, layout and selection of equipment, layout and routing of process and yard piping, permitting and preparation of technical drawings and specifications for treatment basin modifications, new aeration equipment, new pumps and mixers, clarifier mechanism upgrades, new pre-treatment structure with a mechanical screen and grit unit, new traveling bridge filter, and expansion of the effluent pump station.

Wastewater Treatment Plant Sludge Dewatering Improvements, City of Lake Wales, Florida. Project Engineer. Participated in preliminary design report preparation; layout and selection of equipment; layout and routing of process and yard piping; permitting; and preparation of technical drawings and specifications for modifications to the existing pre-treatment structure including a new mechanical screen and grinder, and a new sludge dewatering facility including a screw press, conveyors, polymer system, and other associated piping and equipment.

River Drive Sanitary Sewer Overflow Elimination Program, City of Moline, Illinois. Project Engineer. Responsible for data analysis and system evaluation. Participated in model development, identification of potential problem areas, evaluation of control solutions, and development of river inflow action plan.

North Side Interceptor Expansion Project, City of Rock Island, Illinois. Project Engineer. Designed the traffic control plan for a new 48-inch combined sewer located in and along a state highway. Participated in the preparation of specifications and the erosion control plan for the project.

Citrus Tower Boulevard Water Main Extension Phase II and III, City of Clermont, Florida. Assistant City Engineer. Responsible for the preparation of plans and specifications for approximately 2,700 feet of new 12-inch water main and the relocation of existing utilities to avoid conflicts with roadway realignment.

West Side Service Area Flow Rerouting Alternatives, City of Clermont, Florida. Project Engineer. Participated in the evaluation of an alternative for rerouting flow from the west side service area across town to the east side wastewater treatment facility. Responsible for the evaluation and write-up of the flow rerouting (approximately 6 miles of new sewer force main) and lift station improvements associated with this alternative.

Sewer Manhole and Lift Station Renovation, City of Clermont, Florida. Assistant City Engineer. Prepared specifications for fiberglass or High Density Polyethylene (HDPE) lining of existing sewer manholes and lift stations.

Lift Station Improvements, City of Clermont, Florida. Assistant City Engineer. Prepared plans and specifications for modifications and improvements to five lift stations, including one lift station to be converted from an existing can station to a wet well pump station design with new pumps and a new generator. Installed new generators at two existing lift stations. Swapped existing generators between two existing lift stations.

Mikhal Moberg, PE, GISP

Utility Engineering Services

Relevant projects

- Palisades Water Plant Well and Pump
- Winter Haven Wastewater Treatment Plant No. 3 Discharge Outfall Preliminary Design and Cost Estimate

Core skills

Watershed management plans, dam breach analysis, pollutant loading calculations, GIS, ERP review, flood map generation, nutrient/pollutant load calculation, and hydraulic and integrated modeling

Professional summary

Mr. Mikhal Moberg joined Amec Foster Wheeler in 2008 as a Staff Engineer. His attention to detail and commitment to excellence supports Amec Foster Wheeler's Water Resources team in maintaining high standards and work quality. Mr. Moberg has provided assistance in completing FDEP sponsored TMDL Water Quality Restoration Grant Applications as well as SWFWMD sponsored Cooperative Funding Applications. Mr. Moberg has worked with watershed management plans, dam breach analysis, pollutant loading calculations, and GIS. Mr. Moberg's project experience includes sub basin delineation, Environmental Resource Permit (ERP) review, flood map generation, nutrient/pollutant load calculation, hydraulic modeling, integrated modeling, and GIS. Notably, Mr. Moberg was recognized by Amec Foster Wheeler as an exceptional client service award winner in 2011. Mr. Moberg's software proficiency includes, ArcGIS, ICPR, MIKE 11, FLO-2D, and ICPR PercPack.

Representative projects

Palisades Water Plant Well and Pump, City of Groveland, Florida. Staff Engineer. Aided in preliminary design and cost estimate for well and pumping system. Project was designed on an emergency basis to replace the existing failed well and pump.

Winter Haven Wastewater Treatment Plant No. 3 Discharge Outfall Preliminary Design and Cost Estimate, City of Winter Haven, Florida. Project Engineer. Responsible for creating preliminary design and cost estimate for discharge outfall for wastewater treatment plant No. 3 in Winter Haven, Florida. Preliminary cost estimates were provided for various pipe materials and pipe schematics.

Florida Keys Phase I Canal Management Master Plan, Florida Department of Environmental Protection, Florida. Staff Engineer. Responsible for creating conceptual remedial nutrient reduction designs for selected canals in the Florida Keys. In addition, cost estimates for conceptual remedial designs were created.

Polk County Impervious Stormwater Project, Polk County, Florida. Staff Engineer. Responsible for working with GIS lead to organize, identify, and digitize impervious areas within Polk County to support the creation of a county wide stormwater assessment.

Deckles Millpond and Five Mile Creek, Suwannee River Water Management District, Union County, Florida. Project Engineer. Conducted detailed hydrologic and hydraulic analyses of lakes and streams in Union County that are located within the Sante Fe River Watershed. Responsible for reviewing and updating the hydrologic and hydraulic study to determine the flood elevations for five recurrence intervals for the basins contributing to Deckles Millpond and Fivemile Creek.

East Lake Pollutant Source Tracking Project, Hillsborough County, Florida. Project Engineer. Part of a team investigating the cause of nutrient enrichment to East Lake. Responsibilities include data evaluation and analysis.

Education

Master of Science, Environmental Engineering , University of Central Florida, 2008

Bachelor of Science, Environmental Engineering, University of Central Florida, 2006

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 74764

Certifications and training

Geographic Information Systems Professional No. 82490

ICPR Training Seminar

Experience

Amec Foster Wheeler: 2008

Industry: 2008

Memberships/affiliations

American Society of Civil Engineering - Ridge Branch, President, Former Secretary and Treasurer

Software proficiency

ArcGIS

ICPR

MIKE 11

FLO-2D

ICPR PercPack

Honors and awards

ASCE Ridge Branch Young Engineer of the Year, 2012

Member of Chi Epsilon

Member of Tau Beta Pi

Continued.

Lake Clinch Stormwater Retrofit Project, City of Frostproof, Florida. **Staff Engineer.** Responsible for water quality stormwater retrofit design for a pond adjacent to Lake Clinch in Frostproof. Identification, delineation, pollutant load quantification, hydraulic modeling, pond design, ERP assistance, and opinion of costs were provided for this project. Utilized GIS for map creation and analysis of existing topographic conditions.

Synoptic Biological Monitoring of Springs – Data Collection Project, St. Johns River Water Management District, Florida. **Environmental Engineer.** Field collection of SAV, macroalgal, and macroinvertebrate samples from various springs in Florida. Adhering to applicable FDEP SOPs, specific duties included water quality sampling using multiparameter water quality sondes, conducting detailed velocity profiles, assessment of canopy cover, and biological community sampling within 26 transects on multiple occasions.

Technical Support for Classification of Florida Streams, Florida Department of Environmental Protection, Florida, Alabama, Georgia. **Project Engineer.** The Amec Foster Wheeler Stream Team spearheaded the development of a hydrobiogeomorphic (HBG) approach to stream classification that embodies physical and biological factors structuring the ecological function of natural streams. It also is based on variables that associate watershed conditions with habitat characteristics in the stream corridor. Responsible for assisting with the following accomplishments: field study of more than 60 streams across Alabama, Florida, and Georgia, updated an existing FDEP database of 400 stream sites with their HBG category, described how the types differ in trophic status and quantified how perennial and intermittent flow regimes associate with watershed characteristics.

Lake Lena, Mudd Lake and Eagle Lake Water Quality Master Plans, Polk County Parks and Natural Resources, Polk County, Florida. **Project Engineer.** Many lakes in Polk County have become ecologically degraded and do not meet their designated uses and appropriate water quality standards. Excess nutrient inputs to lakes are frequently, but not always, the cause of degraded conditions. Amec Foster Wheeler was tasked with the following objectives: review relevant data and information to develop an understanding of the current conditions of the lake and basin, review methodology used to derive empirically based relationships for FDEP TMDL criteria and locally derived nutrient targets, develop a GIS-based map series of the lake and watershed, evaluate internal and external (surface and groundwater) nutrient loads to the lake, assess MS4 outfall discharges to the lake, conduct analyses of water quality and other environmental data and review existing reports to determine if nutrients are a likely cause of lake impairment, examine other factors that may possibly affect lake conditions, such as in-lake processes that may include sediment nutrient cycling, connectivity to lake-fringe wetlands, and management of submerged aquatic vegetation, based on the results of the analyses identify management activities that can be expected to improve lake water quality and compare the potential actions to determine those most likely to improve lake water quality.

Sarasota County Model Update and Project Maintenance to the Lemon Bay and Dona Bay Watersheds, Sarasota County, Florida. **Project Manager.** Conducting updates to the Lemon Bay and Dona Bay watershed models and associated GIS databases to reflect recent changes in topography, hydrology, and hydraulics. Considerable development has occurred since the FEMA FIRM Effective date of 1984. Our project team will be updating the watershed models to reflect recent development and topographic changes, using state-of-the-art tools and technology. When finished updating the watershed data, the resulting floodplains (FEMA Special Flood Hazard Areas) will be submitted to FEMA for a Physical Map Change, which will provide citizens with current flood hazard information.

Wahneta Infrastructure Master Plan, Polk County, Florida. **Project Engineer.** Comprehensive infrastructure analysis within the Wahneta Community. The 1,570± acre Wahneta Community is located between the cities of Lake Wales and Winter Haven in unincorporated Polk County. The report focused on evaluating public infrastructure assets within the community including 27 miles of roads, drainage infrastructure, sidewalks, and upgrades to infrastructure deemed critical for compliance with the Americans with Disabilities Act (ADA). The study evaluated, cataloged, and rated the listed infrastructure assets and identify projects to address deteriorating assets. The study identified roadway, drainage, and pedestrian safety improvement projects to include in the County capital improvement project (CIP).

Lake Hunter TMDL Implementation Plan, City of Lakeland, Florida. **Project Engineer.** As part of the City's Cycle 3 MS4 prioritization plan, assisted the City in developing a stormwater management implementation plan for the City's top priority basin, Lake Hunter. The project included development and implementation of a sampling plan to evaluate event mean concentrations associated with up to eight storm events. Additionally, collected lake sediment samples, which were analyzed to determine phosphorous speciation and availability under various environmental conditions. Internal and external loading estimates were developed and utilized to identity and prioritize conceptual best management practices to assist in reaching the ultimate goal of meeting the TMDL allocation for Lake Hunter and MS4 permit compliance.

Joe Wagner, PE, DNE

Coastal Engineering Services

Relevant projects

- Dredged Material Management Plans for the Intracoastal and Okeechobee Waterways
- Sebastian Inlet Channel Completion Project

Core skills

Dredging engineering; long-range dredged material management plans; designing upland dredged material containment facilities; creating dredging management plans, economic evaluations, and reports; evaluating alternate dredging technologies; and dredging construction

Professional summary

As a senior dredging engineer, Mr. Joe Wagner has worked on a variety of dredging engineering projects that have included developing long-range dredged material management plans; designing upland dredged material containment facilities; creating dredging management plans, economic evaluations, and reports; evaluating alternate dredging technologies; and assisting with site inspections and evaluations of nearly 60 dredged material management facilities.

Mr. Wagner has also served as a project manager responsible for marine projects, including waterfront design and development of plans and specifications. In this capacity, Mr. Wagner has coordinated with government representatives and regulatory agencies in property acquisition, planning, permitting, designing, and construction administration of numerous dredged material management areas and dredging projects in Florida, the southeastern United States, South America, and the Caribbean.

Representative projects

Dredged Material Management Plans for the Intracoastal and Okeechobee Waterways, Florida Inland Navigation District, 12 Eastern Florida Counties. Senior Dredging Engineer. Development and implementation of 50-year management plans for maintenance of the 406 miles of federal navigation channels that comprise the Intracoastal Waterway (ICWW) in Florida, as well as the 98 miles of the Okeechobee Waterway (OWW) within Martin and Palm Beach Counties. Under contract to the Florida Inland Navigation District (FIND), assisted in the completion of the development and implementation phases (Phases I and II) for the ICWW in all 12 coastal counties that comprise FIND as well as 15 miles of the OWW east of the St. Lucie Lock. Specific development phase project responsibilities have included researching, organizing, and analyzing U. S. Army Corps of Engineers (USACE) Jacksonville District dredging records and additional survey data; projecting future dredging and material storage requirements based on this information; and evaluating dredging and dredged material management alternatives. Other responsibilities include identifying, inspecting, and evaluating candidate management sites under a broad spectrum of engineering, operational, environmental, and socioeconomic criteria; and providing recommendations to FIND in reports documenting the site selection process. Under the plan implementation phase, completed the preparation of all preliminary site plans and facility designs, site-specific management plans, estimated long-term costs associated with site construction, operation, and maintenance, and associated permitting documents for 54 upland dredged material management facilities and six beach placement areas. FIND's acquisition of these sites is near completion and USACE and FIND have constructed a large percentage of these containment facilities, with additional facilities included in the USACE construction schedule.

Sebastian Inlet Channel Completion Project, Sebastian Inlet Tax District, Indian River County, Florida. Senior Dredging Engineer and Project Manager. Project included dredging and dredge management material design and environmental permitting associated with

Education

Master of Engineering, Coastal and Ocean Engineering, Texas A&M University, 2001

Master of Arts, Science Education, University of North Carolina at Chapel Hill, 1992

Bachelor of Arts, Mathematics Education, University of North Carolina at Chapel Hill, 1986

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 63028, Mississippi No. 19021

Certifications and training

Academy of Coastal Ocean Port and Navigation Engineers Diplomate of Navigation Engineering

Transportation Worker Identification Credential

Experience

Amec Foster Wheeler: 2016

Industry: 2001

Memberships/affiliations

Academy of Coastal Ocean Port and Navigation Engineers

American Society of Civil Engineers

Association of Coastal Engineers

Coasts, Oceans, Ports, and Rivers Institute

Florida Engineering Society

impacts to seagrass and seagrass mitigation design, critical habitat, manatees, and outstanding Florida waters. Services included preliminary site investigations, permitting, final design, construction observation, and project closeout.

Kissimmee River Shoreline Stabilization and Lock Improvements, South Florida Water Management District, Osceola County, Florida. Marine and Dredging Engineer. Prepared plans and technical specifications for placement of articulated concrete block downstream of control structure S-65A in water depths of up to 40 feet for a joint environmental resource permit/dredge and fill permit application. This was for maintenance and erosion repairs to the S-65A lock and dam structure. Responsible for preparation of details for placement of articulating concrete block mattress and riprap downstream of the S-65A gate structure and lock; replacement of timber channel fenders downstream and upstream of lock; installation of an access steel walkway fastened to the timber channel fenders downstream and upstream of the lock; placement of a total of two mooring dolphins upstream and two mooring dolphins downstream of the dam/control structure; and removal of one mooring dolphin upstream of the dam.

The Reef Access Channel Dredging Project Final Construction Documents and Technical Specifications, Martin County, Florida. Dredging Engineer and Project Manager. Responsible for planning the maintenance dredging of an existing and proposed access channel. Tasks included preparation of a channel design geometry including plan area, cross sections, and side slopes. Incorporated into the project plans the design geometry for the project's required mitigation areas (seagrass and salt marsh) consistent with the project's permits and submerged lands lease. Also, prepared certified plan drawings and technical specifications.

Dredged Material Management Areas DU-9, SJ-14, MSA434/434c, BV-NASA, and BV-52, Florida Inland Navigation District, Duval, St. Johns, Volusia, and Brevard Counties, Florida. Dredging Engineer and Project Manager. Designed and developed plans and specifications for Florida Inland Navigation District's dredged material management areas and land reclamation. These sites, constructed at various locations along Florida's east coast, provide a 50-year storage capacity and facility life to support dredging of Florida's Intracoastal Waterway. Responsibilities included site design, structural steel design for dredged effluent control structures, environmental permitting and mitigation design, land reclamation design and permitting, island off-loading/dredging design, beach nourishment design, dike design, geotechnical stability and seepage analysis, and stormwater conveyance and pond design. Project tasks encompassed preliminary and final design, construction document preparation, bidding, and construction oversight.

Caminada Headland Beach and Dune Restoration Project, Louisiana Office of Coastal Protection and Restoration, Lafourche Parish Louisiana. Senior Dredging Engineer. Provided engineering services to the Louisiana Office of Coastal Protection and Restoration for the Caminada Headland Beach and Dune Restoration Project. The large-scale island restoration project along the Louisiana coast required data collection, coastal modeling, design, and permitting services. In addition, grant review services were provided to the National Fish & Wildlife Foundation. The large-scale island restoration project is currently ongoing.

Professional Stormwater and Dredging Services, Brevard County Natural Resources Management, Brevard County, Florida, . Senior Dredging Engineer. Development and implementation of a multiphase project to dredge muck sediments from Brevard County waterways. Provides dredged material management area design, environmental permitting, and technical team coordination for dredging, dewatering, and disposing of sediments from tributaries located within Brevard County. Also assists Brevard County in the administration of grants from the Florida Department of Environmental Protection.

Sampson Marine Construction and Environmental Consulting vs. the Town of Southern Shores, Canal Maintenance Dredging Project Expert Witness, Town of Southern Shores, Southern Shores, North Carolina. Senior Dredging Engineer and Project Manager. Expert witness on dredged material management area design, environmental permit review, and technical team coordination for the dredging, dewatering, and disposing of sediments for the Town of Southern Shores. Duties included a detailed evaluation of previously collected documents, on-site meetings, and follow-up communications to provide an initial assessment of the dredging project and the outstanding claims.

Intracoastal Waterway Parks Master Plan, City of Atlantic Beach, Duval County, Florida. Senior Dredging Engineer and Project Manager. Development and implementation of a citizen/stakeholder outreach program to inform, encourage participation, and build community support for the implementation of the Intracoastal Waterway Parks Master Plan. Also assisted with citizen stakeholder group identification and public participation process and meeting facilitation to identify and evaluate desired and feasible facilities that provide for access and use of the City's Intracoastal Waterway resources.

Stephen J. Hanks, PE, LEED AP

Coastal Engineering Services

Relevant projects

- Monroe County Canal Restoration Demonstration Program
- Monroe County Alternative Technology Evaluation
- Monroe County Canal Management Master Plan Phase II

Core skills

Surface water modeling, water quality restoration, hydrologic restoration, water quality monitoring, and aquatic chemistry

Professional summary

As a Senior Engineer, Mr. Stephen Hanks is a valuable resource in a range of engineering services, including surface water modeling, water quality assessment, and wetland and stormwater permitting. Mr. Hanks has a portfolio of water resources engineering services for water management districts, county municipalities, and parks departments. Mr. Hanks' responsibilities include design and analysis, technical writing, and field sampling.

Representative projects

Canal Restoration Demonstration Program, Monroe County, Florida. Senior Engineer. Completed the design for six demonstration projects consisting of two culverts, one backfill, two organic removal projects (one with an air curtain), and one air curtain. Evaluated survey and site data to complete design activities and develop engineering cost estimates. Assisted with the preparation of bid documents, directed contractors throughout project execution, and evaluated project conformance with specifications. Post construction monitoring demonstrated success of the projects, with the most significant being the reestablishment of seagrass in the backfilled canal less than one year after the completion of construction.

Alternative Technology Evaluation, Monroe County, Florida. Senior Engineer. Completed a literature review to identify alternative technologies to reduce the cost of organic removal, and to identify low energy technologies to improve water quality. Developed a ranking matrix to determine the most amenable technology for each area of evaluation, and developed two conceptual designs for each area of evaluation. The selected technologies include a clay mat cap to reduce organic removal costs by approximately 50%, and modular floating mangrove islands to increase dissolved oxygen.

Canal Management Master Plan Phase II, Monroe County Engineering Services, Florida. Senior Engineer. The project involved creating a phased canal management master plan for the Florida Keys to prioritize canals that need water quality improvement and to select appropriate restoration technologies. The project was funded by an EPA grant and involved completing the canal management master plan for the entire Florida Keys and developing a priority of list of locations that require water quality improvements. All of the 502 residential canals were evaluated through field visits to determine the degree of water quality impact. Extensive homeowner interviews and meetings were performed. The canals were ranked by need for water quality improvement. An updated GIS database was prepared that incorporated the new information obtained on the Keys canals related to water quality and restoration options.

Monroe County Flushing Culvert Design, Monroe County Engineering Services, Florida. Senior Engineer. The project involved completing a tidal study, collecting bathymetric survey data, completing a wetland survey, and developing a hydraulic model to design and permit a flushing culvert to hydraulically connect two stagnant canals in Geiger Key. Responsible for developing a hydraulic model that was used to determine the flushing of the

amec foster wheeler

Education

Master of Science, Hydrologic Sciences, University of Florida, 2011

Bachelor of Science, Engineering, Land, and Water Engineering, University of Florida, 2005

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 72253, USVI No. 1270-E

LEED Accredited Professional

Certifications and training

Certified Professional in Erosion and Sediment Control

Certified SCUBA Diver

HAZWOPER 40 Hour

Experience

Amec Foster Wheeler: 2006

Industry: 2004

Memberships/affiliations

American Water Resources Association

Association of Environmental Professionals

Tau Beta Pi National Engineering Honor Society

Continued.

current canal configuration, and to quantify the likely increase in flushing for the proposed canal configuration. The hydraulic model was used to appropriately size the flushing culvert so that sufficient flushing was achieved and detrimental velocities or scour would not occur.

Hydrologic Routing and Budget, St. Croix, U.S. Virgin Islands. Senior Engineer. Used 30 years of climate data to develop a hydrologic budget to estimate the irrigation requirements for revegetation of a closed disposal pond. Additionally, a hydrologic routing evaluation was completed to support the design of a stormwater system to stabilize the disposal pond.

Wetlands Reserve Plan of Operation, Design, and Permitting, Highlands County, Florida. Senior Engineer. Developed the ICPR model network, optimized the alternative designs to meet the compliance requirements, held discussions to refine final design, collected piezometer data to determine current groundwater conditions, and developed a 3-D finite difference groundwater model using Processing MODFLOW to determine the expected benefit from the additional groundwater recharge associated with the proposed design.

Expert Review of Sediment Control Improvements, U.S. Army Corps of Engineers, Georgia. Senior Engineer. The project involved upgrading the existing stormwater conveyance system at a USACE base. The system upgrades consisted of providing a detention pond to attenuate the peak discharge, and a concrete pipe system to convey the runoff over steep grade without inducing erosion. Responsible for providing expert review of the hydrologic and hydraulic evaluation that was utilized as the basis of design.

Hydrologic and Hydraulic Modeling for an Early Site Permit, PSE&G, New Jersey. Senior Engineer. Responsible for hydrologic modeling using HEC-HMS and hydraulic modeling using HEC-GeoRAS software. Determined the Probable Maximum Precipitation (PMP) storm event for a 13,000-square-mile watershed and evaluated the corresponding Probable Maximum Flood (PMF) elevation. Additionally, inundation mapping for more than 500 river miles was performed for the seismically induced failure of the major reservoirs within the watershed, as well as the inundation resulting from the propagation of the hydraulic surge associated with the Probable Maximum Hurricane (PMH).

Dam Breach Inundation Mapping, Confidential Client, Kentucky. Senior Engineer. Responsible for hydraulic modeling using HEC-GeoRAS and HEC-RAS software to evaluate the potential inundation of the surrounding community resulting from an embankment breach for nine coal power plant ash ponds. The hydraulic models were used to develop emergency response plans based on the projected inundation of the evacuation routes, as well as the temporal progression of the flood wave. Additional analysis was completed for select generating stations, where two-dimensional hydraulic analysis was completed using CCHE2D software to determine the potential impacts if multi-directional flow paths were analyzed. The additional analysis also included the cost-benefit determination for hazard mitigating structural modifications.

Jack Creek Hydrologic and Wetland Restoration, Southwest Florida Water Management District, Highlands County, Florida. Senior Engineer. The project consisted of design and permitting for the hydrologic and natural systems restoration of impacted wetlands on the Jack Creek Tract in Highlands County. Plans included restoring groundwater levels by modeling, designing, and permitting inflow pipes and a bubble up structure from Jack Creek into the wetland to saturate the area and installing a sheet pile wall to maintain the water levels in the wetland. Responsible for hydrologic modeling using Visual MODFLOW and SPAW to evaluate the potential benefits from various rehydration alternatives for the impacted wetland community. The model results were used to select the desired alternative, design the alternative to meet site constraints, and prepare construction documents of restoration of a cypress and bay swamp.

Canal Conveyance Capacity Program, South Florida Water Management District, Florida. Project Engineer. Responsible for hydraulic modeling using HEC-GeoRAS and HEC-RAS software for more than 90 miles of conveyance canals. The hydraulic models were used to compare existing versus as-built canal geometries and identify conveyance reductions associated with alterations in canal geometry. The scope of services also included field reconnaissance, surveying, digital terrain modeling, and professional recommendations for dredging and bank repair.

Randy A. Knott, PE

Coastal Engineering Services

Relevant projects

- Instituto Nacional de Cultura, Plan Maestro (Master Plan) de Panama Viejo
- National Park Service Cape Hatteras Light Station Relocation
- National Park Service Fort Sumter National Monument

Core skills

Coastal planning, design, and construction; including parks and recreation sites; highways and bridges; ports and harbors; U.S. Navy and Coast Guard facilities; and commercial and industrial developments

Professional summary

With more than four decades of experience throughout the United States and abroad, Mr. Randy Knott focuses on civil and environmental engineering design and construction. This experience includes planning, executing, and reviewing project assignments with engineers, architects, geologists, scientists, technicians and inspectors. Projects have involved development, preparation, and review of plans, specifications and reports. He is responsible for design, design-build, and construction, including construction administration, construction engineering and inspections, and quality control and quality assurance and safety programs for new construction, renovations, and restoration projects.

Mr. Knott has considerable experience in coastal park planning, design, and construction including projects involving sensitive environmental areas, historic structures, and cultural resource sites. Having lived and worked throughout Florida for more than 20 years, he is very familiar with the coastal conditions, design practices, and construction means and methods existing in the state. He continues to be involved with coastal projects, many involving federal-level national parks, national seashores, and national monuments and historic sites; fish and wildlife refuges; state-level parks and historic sites; highways and bridges; ports and harbors; U.S. Navy (including NAS Key West) and Coast Guard facilities; and commercial and industrial developments. He has provided engineering services and managed architectural, scientific, and construction services from the Atlantic northeast coast down the eastern seaboard into the Caribbean and along the Gulf Coast.

Much of his services have been associated with coastal locations directly adjacent to the ocean including many barrier islands where long-term resiliency, durability, sustainability, and sacrificial planning is important in adopting the design and construction to coastal conditions. This has included hurricanes, climate change, and other environmental impacts, as well as man-induced impacts such as groins, jetties, hardened shoreline protection, beach erosion, and other issues. He has managed and performed numerous coastal-related services, including shoreline and beach protection systems design and construction; storm and wave surge and scour analysis; natural resource damage assessments and restorations; sand dune protection and restoration; ocean and waterway dredging and dredged material disposal; beach restoration/replenishment; marshland protection/restoration and creation; storm (hurricane) disaster response; facility condition assessments; historic structure and cultural resource assessments, preservation/protection, and restoration; historic and modern construction materials evaluations; hazardous material assessments; environmental contaminations from spilled hydrocarbons and leaking underground tanks; and air quality and noise assessments from nearby sources.

He has provided services for numerous coastal structures, including residential and commercial developments, roadway and pedestrian bridges, shore protection revetments, marinas, docks, boat ramps, bulkheads, trail head facilities and trail pathways, buried and overhead utilities, elevated walkways and observation platforms, visitor centers, orientation kiosks, picnic and camping facilities, restrooms, and other park and recreation structures. In the historic structures category, he has experience with structure condition assessments, and the prediction of its future performance; and their preservation, restoration, demolition, and relocation. Structures have included historic lighthouses; colonial and more modern

Education

Master of Science, Civil Engineering, Mississippi State University, 1973

Bachelor of Civil Engineering, Civil Engineering, Georgia Institute of Technology, 1969

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 20340, South Carolina No. 5608, Georgia No. PE009885

Experience

Amec Foster Wheeler: 1973

Industry: 1970

Continued.

military fortifications; colonial plantation and village buildings; and historic docks/wharves, including ruins from the 1500s through World War II; and involving construction materials of stone, brick, mortar facings, timber, cast iron, and colonial concretes such as tabby. Some of these structures have included remains of Native American village structures and mounds. Locations of his projects have ranged from the Outer Banks of North Carolina (Cape Hatteras Light Station Relocation/ Restoration, Cape Hatteras National Seashore); to San Francisco Bay (Alcatraz National Historic Landmark Cell Block Building Structural Restoration, Golden Gate National Recreation Area); to Panama to help recover, preserve, and restore the coastal ruins of the 1519 Spanish Colony of the original Panama City (Plan Maestro de Panama Viejo) to create a new National Park; to the shores of Kalaupapa in the Hawaiian Islands to preserve and restore a historic dock and wharf structure at this National Historic Park; to several barrier islands along the southeastern U.S. coast to preserve and restore colonial tabby ruins; to the waters of Biscayne National Park and Everglades National Park to assess and restore coral reefs and sea grass beds damage caused by boats; and to the shores of San Juan National Historic Site in Puerto Rico at the base of Castillo San Felipe del Morro to assess damage to a protective shoreline stone revetment caused by the accidental impact of an ocean going freighter.

His expertise during construction is in site preparation and foundation construction where there is the most risk associated with unknown conditions and the weather. One of his projects, in which he managed the engineering design and construction management support activities, was the design-build relocation of the Cape Hatteras Light Station for NPS. This project was selected by ASCE for the Outstanding Civil Engineering Achievement Award for 2000. Another major accomplishment was his involvement in the design and construction of the coastal Naval Submarine Base at Kings Bay, Georgia.

Representative projects

Instituto Nacional de Cultura, Plan Maestro (Master Plan) de Panama Viejo, Panama City, Panama. Principal Engineer. Planned and executed a civil engineering assessment of remains of approximately 40 existing historic structures constructed by Spanish colonists from 1517 to 1671 on a 20-acre site. Evaluated available environmental, archaeological, and architectural information and conditions to form opinions for structure preservation, foundation performance, structural performance and stability, and site drainage. Portions of the historic structures had been damaged and destroyed by coastal erosion. Helped develop a master plan for park development and preservation/restoration, including cultural, tourism, administrative, scientific, and hospitality elements.

National Park Service Cape Hatteras Light Station Relocation, Buxton,North Carolina. Project Manager/Principal Engineer. Project and engineering management, environmental, and engineered construction services for relocation of historic 208-foot-high, 5,100-ton, brick masonry lighthouse and ancillary buildings 2,900 feet from origin. Used structural mover techniques, hydraulic jacks, and rail support system to move the structures in 23 days following two years of planning and design to avoid destruction from erosion of the ocean shoreline. Project included coastal dune preservation and restoration.

National Park Service Fort Sumter National Monument, Charleston, South Carolina. Principal Engineer. Geotechnical and environmental investigation and site development recommendations for new visitor's center, dock, and associated structures. Evaluation of highly distressed historic coastal Civil War brick masonry structure including review of original construction documents; geotechnical/structural analysis; structural monitoring; and conceptual performance modeling for preservation and visitor safety. The structure is under continuous coastal and harbor entrance erosion and deterioration.

National Park Service Contract for Environmental Response, Planning, and Assessment (ERPA) Nationwide and U.S. Possessions. Program Manager/Principal Engineer. Completed more than 150 task orders, many in coastal areas, including Biscayne and Everglades National Parks. Provided technical and management oversight, and assisted in reviewing technical documents. Task orders included natural resource damage assessments and restorations, such as coral reef and sea grass beds; legal support; principal responsible party identification; and economic analysis.

National Park Service Southeast Region, United States. Principal Engineer. Responsible for multiple coastal projects, including Castillo de San Marcos National Monument in St. Augustine, Florida. Provided geotechnical and structural evaluation of distressed and damaged 17th century, stone masonry, Spanish coastal fortification. Projects also included the Cumberland Island National Seashore in Camden County, Georgia. Evaluated structure preservation and performance. Conducted condition assessment of multiple 18th and 19th century coastal tabby and brick masonry and timber structures stressed by environmental deterioration and visitor impacts. Also provided engineering design recommendations for a new visitor's dock. Another project within this contract included Fort Frederica National Monument in St. Simons Island, Georgia. Evaluated deteriorated tabby material on 18th century English coastal fortification and town remains. Facilitated NPS-sponsored workshop for architects, engineers, and scientists on the colonial building material known as "tabby." Drafted series of guidelines for preserving and restoring existing tabby structures at historic sites concentrated along the coast from North Carolina to Florida to Texas, and some Caribbean locations.

Kenneth W. Ashe, PE, PMP, CFM

Coastal Engineering Services

Relevant projects

- The Citadel Hazard Mitigation Plan
- NC Floodplain Mapping Program: Senate Bill 646 Study
- NC Floodplain Mapping Program: DO4 LOMC Review and Processing

Core skills

Risk assessment, FEMA floodplain map development, H&H and floodplain mapping, geospatially derived flood studies, and quality control

Professional summary

Mr. Kenneth Ashe has more than 18 years of experience experience in project management, risk assessment, and FEMA floodplain map development. He is a Project Management Professional and has managed small and large projects, including concurrently managing in excess of $55 million in H&H and floodplain mapping projects in nine river basins. His experience is specialized in floodplain management and the National Flood Insurance Program (NFIP) and includes quality control of more than 20,000 miles of hydrologic and hydraulic studies. His strategic planning and program development in geospatially derived flood studies and flood mapping doubled the map revision case submittal at a 40% cost reduction; produced building level risk analysis for approximately 100,000 buildings; and successfully issued flood studies as a database 17 counties for 144 communities saving 40% of the traditional FEMA flood study cost.

Mr. Ashe managed GIS, infrastructure WebEOC programming, communication and floodwarning staff during Emergency Operations Center (EOC) activation for tropical storm and ice event disasters, as well during the 2012 Democratic National Convention. Additionally, he provided flood damage briefings during shift change overs and provided Significant Event, damage summaries, and mapping input in WebEOC and took part in After Action Reporting.

He has managed or taken part in multiple disciplines of water resources, including stream restoration, FEMA no-rise, CLOMR/LOMR submittals, community and FEMA flood studies, hazard mitigation plan updates, mobile application development, grant management, floodwarning program and website development, and policy and regulation review and development.

Mr. Ashe's water supply planning experience includes review of local water supply plans and river basin summaries for the NC State Water Supply Plan. He managed the NC Statewide Registration of Water Withdrawals and the Eno River Voluntary Capacity Use Program, and served on the NC Drought Monitoring Council.

Representative projects

The Citadel Hazard Mitigation Plan, Charleston, South Carolina, United States. Engineer. Performed dam break, tsunami, and tornado research and vulnerability assessments. Tsunami assessments included three tide conditions and tornado assessments were based on EF0 through EF5 tornados on a hypothetical worst case tornado path. Performed research and vulnerability assessments for an active shooter hazard.

NC Floodplain Mapping Program: Senate Bill 646 Study, North Carolina Legislature, Raleigh, North Carolina. Project Manager. Managed project reviewing existing federal and state law and regulation concerning water-dependent structure requirements for reconstruction of fish houses. Developed summary report and presented findings to the North Carolina Joint Legislative Commission on Seafood and Aquaculture.

Education

Master of Science, Water Resources Engineering, University of Central Florida, 1998

Bachelor of Science, Environmental Engineering, University of Central Florida, 1996

Professional qualifications/ registration(s)

Professional Engineer, North Carolina No. 027462, Mississippi No. 16889, Kentucky No. 31750 Missouri No. 2017000911

Project Management Professional, United States No. 1798728

Certified Floodplain Manager, United States No. 03-0057

Experience

Amec Foster Wheeler: 2015

Industry: 1998

Memberships/affiliations

North Carolina Association of Floodplain Managers, Corporate Liaison

Tennessee Association of Floodplain Management, Member

Continued.

NC Floodplain Mapping Program: DO4 LOMC Review and Processing, Statewide, North Carolina. Internal Technical Review and Program Support. Provided internal technical review, program support, and client interaction of CLOMR and LOMR cases. Reviewed public notification letters, responses from LOMC requestors for adequacy, and comments to be distributed externally. Provided senior engineer guidance on HEC-RAS modeling issues.

Cumberland-Hoke Regional Hazard Mitigation Plan, Cumberland and Hoke Counties, North Carolina. Engineer. Performed Simplified Inundation Maps (SIMS) methodology dam break analysis and damage estimates for 113 dams in Cumberland County and 30 dams in Hoke County. Estimated flood wave height, flood wave downstream distance, number of buildings potential damaged, and building exposure. One hundred buildings were found to be ask risk exposing $15.7 million to flood damage. Performed sinkhole, extreme heat risk analysis research, and vulnerability analyses. Researched and developed community profiles and incorporated community capability assessments.

NC Floodplain Mapping Program: NFIP Community Assistance Program Grant, Internal, Raleigh, North Carolina. Project Manager. Managed grant program and seven staff to complete Community Assistance Program (CAP) grant scope of work for year 2007 through 2015. Work performed included Community Assistance Visits (compliance visits), hydraulic modeling review, NFIP training, and NFIP technical assistance.

NC Floodplain Mapping Program: Letter of Map Revision, Various Jurisdictions, Raleigh, North Carolina. Engineer of Record. LOMR requestor and engineer of record for 19 state-initiated LOMRs, including 08-04-4163, 09-04-0455P 09-04-0456P, 09-04-0539P,09-04-1833P, 09-04-2826P, 09-04-5598P, 09-04-6122P, 10-04-8304X, 10-04-8305P, 13-04-2212P, 13-04-4625P, 13-04-4986P, 14-04-0924P, 14-04-0926P, 14-04-3019P, 14-04-A582P,14-04-A625P, 14-04-A889P.

NC Floodplain Mapping Program: NCFMP LOMC Delegation, FEMA, Raleigh, North Carolina. LOMC Reviewer. LOMC reviewer of the following cases: 11-04-7545R, 11-04-8566R, 12-04-0456R, 12-04-2401R, 12-04-3492R, 11-04-6831P, 11-04-7542R, 11-04-8559P, 12-04-0811P, 12-04-2267R, 12-04-4975R, 12-04-4452R. Review included technical review, regulatory review, and requestor coordination. Case average internal turnaround was 153 days and the average regulatory time was 68 days.

Mississippi Flood Map Modernization Initiative, Mississippi Geographics Inc., Jackson, Mississippi. Principal Engineer/ Project Manager. Managed QA/QC team as a subconsultant for Mississippi Geographics, Inc (MGI). to the Mississippi Department of Environmental Quality. Developed hydrology and hydraulics approval template and review guidelines for study types, ranging from automated A zones to HEC-HMS studies. Managed review staff in multiple offices and was the primary point of contact with MGI and Mississippi.

NC Floodplain Mapping Program, Raleigh, North Carolina. Senior Project Manager. Task manager for riverine modeling quality control review and programmatic support. Managed team to review more than 10,000 miles of quality control for Detailed and Limited Detail studies in four years. Managed team of two dedicated staff and eight surge staff in three offices. Developed the LOMC review process and consultant review team. Presented at Cooperating Technical State meetings.

Town Center Area Plan Basinwide Drainage System Analysis and Water Surface Profile Determination, Town of Cary, North Carolina. Project Manager. Managed an H&H study on the Town Center Area Plan (TCAP) with three primary goals; 1) to develop water surface profiles for the larger drainage area streams, 2) develop hydraulic grade lines for local channel and pipe systems, and 3) to provide recommended solutions for the identified problem areas. The study included the floodplain analyses of Walnut Creek, Coles Branch, and Swift Creek Tributary 7, starting at the upstream limits of the effective FEMA study limits to the point that the drainage area of the stream was approximately 50 acres. Based on the assumed benefit to cost and the number and value of structures determined to be at risk of flooding, the study recommended that the Town should: regulate development using the 100-year water surface elevations developed within the report, or the Town should consider including the 100-year floodplains on the FEMA DFRIMs; additional studies to determine flood risk beyond the FEMA studies; and modification of the existing development ordinances to require new development to include assessments and mitigation of impacts to downstream stormwater infrastructure as part of the permitting requirements.

Andrew Hadsell, CFM

Coastal Engineering Services

Relevant projects

- City of Columbia Rocky Branch Urban Watershed Study
- North Carolina Floodplain Management Program
- WSP Sells Uniform Development Ordinance Update

Core skills

Water resources engineering with a concentration in floodplain and stormwater management, riverine and coastal development, and public projects

Professional summary

Mr. Andrew Hadsell has more than 21 years of experience in water resources engineering with a concentration in floodplain and stormwater management, riverine and coastal development, and public projects. He is currently serving as a Department Manager overseeing projects, including hydrologic and hydraulic flood studies, Digital Flood Insurance Rate Map (DFIRM) development, dam assessments, watershed planning, stormwater management, and hazard mitigation. He manages a group of water resources engineers and hazard mitigation specialists responsible for providing water resources engineering services in support of a variety of clients. His direct involvement with state floodplain mapping programs has resulted in a detailed understanding of technical and regulatory requirements of floodplain management, and he is proficient with modeling accepted by FEMA for use in the National Flood Insurance Program (NFIP).

Previous experience includes working as an engineering team leader under contract to FEMA and later under contract to the North Carolina State Floodplain Mapping Program. In each position, Mr. Hadsell served in a lead role managing the production of a variety of products supporting the NFIP. Mr. Hadsell also has a diverse background with unique projects including components of sustainability and green infrastructure and has supported public and private clients by providing services including watershed management, detailed open and closed system hydrologic and hydraulic analysis, stormwater management, hazard mitigation and flood control, development master planning, greenway design, and other projects related to transportation and infrastructure.

Mr. Hadsell has training in Individual and Public Assistance Operations through FEMA to provide response and recovery services for federally declared disasters. This includes general public assistance operations, debris management, and coastal damage assessment.

Representative projects

City of Columbia Rocky Branch Urban Watershed Study, City of Columbia, South Carolina. Hydraulic Engineer. Provided technical oversight in developing an inventory of available data, identifying appropriate use of data, and quality control review of hydrologic and hydraulics analyses. Review of feasibility of the hydrologic and hydraulic analyses for proposed development at 301 Assembly Street (the 3.7-acre project site), which will affect the Rocky Branch Creek drainage basin. In addition to assessing potential impacts, Amec Foster Wheeler assessed the site's potential to resolve flooding and water quality issues related to the earlier redevelopment of the watershed. Amec Foster Wheeler addressed very stringent time and budget constraints by utilizing available data and modeling to assess the impacts and effectiveness of the proposed development. Project tasks included attaining, assessing, and utilizing all previous stormwater inventory and modeling data; modeling of flood stages for current and (multiple) proposed conditions; recommendations to the City regarding the collection of additional data; and a presentation of recommendations to the City Council.

Education

Bachelor of Science, Civil Engineering, Water Resources, State University of New York, 1997

Master of Business Administration, Elon University School of Business, 2013

Professional qualifications/ registration(s)

Certified Floodplain Manager

Experience

Amec Foster Wheeler: 2011

Industry: 1996

Memberships/affiliations

Association of State Floodplain Managers

Continued.

North Carolina Floodplain Management Program, Office of Geospatial and Technology Management, North Carolina Division of Emergency Management, Raleigh, North Carolina. **Project Manager.** Responsible for multiple delivery orders supporting the continued evolution of Map Modernization and Risk MAP including floodplain modeling and mapping as well as risk and hazard assessment, including production of riverine and coastal hydrologic and hydraulic analyses, DFIRM production, and support of data acquisition.

WSP Sells Uniform Development Ordinance Update, Benchmark, CMR, Inc., Whispering Pines, North Carolina. **Project Manager.** Responsible for providing technical expertise to municipal client in developing content for updated Uniform Development Ordinance, including sections related to stormwater and floodplain management. This focused on implementing strategies to address a greater commitment to sustainability of natural resources in the community.

Wetherill Engineering Future Conditions Floodplain Stormwater Modeling/Mapping, Watershed Concepts, Raleigh, North Carolina. **Project Manager.** Responsible for modeling and mapping of existing and future flood elevations, floodplain boundaries, and floodways for approximately 30 miles of streams in the City of Raleigh. Services provided included a review of land use planning, creation of revised HEC-HMS and HEC-RAS models, and extensive public coordination, as well as developing recommendations for the use of this data by the City's Stormwater Management Program.

Oakley Farms Flood Study, Stafford County, Virginia, Natural Systems Engineering, Raleigh, North Carolina. **Project Manager.** Responsible for review of existing conditions hydrologic and hydraulic modeling for proposed residential development, including three stream crossings, design of proposed conditions HEC-RAS models representing multiple design alternatives (bridges, culverts, and combination structures), and the documentation of the modeling including a narrative to present to the municipality for review and approval. Final design incorporated use of floodplain overbank culverts to minimize primary opening area and reduce the cost of the structure.

Flood Hazard Investigation, River Landing, LLC, Wallace, North Carolina. **Project Manager.** Responsible for preliminary investigation of flood hazards and floodplain management requirements associated with proposed crossing of the Northeast Cape Fear River. Proactive approach to determining the constructability of a crossing from a regulatory standpoint included compilation and review of effective and historical flood hazard information, a site visit to confirm field conditions, correspondence with regulatory agencies, and a review of the hydrologic and hydraulic modeling for the portion of the river. The final report included a review of findings and provided recommendations. The client was able to better understand the regulatory obstacles to designing and constructing a crossing at this location and to avoid potential delays in the process of completing the hydraulic design for any proposed structure.

Watershed Concepts North Carolina Floodplain Management Program, Office of Geospatial and Technology Management, North Carolina Division of Emergency Management, Raleigh, North Carolina. **Engineering Team Leader.** Responsible for providing a strong knowledge of scoping of flood mapping projects, detailed hydrologic and hydraulic riverine and coastal modeling experience, and overall flood map production and quality control. This included accountability to final deliverables, coordination with the client, and participation in public official and open public meetings.

New York State Cooperating Technical Partner Coordination, Federal Emergency Management Agency, Washington, D.C. Supported interim review and coordination process to support NYSDEC effort to fulfill CTC agreement. This project included offering technical support to NYSDEC for the development of an advanced automated hydrologic and hydraulic analysis and flood hazard mapping program integrated with GIS technology. This program was one of the first CTP Programs aimed at aggressively meeting the goals of map modernization (the production of updated and technically accurate DFIRMs).

Letter of Map Revision Processing and Review, Federal Emergency Management Agency, Washington, D.C. Processed and reviewed hundreds of Letters of Map Revision and Conditional Letters of Map Revision to FEMA's Flood Insurance Rate Maps. Very well versed in FEMA's regulations associated with the aforementioned revision processes.

Peter J. Hall, CG, CEA

Coastal Engineering Services

Relevant projects

- Amec Foster Wheeler Resiliency Team Support Professional Guidance
- 100 Resilient Cities

Core skills

Management systems, stakeholder engagement/ training, emergency response, business continuity planning, stormwater, and due diligence/brownfields assessments and integrated planning

Professional summary

Mr. Peter Hall is a Principal Consultant at Amec Foster specializing in sustainability/resilience planning, EHS compliance, and management systems. He is the Sustainability Initiative Lead for the Amec Foster Wheeler Transportation Sector, and Chairs the Sustainability Services Committee for that Global Amec Foster Wheeler Sector. Mr. Hall has supported the global ABB organization with compliance related audits and environmental/sustainability related services for more than 15 years and co-authored the 1998 ABB "Practical Guide for Documentation and Implementation of an EMS" used to secure ISO 14001 registration at hundreds of ABB sites.

His areas of expertise also include the stakeholder reviews, sustainability gap assessment/ reviews, EHS management systems, and the application of Amec Foster Wheeler project sustainability and management (PSM) procedures to incorporate sustainability and climate change related planning into environmental and infrastructure projects. These process tools are applied to the entire life-cycle of selected activities and operations and have typically related to water planning, emergency response, oil storage/management, and infrastructure related planning for storm related issues and impacts. Mr. Hall's background in management systems have been applied to a range of organizations looking to incorporate resilience to natural hazards and climate change into regional and local land use planning, decision-making, and implementation practices. He has supported Amec Foster Wheeler pursuits for climate change adaptation/resiliency planning, utility sustainability KPIs, and sustainability planning for mining and airport projects. He has provided sustainability and climate change resilience presentations at conferences, such as Transportation Research Board, International Facility Management Association, and the National Association of Environmental Management.

Representative projects

Amec Foster Wheeler Resiliency Team Support Professional Guidance, City of Miami Beach (CMB), Florida. Advisor. Providing guidance on the 100RC city resilience framework along with a range of resilience services and expertise to support the City of Miami Beach Residency Team and its "Miami Beach Rising Above" Resiliency Strategy Work Plan.

100 Resilient Cities (Pioneered by the Rockefeller Foundation). Amec Foster Wheeler/100RC Platform Partnership Director. Coordinating and delivering resilience services to global cities in the 100RC network. As the partnership director for our firm I coordinate resilience solutions that address current and future vulnerabilities for 100RC cities which can include:

- Extreme weather forecasting/flood warning services which will allow cities to incorporate resiliency into their infrastructure and operations
- Critical asset data management to help cities identify, prioritize, and track key critical city assets that are most vulnerable to shocks and stresses
- Green infrastructure planning and emergency management response
- Water scarcity and security
- Tactical action plans for resilience implementation and grant applications, which allow our clients to bridge from planning to action and obtain funding for specific resilience projects

Education

Bachelor of Science, Geology, St. Lawrence University, 1984

Graduate Certificate, Integrated Management, University of Southern Maine School of Business, 1994

Professional qualifications/ registration(s)

Certified Geologist (Hydrology Spec.), Maine No. GE293

Envision tm Sustainability Professional Credential (in process)

INTELEX EMS/IMS Training and Certification

Certified Environmental Auditor, United States No. 1499A (Institute of Environmental Management and Assessment - UK)

ISO 26000 Social Responsibility Registered Presenter

OSHA 40-hour HAZWOPER Safety Hazardous Materials

Experience

Amec Foster Wheeler: 1987

Industry: 1984

Continued.

Have attended Chief Resilience Officer (CRO) and Platform Partner workshops in San Francisco, London, and Mexico City and coordinated resources that have participated and applied the 100RC City Resiliency Framework (CRF) at several cities which have included Pittsburgh, London, San Francisco, Boston, Tulsa, and Dallas. Co-led with 100RC resiliency planning workshops for New York City Transit, the City of Boulder, and Navy Station Norfolk, and recently co-led a workshop on "maximizing resilience value through project design and implementation" with the 100RC Program Director and the Global Infrastructure Basel Foundation at the November 10–13, 2015 100RC Global CRO/Partner Summit in Mexico City. As a 100RC platform partner, Amec Foster Wheeler is engaged with New York City and Norfolk on city resilience implementation support. Recently supported Nashville, Tennessee and Portland, Maine with their 100RC grant applications working directly with the Mayors and City CEOs in each city.

ISO 14001 EMS Training, NYC MTA. Training Lead. Responsible for an ISO 14001:2015 EMS workshop with New York City MTA which is the first transit agency in the U.S. to leverage their EMS program to address climate change resiliency.

EHS Consultation, Business Continuity, Training and Global Audits, Avaya, Worldwide. Avaya East Region Manager. Supported Avaya's BCP group with elements of the Avaya communications framework for incident managers and facility managers at facilities impacted by the 2012 Hurricane Sandy event. Responsible for the overall development and implementation of a wide-range of projects, including property transfers, EHSMS and compliance training, EHS program development, compliance performance evaluation (CPE) audits, general consulting, and strategic planning. As the Global EHS Management System Lead, supported the Avaya Global Business Continuity Program (BCP) director with training, communications, procedures, and planning services. In this role, Amec Foster Wheeler supported Avaya with their "roadmap" for continuing operations under adverse conditions (such as climate change and storm related events) and included scenarios such as damage to critical infrastructure (major machinery or computing/network resource). Was a member of the Avaya Corporate Green Team that is supporting this organization's sustainability initiative to reduce the Avaya carbon footprint across operations and activities.

GSA Climate Change Adaptation Technical Submittal. Advisor. Was part of an Amec Foster Wheeler team that submitted a climate change adaption technical document to GSA to support their climate change adaptation program and activities. These services were developed in accordance with the Executive Order 13653 preparing the United States for the impacts of climate change and included the following Amec Foster Wheeler services: applying and interpreting climate models; applied climate science; climate risk management; and climate risk communications and training.

Environmental Management Plan, National Oceanic and Atmospheric Administration, Nationwide. EMP and Site Investigation Lead. Responsible for supporting NOAA/National Environmental Satellite, Data and Information Service (NESDIS) with the development of an EMP that is a decision-making tool for establishing environmental and resiliency goals and long-term continual improvement objectives consistent with ISO 14001 criteria.

ISO 14001:2015 Gap Analysis, Implementation Plan and Management Training, EMD Serono/Merck KGaA. Technical Lead. Supporting this global pharmaceutical company to develop and implement an environmental management system to the ISO 14001:2015 standard. This work included gap analysis, implementation planning, senior management training, and review of the organizations sustainability metrics and programs.

Phil Scott

Solid Waste Engineering Services

Relevant projects

- Integrated Waste Management PFI Contract
- Solid Waste Management Policy Strategy and OBC for the Cayman Islands
- Buckinghamshire Biowaste Strategy and Implementation

Core skills

Innovative waste management solutions, waste procurement and management, and collection, recycling, composting, and disposal

Education

Master of Science, Public Health Engineering, Imperial College, 1984

Bachelor of Science (Hons), Environmental Science, University of Lancaster, 1983

Certification and training

APMP Examination, Project Management, Association for Project Management, 2003

Experience

Amec Foster Wheeler: 2011

Industry: 1985

Professional summary

Mr. Phil Scott is a Technical Director and one of Amec Foster Wheeler's most experienced project managers/directors in the waste sector. He is responsible for the direction and management of a portfolio of consultancy projects and is highly experienced in running multidisciplinary project teams being an APM qualified project manager. Mr. Scott has worked on projects for major national and international clients such as the IEA, BAA, European Commission, Rothchilds, Veolia, Sita, and United Utilities. Some of these projects have resulted in innovative waste management solutions and potential cost savings in excess of $1 million.

Mr. Scott also acts as lead advisor to several local authorities on waste procurement and management issues. His work in this capacity has included the production of waste management strategies for West Berkshire DC, Sandwell MBC, and Hertsmere DC and other local authorities. He has contributed to the procurement of waste management contracts, including collection, recycling, composting, disposal, Civic Amenity Site, and integrated contracts ranging in value from $1.8 million to more than $620 million.

Mr. Scott specializes in PFI and PPP waste procurement work and is currently the lead advisor to West Berkshire Council, Oxfordshire C.C., and the South Tyne and Wear and Cheshire West and Chester Council. His work includes the successful development of outline business cases, service specifications, performance mechanisms contract risk, T&C's tender evaluation, and clarifications/negotiations. He has managed procurement projects let under the open, restricted, negotiated, and competitive dialogue procedures. Mr. Scott provided waste management advice to BAA in relation to the development of Terminal 5 at Heathrow and provided support in the production of evidence submitted by BAA at Inquiry.

His work in relation to landfill gas extends more than 20 years and includes expert witness input and more than 100 reports and papers.

Representative projects

Integrated Waste Management PFI Contract, West Berkshire County Council. Technical Advisor/Project Manager. Overseeing the West Berkshire integrated waste management procurement project. This procurement encompassed services that include street cleansing, waste collection, recycling and composting, waste transfer and treatment, disposal, street cleansing, abandoned vehicles, street scene, and HWRC management. Amec Foster Wheeler provided comprehensive technical support throughout the process from OBC through Preferred Bidder Negotiations to Contract Award. Had direct input in to the drafting of the OBC, service specifications, and PMF, and worked closely with the legal and financial advisors on the project agreement, payment mechanism, and effective management of project risks. Ran an multidisciplinary Amec Foster Wheeler team delivering specialist support covering not only the procurement process but also planning, environmental and geotechnical surveys, engineering design, and technical due diligence.

Continued.

The procurement was successfully closed in March 2008 with the award of a $630-million contract award for the provision integrated waste management service and infrastructure. Planning permission was secured in November 2008 and the site acquired by the Council in February 2009. The Padworth IWMF became fully operational in 2010. Amec Foster Wheeler is now providing a variety of post procurement follow up services to West Berkshire.

Solid Waste Management Policy Strategy and OBC for the Cayman Islands, Cayman Island Government. Project Manager/ Lead Advisor. Amec Foster Wheeler was appointed in October 2014 to assist the Cayman Islands Government is developing and delivering a modern integrated waste management system for the Cayman Islands. Now assisting the procurement phase for the delivery of the Integrated Waste Management Solution for the Government which is due to be completed in 2017. Acting as both the Amec Foster Wheeler project manager and lead adviser, provided technical guidance and support (document drafting, options appraisal works shops, detailed strategic modeling, report writing, and public consultation) that has led to publication of:

- Report on the investigation and risk assessment of existing landfills on each island (August 2015)
- Solid Waste Management Policy for the Cayman Islands (September 2015)
- National Solid Waste Management Strategy for the Cayman Islands (June 2016)
- Outline Business Case for the delivery of an Integrated Solid Waste Management Systems for the Cayman islands (October 2016)

Buckinghamshire Biowaste Strategy and Implementation, Buckinghamshire County Council. Amec Foster Wheeler was commissioned by Buckinghamshire under a framework agreement to assist the authority in developing a new biowaste management strategy to deal with separately collected food and garden wastes arising within the county. Led the Amec Foster Wheeler team and provided technical advice, delivering several stakeholder workshops as part of the project. The new strategy identified methods appropriate biowaste treatment a systematically developed and assessed routes for developing new infrastructure (including biowaste transfer facilities) and accessing existing merchant treatment capacity.

Waste Collection Recycling and Anaerobic Digestion Project, Cheshire West and Chester. Cheshire West and Chester (CWAC) was formed from the merger of four previous local authorities in 2009. In April 2010, CWAC initiated a new procurement process and commissioned Amec Foster Wheeler to provide technical support for a new contract that would harmonise collections systems across area. Demanding targets for improved performance, economic savings, a reduced carbon impact, and localism issues were set by the Council. Key risks that also need to be addressed through the competitive dialogue process included a lack of modern infrastructure/treatment capacity and uncertainty over the deliverability of a parallel residual waste PFI process. In September 2011, May Gurney were successfully selected as the preferred bidder and their solution will deliver recycling in excess of 65%, saving of approximately $99 million over the contract term, two new transfer stations, and a new anaerobic digestion facility. The contract will also see May Gurney working the 3rd sector to deliver some of the procured services. The anaerobic digestion facility will be fed from kitchen waste and used to produce PAS 110 compliant digestate and biogas (for energy production) and these with together with high value recyclates and efficient logistics will deliver a substantial reduction in the carbon impact.

Technical Due Diligence on IVC technologies, West Berkshire Council. In the absence of any formal bank due diligence, West Berkshire Council asked Amec Foster Wheeler to undertake a formal technical assessment of in vessel composting technologies proposed by Veolia as part of best and final offer submission in reponse the WBC integrated waste management PFI project. The issue of a satisfactory due diligence report was a Preferred Bidder requirement placed on Veolia and key to achieving approval of the final business case by PRG. With technical support from Amec Foster Wheeler's process engineers, visited plant put forward by Veolia in Begium and France. These include a WTT tunnel composting plant and Veolia operated clamp based system. The clamp system failed the technical assessment on several criteria and Veolia were requested to re-examine this issue and come forward with revised facility proposals. Veolia completed this exercise January 2008 and Amec Foster Wheeler delivered a satisfactory due diligence assessment of the revised proposals in February 2008.

Ken Rigby

Solid Waste Engineering Services

Relevant projects

- South Yorkshire PFI Waste Management Partnership
- Suffolk PFI Residual Waste Treatment
- Guernsey Waste Treatment Facilities

Core skills

Strategy development, competitive dialogue, contract negotiation, together with public consultation, partnership working, and development of recycling and commercial opportunities, collection logistics, waste transfer and contractual issues

Education

Bachelor of Arts, Business Studies, Liverpool University, 1976

Experience

Amec Foster Wheeler: 2011

Industry:1976

Memberships/affiliations

Chartered Institution of Wastes Management - Member

Professional summary

Mr. Ken Rigby is the Waste Sector Director and is responsible for Waste Management Strategy and Infrastructure Development at Amec Foster Wheeler. He is a Chartered Wastes Manager and has more than 30 years of consultancy and commercial experience and for the last 20 years has specialised in waste management. With experience of more than 10 major PPP/PFI procurements he is regarded as an industry leader in the field of waste contract procurement. His key skills include strategy development, the procurement process, competitive dialogue, contract negotiation, together with public consultation, partnership working, and development of recycling and commercial opportunities, collection logistics, waste transfer and contractual issues. Mr. Rigby has reviewed the performance of major waste treatment technologies, including visits to plants throughout Europe. Recently, this has included an assessment of anaerobic digestion plants, AD gas clean-up technology with either injection to grid or use as a vehicle fuel.

Mr. Rigby has a deep understanding of key risk areas such as landfill diversion, treatment technologies, sites, planning and permitting, power generation, ROCs, SRF production, recyclate markets and third party off-takers. From this detailed understanding of the technical processes and risks, Mr. Rigby is able to deliver the successful procurement of complex waste management contracts, which also requires a fundamental understanding of the inter-relationship between technical, financial and legal disciples and how the output specification, performance framework, payment mechanism and project agreement link together. A professional management consultant he has considerable experience of business management and development, company appraisals, business planning and managing a complete business unit. By combining these skills with strong communications and presentation skills, he has the personality and maturity to deal at all levels in the market place.

Representative projects

South Yorkshire PFI Waste Management Partnership, Barnsley Doncaster Rotherham Partnership. Lead Technical Advisor. Served as the lead technical adviser to the three councils comprising Barnsley Doncaster and Rotherham Waste Partnership who commissioned Amec Foster Wheeler as its technical adviser for the procurement of a long-term 25-year PFI contract for the management, treatment and disposal of the each authority's residual waste. The preliminary work included the modeling of waste growth and recycling potential and following on, assessed the viability of joint procurement of waste treatment facilities and services, and the advantages that this affords to each partner. This work underpinned the preparation a full Outline Business Case which received Defra approval in spring 2008.The project continued with the development of tender documents and evaluation of PQQ, ISOS, ISDS and ISRS and CFT submissions. Provided support throughout the preferred bidder period on fine tuning to achieve financial close and contract award at the end of March 2012 and is currently working with the partnership during the commissioning and early operational phases. An important aspect of the project included working with the Partnership to develop an Inter Authority Agreement (IAA) which was designed to manage the relationship between the three Authorities.

Continued.

Suffolk PFI Residual Waste Treatment, Suffolk County Council. Project Director. Oversaw this multi-task framework project which includes planning advice, the procurement of an interim disposal contract, procurement of a Household Waste Recycling Centre contract, incorporating upgrade and operation of 15 facilities; and the procurement of a long term residual waste treatment facility under the PFI process. The main procurement task commenced with the preparation of an Expression of Interest which was submitted to the Defra in support of an application for PFI credits. Then assisted the Partnership with the development of a full Outline Business Case, together with a supporting Inter Authority Agreement. The OBC received Defra approval in spring 2008. PQQ, Output Specification, Performance Framework and procurement documents were prepared, together with supporting evaluation mechanisms which allowed the solution to be procured over a 24 month period. Financial close was achieved in January 2011, and the plant received first waste in January 2015. Continues to lead the Amec Foster Wheeler team as the project moves through the commissioning and early operational phases and is examining the option to re-use waste heat at a nearby glass house complex.

Guernsey Waste Treatment Facilities, Guernsey States Works Department. Technical Advisor. Served as the technical adviser to States Works who are the preferred bidder for a long-term waste services contract for the Island. The project involves preparation of the technical bid submission for managing the operation of a Refuse Derived Fuel preparation plant, a food waste treatment facility, a glass crushing plant and a household waste recycling centre. The Amec Foster Wheeler role includes the development of a waste flow model, preparation of detailed method statements and service delivery plan, together with negotiation of the performance and payment mechanisms. Also supported the Amec Foster Wheeler engineering team, who are the EPC contractor for the design and delivery of the infrastructure.

GMWDA PFI Waste Management Contract, Greater Manchester Waste Disposal Authority. Lead Technical Advisor. Served as the lead technical advisor with day to day responsibility for overall project delivery of one of the largest waste PFI's in Europe, handling nearly 1.5 million tons of waste each year. Led a team of experts to deliver a multi-discipline service. Phase one of the project included risk management; site identification and planning; development of the technical aspects of the Outline Business Case, including a comprehensive, validated, waste flow and cost model; technical due diligence auditing of the LAWDC/authorities assets. The OBC successfully secured $123 million in support from Defra for the ongoing project. Acted as lead technical advisor to the GMWDA throughout the procurement process which progressed through the OJEU, PQQ/ISOP, ITT, BAFO and PB stages to financial close and led the technical negotiations throughout the process. Other tasks have included: contaminated land assessment; a survey of the current distribution of certain non-native and invasive plant species; review of the ground condition assessments of the GMWDA sites, approach to ground settlement allowances and the appropriateness of the site piling techniques proposed. Continues to lead the Amec Foster Wheeler team as the project moves through the construction and commissioning phases.

Jonathan Bebb

Solid Waste Engineering Services

Relevant projects

- Buckinghamshire County Council Waste Management Project
- Herefordshire and Worcestershire Waste Project
- North Wales Regional Waste Treatment Project

Core skills

Wastewater and solid waste management, waste treatment technologies, including Energy from Waste, Mechanical and Biological Treatment, Materials Separation, Composting and Autoclave treatment

Education

Bachelor of Science (Hons), Civil Engineering, University of Edinburgh, 1981

Certification and training

APMP Examination, Project Management, Association for Project Management, 2004

Experience

Amec Foster Wheeler: 2011

Industry: 1981

Memberships/affiliations

Institution of Civil Engineers, Member

Professional summary

A Chartered Civil Engineer, Mr. Jonathan Bebb has more than 30 years of international project management experience in all aspects of the project lifecycle. His particular expertise lies in the fields of wastewater and solid waste management. Mr. Bebb has been Lead Technical Advisor in the procurement of many waste management contracts, including many seeking PFI credit funding, such as those for Sheffield City Council, Cumbria County Council, North London Waste Authority, Wakefield MDC, Plymouth and South West Devon Waste Partnership, Hull and East Riding Councils, Hereford and Worcestershire Councils, Wiltshire County Council and the North Wales Waste Partnership. He has broad experience of the assessment of a wide range of waste treatment technologies including energy from waste, mechanical and biological treatment, materials separation, composting, and autoclave treatment.

Representative projects

Buckinghamshire County Council Waste Management Project - Authority Technical Advisor, Buckinghamshire County Council. Project Director. Amec Foster Wheeler's Project Director on this commission to provide independent technical advice to the authority during the infrastructure development phase of their recently signed strategic waste treatment project. The role includes the oversight and review of the contractor's programme, any proposed variations put forward by the contractor and adherence, by the contractor, to the agreed specifications.

Herefordshire and Worcestershire Waste Project, Worcestershire County Council. The contractor delivering the PFI funded waste services contract for the Counties of Herefordshire and Worcestershire failed to secure planning approval for a proposed EFW facility. They subsequently brought forwards revised proposals for the development of the EFW facility at an alternative location. Amec Foster Wheeler were appointed to provide technical advice to the partnership and assist in the technical scrutiny of the contractor's revised proposals. Role has been to review and comment upon technical proposals submitted by the contractor, review the contractor's EPC contract, procurement and supply chain proposals. Proved technical advice associate with discharge of planning conditions, and comments raised by members of the public, the authorities and DEFRA.

North Wales Regional Waste Treatment Project, NWRWTP and Flintshire County Council. Project Manager. The NWRWTP sought a long term sustainable waste management solution for their residual waste having been committed to achieving an overall recycling performance in excess of 70% by national policy. The project included the review of options as part of the outline business case preparation and subsequent procurement of a design, build, fund, and operate contract of 25 years duration. As Amec Foster Wheeler's project manager, led a multidisciplinary team of technical experts in the scrutiny and evaluation of each of the bidder's proposals. The project has included the comparative evaluation of waste transport by road and rail based alternatives. The key waste treatment facility to be developed is a 175,000tpa energy from waste facility to be located on a brownfield site in Deeside.

Continued.

SWDWP Residual Waste Treatment PFI Contract, South West Devon Waste Partnership. The Authorities of Plymouth City, Devon County and Torbay have combined to procure a residual waste treatment plant for their sub region. The preferred solution is Energy from Waste linked to Combined Heat and Power. Amec Foster Wheeler, as technical advisors to the SWDWP have assisted in the drafting of key tender documents and evaluated tender responses. The procurement process included the inspection of a number of the proposed contractor's reference facilities across Germany. The procurement resulted in the development of 240,000tpa energy from waste facility linked to a district heating network within the adjacent Royal Navy Dockyards. The facility is currently under construction.

North London Waste Authority Procurement, North London Waste Authority. Project Director. Project involved the NLWA procurement with technical responsibility for Amec Foster Wheeler's technical input to the project. The procurement included the development of a contract for the management of municipal solid waste arising within the North London area. Tasks included the assessment of bidder's proposals for recovering dry recyclables, treating kitchen and garden waste and mechanical and biological treatment of residual waste followed by treatment of RDF by thermal conversion. Treatment processes evaluated included composting and anaerobic digestion, materials recovery, and the manufacture and utilisation of a refuse derived fuel.

Claire Brown

Solid Waste Engineering Services

Relevant projects

- Milton Keynes Residual Waste Treatment Facility Procurement
- Barnsley Doncaster and Rotherham Waste PFI
- Coleshill SDP Energy from Waste Conversion

Core skills

Waste planning frameworks, identification and assessment of site specific waste allocations and the establishment of robust waste arisings/disposal data and associated forecasts

Education

Bachelor of Science (Hons), Town and Regional Planning, University of Dundee, 1995

Experience

Amec Foster Wheeler: 2011

Industry: 1995

Memberships/affiliations

Royal Town Planning Institute, Member

Institute of Quarrying, Affiliate

Professional summary

Ms. Claire Brown is a Chartered Town Planner with more than 17 years of experience of working in the waste industry. Specifically, she has taken a lead role in a number of projects for Local Authorities in support of the development of their waste planning frameworks. For Wakefield Metropolitan District Council (MDC), Ms. Brown played a key role in the development of the Waste Development Plan Document, which included appearing for the Council at the associated Examination in Public. For other authorities (Derbyshire, Cheshire, Shropshire, and Hampshire), she has managed a range of technical studies. Such studies have involved the identification and assessment of site specific waste allocations and the establishment of robust waste arisings/disposal data and associated forecasts. Ms. Brown has also led on the planning elements of wider waste PFI projects managed by Amec Foster Wheeler on behalf of Wakefield MDC, the Ayrshire authorities, Barnsely, Doncaster and Rotherham Councils, West Berkshire Council, the North Wales Residual Waste Partnership, Milton Keynes and Gloucestershire County Council. Furthermore, for private sector clients Ms. Brown has been involved in managing and inputting into the production of planning applications and supporting statements for a range of specific waste development proposals, including landfills, composting, material recovery facilities, mechanical biological treatment facilities and energy from waste facilities. This experience has latterly extended to the preparation of planning applications for the restoration of quarry voids with waste for both Lafarge Tarmac and FCC.

Prior to joining Amec Foster Wheeler, Ms. Brown was responsible for the formulating and monitoring waste planning policy in Kent. She also has development control experience in that she provided substantial professional support at an energy from waste public inquiry at Ridham Dock, near Sittingbourne, which included drafting primary evidence concerning the case of need. She also acted as case officer for a further energy from waste proposal at Sandwich in East Kent.

Representative projects

Milton Keynes Residual Waste Treatment Facility Procurement, Milton Keynes Council. Planning Advisor. Acted as planning advisor to Milton Keynes Council on their municipal waste management procurement project. Specifically, involved in evaluating bids during the procurement process and as the Council moved towards selecting a preferred bidder, she was involved in providing detailed planning support and advice to the authority, which included identifying any areas of planning risk. As the Council moved towards financial closure of the contract process, liaised with all parties to evaluate whether 'all reasonable endeavours' had been achieved on planning issues. Financial closure was achieved in the summer of 2013.

Barnsley Doncaster and Rotherham Waste PFI, Barnsley, Doncaster and Rotherham Waste Partnership. Lead Planning Advisor. Acted as lead planning advisor to the Barnsley, Doncaster and Rotherham (BDR) Waste Partnership on their residual municipal waste procurement project. Specifically was involved in evaluating bids during the procurement

process and as the Partnership moved towards selecting a preferred bidder, she was heavily involved in providing detailed planning support and advice to the authorities, which included identifying any areas of planning risk. As BDR moved towards financial closure of the contract process, liaised with all parties, including DEFRA officials, to evaluate whether 'all reasonable endeavours' had been achieved on planning issues. This most notably involved considering whether all appropriate steps had been taken in preparing a robust planning application for the contract's key facility - an MBT plant located partially in Rotherham's Greenbelt. Financial closure was achieved in the autumn of 2012 and planning permission was duly received for the key MBT facility later the following year.

Coleshill SDP Energy from Waste Conversion, Severn Trent Water Ltd. On behalf of Severn Trent Water, managed the preparation of a planning application for the conversion of an existing Sludge Destruction Plant (SDP) at Coleshill, in Warwickshire into an energy from waste installation. Whilst no formal Environmental Impact Assessment was required, a number of detailed environmental studies were carried out to support the planning application, including a detailed Flood Risk Assessment (given that the site is located in the floodplain), landscape and visual assessment (most notably because the site is located in the Greenbelt) and air quality, traffic, noise and cultural heritage assessments. An appraisal of how the proposed development complies with prevailing energy policy and a carbon footprint analysis were also included in the planning application, together with a Design and Access Statement. Managed the planning application through to determination for which an approval was received from Warwickshire County Council in the summer of 2007.

Hampshire Joint Municipal Waste Management Strategy, Project Integra. Project Manager/Technical Advisor. Acting as project manager and technical advisor on SEA and community consultation, assisted the Waste Collection and Disposal Authorities in Hampshire (jointly known as Project Integra) with the development of a Joint Municipal Waste Management Strategy. Funded by DEFRA under the Waste Implementation Programme, the project required Amec Foster Wheeler to assist Project Integra with the preparation of a draft Joint Municipal Waste Management Strategy and accompanying Strategic Environmental Assessment (SEA); the procurement of legal advice on the delivery of the strategy; and the preparation and delivery of a programme of community consultation. An important as aspect of the overall project was to ensure integration with parallel community consultation and SEA activity on the Hampshire Minerals and Waste Development Framework and the wider Hampshire Material Resources Strategy.

Municipal Waste PFI Contract - Site Search Exercise, Wakefield Metropolitan District Council. Led on the site search and planning elements of a wider Amec Foster Wheeler managed project relating to the establishment of a multi-million dollar municipal waste management PFI contract in Wakefield. As part of the emerging waste PFI contract, Amec Foster Wheeler was commissioned by Wakefield Metropolitan District Council Waste Services to carry out a search for sites within the Council area suitable for accommodating a strategic waste management facility and household waste recycling facilities. Co-ordinating Amec Foster Wheeler and Wakefield MDC's in-house GIS expertise, liaised with the Council's planning and waste services teams to establish a digital site search model. Having identified a short-list of potential sites, these were assessed in more detail using in-depth evaluation matrices and by carrying out site visits.

Alex Green

Solid Waste Engineering Services

Relevant projects

- Buckinghamshire Waste PPP Project Authority Engineer
- Greater Manchester Waste PFI Contract
- Peterborough EFW

Core skills

Experience of complex, multi-discipline projects ranging from the waste management industry, the water industry, oil and pharmaceutical industries and nuclear sectors

Professional summary

Mr. Alex Green is a Chartered Mechanical Engineer with more than 20 years of experience of complex, multi-discipline projects ranging from the waste management industry, the water industry, oil and pharmaceutical industries and nuclear sectors. His experience includes project management, process and equipment specification, procurement specifications, contract management, tendering, and design at all project stages from concept and feasibility studies through to site installation and construction.

He also has significant experience with waste management projects, has undertaken due diligence on more than 30 reference technologies, and is technical adviser on several waste management procurements.

Representative projects

Buckinghamshire Waste PPP Project, Buckinghamshire County Council. Authority Engineer. Supporting Buckinghamshire County Council in the role of authority engineer on the development of their EFW, new access road, and waste transfer stations. This role includes provision of technical advice, review of change notices from the development partner, confirmation of project payment milestone achievement, and a general regular overview of the project progress and programme.

Greater Manchester Waste PFI Contract, Greater Manchester Waste Disposal Authority. Technical Advisor. Supporting GMWDA in development of the procurement strategy and engagement with the private sector waste management market, supporting the project from Outline Business Case onwards. Ensured that all possible vendors are suitably assessed and advising the GMWDA of possible strategic opportunities and risks, in particular around the thermal elements of the project. Project manager on specific project tasks such as facility re-engineering, refuse derived fuel preparation and use.

Peterborough EFW, Peterborough City Council. Authority Engineer. Supporting Peterborough City Council in the role of authority engineer on the development of their EFW. This role includes provision of technical advice, review of change notices from the development partner, confirmation of project payment milestone achievement, and a general regular overview of the project progress and programme.

Wrexham Waste PFI Phase 2, Wrexham Borough Council/FCC. Independent Certifier. Acting as independent certifier on the Wrexham Waste PFI Phase 2 project. Phase 2 of the contract is for the construction and commissioning of a Mechanical Treatment facility with bio-drying to produce a RDF and additional recycled materials. This role includes review of the project agreement, assessment of the critical equipment requirements and testing parameters, and the preparation of readiness and acceptance certification as set out in the amended PFI contract.

Education

Master of Engineering, Engineering, Manufacture and Management, UMIST, 1991

Certification and training

APMP Examination, Project Management, Association for Project Management, 2003

Experience

Amec Foster Wheeler: 2011

Industry: 1991

Memberships/affiliations

Institution of Mechanical Engineers - Member

Engineering Council UK - Chartered Engineer

American Society of Mechanical Engineers - Associate

Association for Project Management - Member

Continued.

Appleton Thorn School Biomass Boiler, Warrington Borough Council. Project Manager. Project consisted of new biomass boiler system at Appleton Thorn Primary School to replace two existing oil fired boilers. The scope of the work included developing the procurement documentation, evaluation of tenders, submitting a planning application, then the site construction supervision for the installation of the packaged boiler system.

Bournemouth MRF, Bournemouth Borough Council. Reviewed the development of a MRF business case, comparing the material flows, input waste composition, recyclate production and cost output from the WRAP MRF Cost model to known existing facilities. This data was then used to develop the MRF business case, along with a sensitivity analysis, indexation, and a cost-risk assessment of the unknown factors within the pricing model. Bournemouth were ultimately awarded a grant from the Department of Local Government and the Environment to develop this project.

Design of Transfer Stations, Lancashire County Council. Project Director. Design and construction management project for three new transfer loading stations. Scope involved developing outline brief and planning permission into the detailed procurement packages for three new TLSs. Detailed design work focused on successful discharge of planning conditions, groundworks, including flood alleviation schemes, site layout, building structural and civil design, internal layout and provision for waste materials, and preparation of procurement documentation. Procurement used the client procurement services, then continued on site with Amec Foster Wheeler providing construction management and engineering support. Amec Foster Wheeler had CDM-Coordinator role on all three construction sites.

Armando Hernandez, PE, CCM, SI

Structural Engineering Services

Relevant projects

- U.S. Southern Command Headquarters
- Collier County Facilities Management Program
- Ravenswood Bus Maintenance Facility

Core skills

Construction project management, engineering, construction, operations and maintenance of complex technical projects, design, inspection, and QA/QC

Professional summary

Mr. Armando Hernandez has more than 35 years experience in construction project management and engineering of complex technical projects in the power, pharmaceutical, industrial, transit, commercial, hospital, water and wastewater treatment, and infrastructure markets. As a Senior Principal Civil/Structural Engineer and Project Manager, he has directed home and field offices providing construction services. His professional background includes the design, project engineering, and inspection of nuclear and fossil fuel power plants, buildings and tunnels, owner representative of major hospitals, pharmaceutical, medical and banking institutions, and the QA/QC and inspection of treatment plants, airports, bridges, and roadways. He is a licensed Special Inspector of Threshold Buildings in Florida.

Representative projects

U.S. Southern Command Headquarters, U.S. Army Corps of Engineers, Florida. Senior Program Manager. Led project office for this $280-million design/build military installation representing the USACE consisting of project managers, multidiscipline engineers, estimators, scheduler, inspectors, and administration. Managed design coordination; QA; submittal, schedule, change order, and invoice review; monitored construction meetings, safety, contractor QC, testing, commissioning, user training, permitting, obtaining Silver LEED Certification, coordination with city and county officials; and trained USACE personnel. The 55-acre, 630,000-square-foot facility featured site antiterrorist measures, progressive collapse prevention, resistance to 185 mph gust wind loads, advance data and communications; tilt-up, steel, prefab and roadway construction; and post construction plant operations and maintenance. Amec Foster Wheeler received the ASCE Miami-Dade Project of the Year Award; achieved over $3 million in cost avoidance for the government and completed the construction in an aggressive 27-month schedule.

Facilities Management Program, Collier County Public Utilities Department, Florida. Senior Engineer. Evaluating the civil, structural, roofing, mechanical, electrical and plumbing condition of more than 60 water and waste water treatment plant facilities and master pumping stations.

Ravenswood Bus Maintenance Facility, Broward County, Florida. Associate Project Manager. Responsible for the construction field administration, construction materials testing, commissioning and threshold inspection a phased construction of a precast concrete and masonry multi-story vehicular garage, fuel and wash and operations center as well as a new bus maintenance steel and tilt-up concrete structure.

Riverside YMCA Inspection and Testing, YMCA of Florida First Coast, Jacksonville, Florida. Special Inspector of Threshold Buildings. Oversite of authorized representatives, reviewed materials testing results; tracked resolutions of nonconformance construction work. Performed inspections, submitted periodic progress reports to the building department, and provided final certification of the work. This $21 million, 69,000-square foot facility consists of wellness, exercise, meeting and executive spaces, an aquatics center, café, and

Education

Master of Business Administration, Fairleigh Dickinson University, 1982

Bachelor of Civil Engineering, Manhattan College, 1976

Professional qualifications/ registration(s)

Special Inspector of Threshold Buildings, Florida No. 7392809

Professional Engineer, Florida No. 63211, Puerto Rico No. 12103

CMAA Certified Construction Manager

Certification and training

FDOT Certified CTQP Asphalt Paving I and II

FDOT Certified CTQP QC Manager

FDOT Advanced MOT

OSHA 30 Hour Construction Safety and Health

American Red Cross CPR and First Aid Certified

Experience

Amec Foster Wheeler: 2002

Industry: 1976

Professional affiliations

American Society of Civil Engineers

Chi Epsilon (Engineering Honorary Society)

Association of Engineers and Surveyors of Puerto Rico

Construction Management Association of America

Continued.

indoor track. The structure is supported on H steel driven piles and composed of structural steel, masonry, tilt-up, prestressed precast elements, and curtain wall construction.

Feasibility Study of Load Testing the Central Base Aircraft/Vehicular Bridges, Miami-Dade County Aviation Department, Florida. Project Manager. Collaborated with Principal Structural Engineer to develop project criteria, evaluate existing drawings, conduct site visits, and prepare cost estimates. Responsible for RFP and feasibility study to load test two 25-foot clear span bridges, 99 feet and 82 feet wide, measuring stress and deflections with stress gages and other surveying instruments.

U.S. I-595 Construction Materials Testing and Inspection, Dragados USA/Florida Department of Transportation, Florida. Senior Structural Engineer. Performed QC inspections of 380-feet multi-span concrete bridge decks on prestressed girders and their abutments. Supervised deck screed clearance demonstrations, performed bridge deflection analyses, and monitored concrete placements. Five-year FDOT project with fees of $6,702,425 involving the construction of three miles of HOT lanes and more than 53 bridges.

South Terminal Expansion Program, Miami-Dade Aviation Department, Florida. Quality Assurance/Quality Control Supervisor. Developed and managed a multidiscipline team of QA/QC inspectors and testing technicians during the $830-million, six-year construction program. Managed inspectors located at off-site concrete and steel fabrication plants. Work included a new terminal and concourse, taxiway and apron, baggage handling systems, passenger loading bridges, jet fuel systems, roofing, building envelope, structural steel and welding, auger cast piles, roadways, and secured entrance gates. Renovation of Concourse H tie-in.

Parador Parking Garage, Parador Partners, Jacksonville, Florida. Special Inspector of Threshold Buildings. Provided technical guidance and oversaw the authorized representatives, reviewing inspectors, and materials testing results, as well as tracked resolutions of nonconformance construction work. Performed inspections, submitted periodic progress reports to the building department, and submitted final certification of the work. The Downtown Jacksonville six-story, open-air parking garage is located within the area bounded by Bay Street to the north, Hogan Street to the west, the existing Suntrust Tower to the east, and Independent Drive to the south. The parking structure has an overall plan dimension of approximately 300 feet (north/south direction) by 134 feet (east/west direction). Generally, the construction included a six-story parking structure with sufficient space for 602 vehicles. The structure consists of a precast, factory-produced pre-topped double-tee system for the parking garage beams and a complete precast concrete frame, including supporting precast columns, structural spandrels, beams, bearing walls, and pre-topped double-tees. The whole structure is supported on 64 drilled shafts of 24-inch diameter. Amec Foster Wheeler provided geotechnical engineering, environmental consulting, and CMT and inspection services.

Fort Lauderdale-Hollywood International Airport Expansion of Runway 9R-27L, Broward County Aviation Department/ Parsons Transportation Group, Florida. Construction Project Manager and Quality Assurance/Quality Control Manager. Responsible for the construction project engineering, quality assurance, owner's materials testing lab oversight, and environmental compliance for this $800-million FAA runway and aircraft bridge program. Features include 64-feet-high MSE walls containing six million cubic yards fill, surcharging, dynamic compaction, and geotechnical instrumentation, and FDOT roadways and bridges. This project is the largest in Broward County history and received the ASCE Broward Project of the Year Award.

Property Condition Assessment, Executive Park Court Building 100, EdgeConnex Jacksonville Holdings, Jacksonville, Florida. Associate Engineer. Evaluating the civil, structural, roofing, mechanical, electrical and plumbing condition of a 42,000 sq. ft. property on 2.3 acres with surface parking and drive lanes; included a cost estimate of replacement reserve expenditures.

Wilshire Drive Bridge Improvement, City of Orlando, Orlando, Florida. Structural Engineer. Leading design of headwalls and flowable filling of the void to be left between the bridge deck and the proposed prefabricated culverts. Design requires the backs and sequential layers of flowable fill to limit stresses on culverts.

Project Engineering and Structural Design, Beluga Station Plant, Alaska. Structural Engineer. Analyzed and designed steel and concrete building structures for this 60 megawatt coal fired power plant.

Project Engineering and Structural Design, Laguna Verde Nuclear Power Station, Mexico. Analyzed and designed steel and concrete building structures of this 675 megawatt boiling water reactor plant. Finite element computer aided design (ANSYS) and GT STRUDL.

Ryan Kane, PE

Structural Engineering Services

Relevant projects

- Heaney Bridge Case Alternatives Report
- Access Road Bridge
- Schedule and Estimates Team (SET) Cost Estimates

Core skills

Bridge design, NBIS bridge inspector, proof load testing bridges

Professional summary

Mr. Kane has 15 years of experience designing and inspecting various transportation facilities structures. As a senior structural designer Mr. Kane has designed, repaired, retrofit, and inspected bridges, culverts, foundations, retaining walls, floodwalls and other related structures. He has designed all facets of bridge structures with spans from 20 feet to 1,500 feet and including all commonly acceptable geometries, materials and construction methods. His clients range from private owners to local agencies, state DOTs, federal agencies and joint venture partners. Mr. Kane is a certified NBIS Bridge Inspector and Fracture Critical Bridge Inspector. He also has experience proof load testing bridges.

Representative projects

Heaney Bridge Case Alternatives Report, Naval Facility Command (NAVFAC), Naval Support Activity Crane, Crane, Indiana. Project Manager. Amec Foster Wheeler, as a subconsultant to a small business cultural resources firm, provided road, bridge and traffic planning services for the case alternatives report to replace the historically significant Heaney Bridge at Crane NSA. The case alternatives report was a necessary step to document the significance of the existing bridge which was built by the Work Progress Administration in 1942. Case alternatives developed included: Do Nothing, Rehabilitate Bridge, Rehabilitate Bridge and Add a Parallel Bridge, Add a Parallel Bridge and Turn the Existing Bridge into a Monument, Demolish Existing Bridge and Replace.

Access Road Bridge, Panoche Valley Solar, San Benito County, California. Bridge Project Manager. As part of a $250 million EPC contract Amec Foster Wheeler provided bridge design, plans and specifications for a 58ft single span, adjacent box beam bridge with integral abutments and steel H-piles foundations. The box beams were designed and detailed to carry multiple electrical transmission lines through the bridge superstructure. The bridge was laid out to span the ordinary high water mark and received severe oversight from fish and wildlife officials.

Schedule and Estimates Team (SET) Cost Estimates, Missouri Department of Transportation, St. Louis District, Missouri. Civil Engineer. Provide cost estimates for the St. Louis District necessary for long term planning and budgeting. Amec Foster Wheeler was provided a preliminary design by District Staff and asked to develop the corresponding cost estimate in Bid Tabs Pro software.

Inter-Modal Facility Access Road Bridge, Norfolk Southern, Toledo, Ohio. Bridge Engineer. Design of a roadway bridge connecting to portions of a large inter-modal facility. The design rehabilitated the existing abutments and provided a new adjacent box beam superstructure with a composite concrete deck. The load capacity of the bridge was increased to account for 300,000 pound container handling vehicles.

Kentucky and Indiana Terminal Railroad Swing Span Bridge over the Ohio River, Norfolk Southern, Louisville, Kentucky. Bridge Engineer. Amec Foster Wheeler evaluated brearing replacement alternatives for the ends of a 394' center pivot truss bridge. The existing

Education

Bachelor of Science, Civil Engineering, University of Missouri, 2000

Professional qualifications/ registration(s)

Professional Engineer, Missouri, No. 2007020287, 2007

Professional Engineer, Illinois, No. 062-060249, 2007

Professional Engineer, Kentucky No. 29879

Professional Engineer, Michigan, No. 6201059954

Professional Engineer, Arkansas, No. 15154

Professional Engineer, North Carolina, No. 040056

Professional Engineer, Florida, No. 72050

Professional Engineer, Indiana, No. 11400086

Professional Engineer, Oklahoma, No. 25967

Professional Engineer, Georgia, No 040385

NCEES Registered Engineer, No. 46518

Certification and training

IDOT Certified Bridge Inspection Program Manager

FHWA-NBIS Fracture Critical Inspection Techniques for Steel Bridges

FHWA–NBIS Safety Inspection of In-Service Bridges

OSHA 10 Hour Construction Safety and Health

OSHA 40 Hour HAZWOPER

OSHA Fall Protection

OSHA Aerial Boom Lift Training

Norfolk Southern Roadway

Continued.

bearings include a geared mechanism to engage and disengage the bearings for the center pivot action. The replacement bearing will eliminate the geared mechanism with fixed bearings because the truss is no longer required to pivot. Bearing selection requires careful evaluation of multiple dead and live load conditions because one side of the truss is the "Heavy" arm and one is the "Light" arm.

Stanton Station Coal Unloading Rail Trestle, Great River Energy, Stanton, North Dakota. Bridge Inspector. Team Leader for fracture critical inspection services of a 50 plus year old, 364' long coal unloading rail trestle. Inspection included arms length access to all primary load carrying members using an aerial boom lift. An ultrasonic thickness gage was used to evaluate remaining steel member section thickness. Inspection report included maintenance, repair and future inspection recommendations.

CJ252 Bridge Bearing Replacement, Norfolk Southern, Cincinnati, Ohio. Bridge Engineer. Design of bearing assembly replacements that included laminated neoprene bearing assembly, sole plate, a shim pack and precast concrete beam seat pedestal. Work also included redesigning the girder end diaphragms so they could be used as lifting points to accommodate the jacking forces required to lift the superstructure.

CNO19.4 Bridge Bearing Replacement, Norfolk Southern, Walton, Kentucky. Bridge Engineer. Design the rehabilitation of an abutment with concrete failing directly below the bearing. Included demolition and replacement of a portion of the abutment below the bearing and design of a micropile temporary pier used as a foundation to jack up the truss to access the rocker bearing and rehabilitate the abutment.

Preliminary Design for Gravina Mill Access Road, Alaska Department of Transportation and Public Facilities, Ketchikan, Alaska. Bridge Engineer. Amec Foster Wheeler provided preliminary bridge design alternatives for this project to improve access to the Gravina Mill Site. Multiple profiles and alignments were developed for both the 25mph and 40mph design speed. Bridge type alternative analysis included options to accommodate each profile developed. In addition, superstructure selection included both medium and long span structure alternatives that include box beams and prefabricated vehicular truss bridges. The preliminary design included Geosynthetic Reinforced Soil Integrated Bridge System Abutments with concrete block wall facing.

Brandywine Fall Pedestrian Bridge, National Park Service, Cuyahoga National Park, Ohio. Bridge Engineer. Services included bridge inspection, load rating, load testing, rehabilitation design and construction of an existing pedestrian bridge over Brandywine Creek. Amec Foster Wheeler was the prime contractor and engineer for this design/build bridge rehabilitation. The 80 year old historical concrete bridge with limestone block abutments had significant deterioration of the cast-in-place concrete t-beam superstructure. Amec Foster Wheeler assessed the bridges condition, and performed a load rating that yielded unsatisfactory results for the proposed pedestrian loads. As such, Amec Foster Wheeler developed and performed a load test to verify the bridge's structural capacity under pedestrian loading. Repairs to the bridge were designed and constructed in accordance with environmental oversight from local park staff. Amec Foster Wheeler was able to design bridge repairs that preserved the historically significant aspects of the bridge.

Lonedell Road Bridge, Jefferson County Public Works Department, Jefferson County, Missouri. Bridge Engineer. Served as Project Engineer for the substructure design of a 30ft aluminum culvert arch. Design included two cast in place footings for the arch, four detached cast in place retaining walls and cast in place headwalls designed to include arching loads from skewed edge of culvert arch. Other responsibilities include plan and specification development, quantities and engineer's opinion of probable cost.

Worker Protection

e-RAILSAFE

Lead and Asbestos in Construction Training

Experience

Amec Foster Wheeler: 2011

Industry: 2001

Mark A. Leon, PE

Structural Engineering Services

Relevant projects

- Bank of New York Emergency Response Facilities Assessments
- Hurricane Ivan Emergency Response
- World Trade Center Collapse

Core skills

Field data collection, analysis, and quality assurance inspection and testing services associated with structural building systems and non-traditional structural components

Professional summary

Mr. Mark Leon is a licensed professional engineer with more than 29 years of experience in the evaluation and repair of existing structural systems. He specializes in field data collection, analysis, and quality assurance inspection and testing services associated with structural building systems and non-traditional structural components.

Representative projects

Bank of New York Emergency Response Facilities Assessments, Confidential Client, New York, New York. Structural Engineer. Responsible as member of a three-person team for conducting visual inspections of structural systems and observing interior finishes for signs of structural damage and exterior facade from roof and ground using binoculars. Facilities engineering providing disaster recovery and emergency response services mobilized within 24 hours of first terrorist hijacked airline attack on World Trade Center complex. Involved three high-rise office towers (114 floors combined) encompassing more than 2.2 million square feet in total in and near "hot zone." Prioritized services assessed structural integrity, asbestos contamination, mechanical/HVAC building systems operations, and indoor air quality to allow financial institution to resume operations on selected floors in time for NYSE opening bell in absence of immediate health and safety concerns.

Hurricane Ivan Emergency Response, U.S. Department of the Navy, Naval Air Station Whiting Field, Milton, Florida. Principal Engineer. Responsible for emergency response evaluation of structural soundness of buildings and facilities damaged. Facilities engineering emergency response 12 hours a day, seven days a week for several months in wake of Hurricane Ivan to provide structural and roofing assessments including asbestos, mold, and indoor air quality, and design to facilitate repairs to multiple buildings constructed in 1943 at the U.S. Navy's largest and busiest air flight training facility. Services performed as subcontractor to NAVFAC BOSS contract. No power at NAS and no commercial lodging was available within 100 miles at the time the project initiated.

World Trade Center Collapse, Confidential Client, New York, New York. Structural Engineer. Mobilized to New York City within 48 hours after the World Trade Center collapse as part of a six-man structural evaluation team. Duties included evaluating certain high-rise buildings at ground zero damaged by the terrorist attack to determine the impact on the structural integrity of the building. Quantified the extent of the damage and prepared report to the building official with a recommendation for an appropriate course of action to initiate to repair the structure and eventually re-occupy.

Architectural and Engineering Services for Design of Miter Gates, Culvert Valves, and Culvert Bulkhead at the Black Warrior Tombigbee Rivers Project, U.S. Army Corps of Engineers Mobile District, Alabama, Amec Foster Wheeler.Principal Engineer. Served as a part of Amec Foster Wheeler's Hydraulic Steel Structures program with the USACE which has included design consulting services on miter gates, culvert valves, stop logs, and pick-

Education

Bachelor of Science, Civil Engineering, University of South Alabama, 1987

Certification and training

Professional Engineer, Florida No. 72832, Alabama No. 21836

Certified Building Inspector, Florida No. BN4291

Certified Plans Examiner, Florida No. PX2031

PTI Certified Unbonded Post-Tensioning I, United States No. 1023055724

Experience

Amec Foster Wheeler: 1987

Industry: 1986

Memberships/affiliations

Building Officials Association of Florida

Software Proficiency

STAADPRO

Continued.

up beams. Performed strain gauge field data collection and finite element analysis on various structural components. Based on these assessment and analysis findings, performed, managed, and supervised teams that have reviewed and updated USACE design details and construction materials to meet current standards and to improve the operation and reliability of the components.

Jim Woodruff Lock and Dam Spillway Design/Build Rehabilitation, U.S. Army Corps of Engineers Mobile District, Chattahoochee, Florida. Principal Engineer. Performed senior structural engineering development of plans and specifications for this design/build project. The repair design generally involved the replacement of the upstream and downstream plate girders (48 total) spanning pier to pier (770 feet total). Additional scope items included replacement of bearing plates and rocker plates at piers; replacement of gantry crane rail system; replacement of standard handrail system on upstream girder; the addition of an impact barrier rail system installed on the downstream girder to allow for motorized personnel travel on catwalk; and new coating system on new and existing framing, as well as electrical work and lead-based paint abatement. During the construction phase of the project, was involved in constructability problem resolution and special inspection services.

Miter Gate Anchorage Evaluation, U.S. Army Corps of Engineers Mobile District, Holt Lock and Dam, Tuscaloosa, Alabama. Structural Engineer. Provided assistance to the USACE by field quantifying the stress in the anchorage links supporting the miter gates on the lock induced by the water loads. Work included instrumentation services consisting of attaching resistance type strain gages at strategic locations in the structural load path and measuring and recording the induced strain. Using this data, calculated material stress and identified abnormal bending stresses resulting from various causes including misalignment and uneven wear. The results of the instrumentation services provided data for an improved design as well as streamlined maintenance activities.

Facility Condition Assessments and Remediation Services at Defense Distribution Centers, U.S. Air Force Center for Engineering and the Environment/U.S. Defense Logistics Agency, Various Locations, Worldwide. Structural Engineer. Performed field evaluation and structural analysis services of the primary support system for numerous overhead material handling crane frames and jib cranes in numerous warehouse type facilities located throughout the base. Work included performing field inspections of the existing structural frames systems for signs of distress, preparing field sketches and documenting member size and dimensional parameters, performing structural analyses to determine design adequacy for its rated capacity, and preparing repair designs as needed to bring the structural support frame into code compliance. Scope included condition assessment surveys and energy audits of and remediation for facilities at approximately 40 DLA facilities covering approximately 65 million square feet worldwide. Component assessments comprise readily accessible electrical; heating, ventilating, air conditioning, roofing, structural components and paving; limited plumbing; loading dock equipment; life safety/fire protection systems; energy audits and environmental reviews; and more than 600 drawings. Electrical and engineering technicians recognized and planned for corrective actions and eliminated discrepancies found in safety audits for Defense Distribution Center, with specific focus on electrical hazards, loading dock safety deficiencies, and configuration problems. Quality control review performed for assessment management data collected for buildings. Program initially represented more than 65 million square feet of functional facility space and energy conservation projects resulting in more than 40% identified savings.

Nestor Fernandez

Construction Support - Construction Management

Relevant projects

- Collier County Facilities Management Program
- Immokalee MSTU Main Street Improvements
- Florida Keys Overseas Heritage Trail

Core skills

Managing, directing, coordinating, and administering all aspects of project management, construction oversight services, facility improvements, environmental remediation, systems operations/maintenance, construction cost estimating, and permitting

Professional summary

Mr. Nestor Fernandez is an experienced Project and Construction Manager knowledgeable in South Florida building codes and all associated laws and regulations. With more than 25 years of experience, he has participated in managing, directing, coordinating, and administering all aspects of project management, construction oversight services, facility improvements, environmental remediation, systems operations/maintenance, construction cost estimating, and permitting.

As a Program Manager and Client Representative, Mr. Fernandez's responsibilities include administering contracts for design professionals and contractors, as well as coordinating all design, permitting, and construction efforts. He also provides support in areas such as plan reviews, contract scoping, document controls, budgeting, and payment submittal reviews. He coordinates and chairs design and construction progress meetings as well as reviews, tracks, and monitors construction progress, schedules, shop drawing submittals, and RFIs and their responses. He is also responsible for reviewing requests for change orders and coordinating the review, recommendation, and approval of progress payments.

Representative projects

Eagle Creek Weir Gates Refurbishment, Collier County Stormwater Division, Florida. Contract Manager. Evaluate the condition of the flood control gates, existing hardware, and structural integrity of the weir. Perform concrete conditioning testing of the weir for the purpose of determining if the weir is capable of being retrofitted with new hardware. Develop a design package for weir upgrades and hardware retrofit. Design a maintenance parking area within their existing easement constructed out of permeable material that allow for greater infiltration of stormwater and develop plans for security fencing located on all sides of the bridge with the purpose of significantly limiting pedestrian access to the weir and the areas around the bridge. Delineate the wetland upland boundary of the riparian corridor, locate, identify, and map the mangrove species within the project area, Identify the presence of the invasive species which either are or could potentially impact flow through the project area and obtain required permitting for either the trimming or removal of impacting vegetation.

Immokalee Road Back Flow Preventer Project, Collier County, Florida. Project Manager. Collier County Public Utilities Department (CCPUD) has an existing 36-inch water main located along Immokalee Road. The purpose of the project is to install a temporary maintenance and reliability backflow assembly connection that will connect the eastern portion of the water main to the active western portion of the water main. This will allow the County to utilize the inactive 36-inch diameter water main for interim operating conditions downstream of the new assembly. The project also required installation of bell restraints along 220 linear feet of water main because of the new 36-inch by 18-inch tee with plug.

Facilities Management Assessments Phase I, Collier County Facilities Management Department, Florida. Project Manager. Performed facility condition assessments of 86

Certification and training

TIN: F655620622850

CTQP Quality Control Manager

FDOT Advanced Maintenance of Traffic

FDOT CTQP Asphalt Paving Level I

FDOT CTQP Asphalt Paving Level II

FDOT CTQP Asphalt Plant Level I

FDOT CTQP Asphalt Plant Level II

FDEP Stormwater and Sedimentation Control Inspector

NACE Coating with Cathodic Protection

Supervisors Training Course

OSHA Confined Space Entry Supervisor Training Course

OSHA 10 Hour – Construction Safety

OSHA 40 Hour – Hazardous Waste Operations Training Course

Experience

Amec Foster Wheeler: 2013

Industry: 1985

Continued.

government facilities (2 million square feet) throughout Collier County. Developed site specific inspection plans that addressed ADA, electrical, HVAC, structural, roofing, building envelope, indoor air quality, plumbing, security, low voltage, signage, pest control, and fire and safety related issues so that short- and long-term maintenance and budgeting requirements could be identified. Created baseline building assessment reports for each facility that identified its current condition, the immediate, five-year, and 10-year maintenance or replacement budgeting requirements.

T1669 – SR 78 (Pine Island Road) from Chiquita Blvd to Santa Barbara Blvd, Sidewalks/Path Project (FIN 435023-1-52-0), Lee County, Floridar. Material Testing Lab Director. Responsible for managing and monitoring the processes to ensure compliance with the contact documents. Daily activities include material testing and inspections and placement in accordance with the applicable specifications. The improvements under this contract consist of milling and resurfacing, widening, base work, shoulder treatment, curb and gutter, bike lane keyholes, sidewalks, signing and pavement marking, and lighting on State Road 78 (Pine Island Road) from Chiquita Boulevard easterly 0.858 miles to Santa Barbara Boulevard in the City of Cape Coral, Lee County.

Heritage Bay Reliability Connection Project, Collier County, Florida. Project Manager. The project was intended to provide the Heritage Bay community with a second, reliable connection to their distribution system and activate approximately 3,000 linear feet of existing 36-inch water main along the north side of Immokalee Road from just east of Quarry Drive to approximately 600 linear feet east of Heritage Bay Boulevard. The project also required installation of bell restraints along 350 linear feet of water main as a result of a new 36-inch in-line gate valve.

Palazzo Del Sol, PDS Development, LLC, Fisher Island, Florida. Project Manager. Provided geotechnical engineering and performed special inspections and CMT services for the construction at Palazzo Del Sol condominiums. The project consists of the new construction of a 1-level subgrade parking garage and 12 stories of a luxury condominium finished roof with three penthouse pool decks. The project is located at the northeast side of Fisher Island. The building is supported by large-mat foundation on top of augercast piles and utilizes a system of concrete columns and post-tensioning slabs to create a structural frame. The project also consists of site improvements, including utilities around the building, road access, curbs, sidewalks, two pool decks at the north side, one main pool deck, and amenities at the northeast side. These amenities include six cabanas east of the pool and a large-steel structure pergola south of the main building entrance. Our services included special inspections, augercast pile inspections, deep and shallow foundations, subgrade structural/engineering fill density testing, reinforcing steel, formwork, post-tensioning, cast in place concrete monitoring and testing, masonry, asphalt field density, non-destructive testing, architectural precast, trellis, railing, welding inspection, bolt connections, light gauge framing, metal sheeting, and aluminium cladding, as well as performing all operations necessary to complete the construction of the PDS towers.

PUD-Annual Fixed Ladder Inspections, Collier County Board of Commissioners, Naples, Florida. Project Manager. Performed Annual Preventative Maintenance Inspections and certification of 100 fixed ladders installed within the four water and wastewater plants in Collier County. The objective is to identify the serviceability of all fixed ladder and any required short or long term maintenance needs, provide engineered solution (Scopes of Work) to address noted compliance issues and certify after repairs.

Facilities Management Program, Collier County Public Utilities Department, Florida. Project Manager. Assisted the County in developing a facilities management program that identified 14 manned facilities within the department's control. Reviewed available maintenance records and AutoCAD files and conducted interviews with each corresponding building manager to assess existing conditions. Developed site specific inspection plans that addressed ADA, electrical, HVAC, structural, roofing, building envelope, indoor air quality, plumbing, security, low voltage, signage, pest control, and fire and safety related issues so that short- and long-term maintenance and budgeting requirements could be identified. Created baseline building assessment reports for each facility that identified its current condition, the immediate, five-year, and 10-year maintenance or replacement requirement, and provided a preventative maintenance schedule for each major system.

Immokalee Stormwater Improvements Phase II, Collier County, Florida. Project Manager. Project includes the improvements to the residential area sidewalks and stormwater conveyance system at Immokalee Drive from Carson Road to North 15th Street/ State Road 29 in the City of Immokalee. Services included installation of approximately 9,800 linear feet of sidewalk and 7,600 linear feet of ERCP and RCP ranging in size from 15 inches to 36 inches and 50 drainage structures to enhance the existing drainage system. Project also included restoration of driveways and roadways, swale re-grading, and the relocation of multiple water and wastewater utilities.

Jose N. Quiroz

Construction Support - Construction Materials Testing

Relevant projects

- Palazzo del Sol at Fisher Island CMT/Special Inspections
- Miami International Airport Satellite E Improvements CMT/Special Inspections
- Ravenswood Bus Maintenance Facility CMT

Core skills

Laboratory management, foundations, structural concrete/masonry, bridges, paving, laboratory testing, project management, Auto CAD, and Geo-system

Professional summary

Mr. Jose Quiroz has more than 17 years of experience on various public, vertical, and roadway projects. He possesses numerous certifications, including ACI, NICET Level I and II, CETCO waterproofing inspector, and Washington Area Council Laboratories (WACEL) for soil, concrete, and structural masonry. Mr. Quiroz served as project manager/field operations manager for the Dulles Corridor Metrorail Project, Phase I and II, in addition to the Capitol Place Project in Washington, D.C., which consisted of an entire block of multi high-rise residential and office building towers. His duties include special inspections, destructive and non-destructive testing, QA/QC monitoring, and coordinating contractor's activities for schedule control and work assignments, as well as reviewing field reports to ensure inspections were conducted in accordance with the project plans and specifications.

Representative projects

Palazzo Del Sol Project, Fisher Island, Miami, Florida. Project Manager. Palazzo Del Sol will be the first new condo on Miami's exclusive Fisher Island since 2007. A brand new luxury condo on the ultra-exclusive Fisher Island. This private island, which is home to America's most expensive real estate hasn't seen a new real estate development in recent years and there is a severe lack of larger residential units. Given that Palazzo del Sol will be located on Miami's most exclusive and private island we won't expect anything less than amenities such as a fur coat storages, wine collection showcases and theater rooms. Besides the luxuries of your own residence, Fisher Island offers a marina, a golf course and a private beach. Currently working as Project Manager at above mentioned project. Responsibilities as Project Manager involve structure inspections, special inspections, testing materials, specifications, QM, plan drawings review including IFC, RFI, Submittals, etc. Monitor and coordinate contractor's activities for schedule control – work assignment. Review field inspection reports; ensure the inspections are in accordance with the project plans and specifications for report preparation, certification documentation, cost, and file document control.

Satellite E Improvements, Miami International Airport, Florida. Field Operations Manager and Special Inspector. This ongoing project consists of improved construction renovation of seven Gates and eight new elevator shafts at Satellite E. It also consists of a renovation of concrete pavement on top of stabilized subgrade and resurfacing asphalt near bay area for the above mentioned gates. Amec Foster Wheeler provided the necessary engineering oversight, special inspections for drill shafts, and construction certifications required by the Miami International Airport Authority and Miami Dade County for all drilled shafts, reinforcing steel, fireproofing, density, and concrete testing. Responsible for CMT operations, coordinating activities of testing and inspections, including drill shaft, stabilization subgrade, concrete paving, asphalt paving, elevator additions and other interior terminal upgrades, and fireproofing. Responsible for reviewing field inspection reports to ensure activities are in accordance to the project specifications, certification, and document control.

amec foster wheeler

Education

Bachelor of Science, Architecture, Universidad Mayor de San Simon, 1997

Certifications and training

WACEL Soils I, Concrete Level II Technician, Foundations, Soils Laboratory, Concrete Laboratory, Structural Concrete-Masonry

ACI Concrete Field Technician I

VDOT Concrete Field Technician

CETCO Waterproofing Inspector

NICET Level I and II

Experience

Amec Foster Wheeler: 2015

Industry: 1998

Continued.

Construction Services for the Dulles Corridor Metrorail Projects (Silver Line), Metropolitan Washington Airports Authority. **Project Manager.** The Dulles Corridor Metrorail Project is a 23-mile extension of Washington's existing Metrorail System. It is being built in two phases by the Metropolitan Washington Airports Authority (MWAA). Phase 1 of the new line opened on July 26, 2014, connecting East Falls Church with Tyson's Corner and Reston, Virginia's largest employment centers, with downtown Washington and Largo, Maryland. Known as the Silver Line, the extension is operated by the Metropolitan Washington Area Transit Authority (WMATA). Phase 2 will include six stations along 11.4 miles from the Wiehle-Reston East Station to Ashburn. Responsibilities included structure inspections; special inspections; testing of materials; review of specifications; quality management (QM); and plan and drawing reviews, including invitations for proposals (IFPs), requests for information (RFIs), and other submittals. Monitored and coordinated contractor's activities for schedule control and work assignments. Reviewed field reports and ensured inspections were in accordance with project plans and specifications.

Terra Centre Elementary School Addition and Renovation, Fairfax County Public Schools, Architect: Stanmyre Noel Architects, Burke, Virginia. **Field Operations Manager/Senior Special Inspector.** The Terra Centre Elementary School project included additions and renovations that totaled 20,500 square feet of the existing 68,500-square-foot occupied school. Responsible for general contractor's project control and coordination. Performed construction inspections for foundations, sub-grade, building pads, utilities, soil bearing, reinforcing steel, masonry, floor flatness, non-destructive testing, structural fill, base, surfacing and paving, and impervious concrete. Also performed quality control; cost document control; review of drawings, submittals, and inspection reports. Reviews to ensure all inspections and construction activities were conducted in accordance with project plans and specifications

Thoreau Middle School Addition and Renovation, Fairfax County Public Schools, Little Diversified Architectural Consulting, Vienna, Virginia. **Field Operations Manager/Senior Special Inspector.** Project consisted of a complete renovation, including a 3-story classroom addition, auxiliary gym addition, and an administrative/front entrance addition. Responsible for general contractor's project control and coordination. Performed construction inspections for foundations, sub-grade, building pads, utilities, soil bearing, reinforcing steel, masonry, floor flatness, non-destructive testing, structural fill, base, surfacing and paving, and impervious concrete. Also performed quality control; cost-document control; review of drawings, submittals, and inspection reports. Reviews to ensure all inspections and construction activities were conducted in accordance with project plans and specifications

Capitol Place, Washington, D.C. **Field Operations Manager/Senior Special Inspector.** Capitol Place is a 10-story, multi-high rise, mixed-use residential building that encompasses one city block in Washington, D.C. Responsible for inspection operations, coordination of general contractor's activities, and performing special inspections, including sheeting and shoring, tie backs, piles, mat foundations, floor flatness, waterproofing, and non-destructive testing during construction. Also responsible for review of drawings, RFIs, submittals, and field inspection reports in order to meet project plans and specifications.

Pharmacy and Store Master Contract, Walgreens, Northern Virginia. **Field Operations Manager.** The contract included new construction of buildings and parking lots in northern Virginia area. Managed construction activities, including sub-grade, building pads, foundations, slab on grade, floor flatness, masonry, surface coefficient of friction, gloss surface, sub-base, and paving. Responsibilities also included coordinating and monitoring the general contractor's work, drawings, submittal specifications, RFIs, and field inspection reports to ensure activities were in accordance to project specifications. Provided cost and document control.

Medical Office Building and Parking Garage Addition, Sibley Memorial Hospital, Washington, D.C. **Operations Manager.** The project included a mixed-used 141,000-square-foot, six-story patient care center and medical office building, as well as an adjacent 223,000-square-foot, five-story parking garage that includes 733 parking spaces. Responsible for coordinating and monitoring general contractor's activities. Responsibilities also included structural inspections, as well as inspections for mat foundations, retaining walls, waterproofing, and floor flatness. Reviewed drawings and specifications in field inspection reports to ensure activities were in accordance to the project's specifications.

Santiago Jimenez, AIA, LEED AP

Architecture

Relevant projects
- Miami Gardens Municipal Complex
- Ives Estates Park Youth Ballfied
- Trail Glades Park

Core skills
Design development, code and zoning compliance, specifications, construction documents, bidding assistance, and shop drawing

Education
Master of Architecture, Suburb and Town Design, University of Miami, 2006

Bachelor of Arts, Architecture, Cristobal Colon University, Veracruz, Mexico, 1995

Professional qualifications/ registration(s)
Registered Architect, Florida No. AR94369

Licensed Architect, Mexico

LEED Professional Accreditation

Experience
Amec Foster Wheeler: 2014

Industry: 1996

Memberships/affiliations
American Institute of Architects

U.S. Green Building Council

Professional summary

Mr. Santiago Jimenez is a licensed architect with more than 20 years of experience as a project manager and architect for large-scale cruise terminals, commercial, industrial, recreational, and institutional projects. He has extensive experience in managing projects, developing contract documents, and on-site construction observation.

As a project manager, he has been responsible for all phases of design and construction, including design development, code and zoning compliance, specifications, construction documents, bidding assistance, and shop drawings, as well as review and construction administration for large-scale transportation, commercial, institutional, and industrial projects. As an architectural group leader, he has also been responsible for the supervision of personnel and financial and resources management.

Mr. Jimenez's project experience includes an aquatic park, trails, gun range, zoo facilities, and site improvements for the Miami-Dade County Parks Department; government facilities for the City of Miami Gardens, as well as numerous projects for port and marine facilities. He has provided design and construction services for several state-of-the-art cruise ship terminals, including the Port of Miami and other major seaports in the United States and internationally.

Representative projects

Miami Gardens Municipal Complex, Miami, Florida. Project Manager. Provided design services and construction document preparation for the new municipal complex in the City of Miami Gardens. The project included a city hall, police building, and a multi-story parking garage. The project incorporates sustainable design and state-of-the-art green technology to achieve a LEED Platinum certification by the USGBC. The work was scheduled for completion in phases with Phases 1 demolition completed in October 2011. The construction budget was $39 million and work was completed in fall 2013.

Ives Estates Park Youth Ballfied, Miami-Dade Parks and Recreation Department, Miami, Florida. Project Manager. Provided complete architectural services for a 3,000-square-foot recreational facility, which included meeting rooms, offices, restrooms, and a snack bar. A lighted parking lot for 437 vehicles, two lighted and irrigated baseball fields, an irrigated soccer field, and storage for both athletic equipment and scooters were also included in this project. A gas methane mitigation and management system was implemented since the property is located on a former landfill.

Trail Glades Park, Miami-Dade County Parks and Recreation Department, Miami, Florida. Project Manager. The project included the restoration and improvement of an existing shooting facility in western Miami-Dade County. The project's scope included environmental clean-up, environmental permits, design upgrades to existing ranges, development of new ranges and club house, new RV parking, and upgrades to existing parking facilities to make

Continued.

the site handicap accessible. The work was completed in phases with Phase I successfully completed on schedule in winter 2010. Phase II was completed in spring 2013. Services included design development, construction documents, permitting, and architectural and engineering construction administration for the project. As part of the construction administration services, also coordinated and monitored the design work with the construction contractors, responded to RFI, reviewed shop drawings, and reviewed payment requisitions.

Muvico Theater Parking Garage, Boca Raton, Florida. Project Manager. Provided construction documents for a two-story, 103,000-square-foot parking garage capable of accommodating 575 vehicles. The design featured pre-cast and pre-stressed concrete and was designed to complement the Moorish theme of the complex.

Parking Garage for Cruise Terminal 8 and 9, Port of Miami, Florida. Project Manager. Provided design development, including drawings and specifications, for a design-build parking facility. The parking facility will accommodate 1,600 vehicles within four levels, including an adjacent surface parking lot for tall vehicles.

Zoo Miami Improvements, Miami-Dade County Parks and Recreation Department, Miami, Florida. Project Manager. Provided design services to implement zoo-wide improvements and master plan recommended expansion for the new "Florida Exhibit." The scope of services included professional architectural and engineering services, such as civil, structural, mechanical/plumbing, electrical, landscape, and interpretive design services. Services also included programming, schematic design, design development, construction document development, construction administration, and bidding and award assistance. The construction budget is $34 million and construction is scheduled for completion by spring 2015.

Amelia Earhart Park, Aquatic Complex and Park Improvements, Miami Dade County Parks and Recreation Department, Miami, Florida. Project Manager. The work includes the review and coordination of environmental, ecological, and archaeological services to develop the property into a family-orientated water-park and mountain bike facility. The proposed facilities include a water park with lazy river; water splash area; water slides; wave pool with supporting locker/restrooms; administration areas; concession areas; and a mountain bike facility. The construction budget is $8 million and construction work is scheduled for completion by fall 2014.

North Trail Park, Miami-Dade Parks and Recreation Department Miami, Florida. Project Manager. Completed architectural services for a 4,450-square-foot recreational facility, which included multipurpose rooms, a game room, an arts and crafts room, offices, a restroom, and a kitchen. Storage for athletic equipment was also designed.

Bird Lakes Park, Miami-Dade Parks and Recreation Department, Miami, Florida. Project Manager. Provided complete architectural services for a 3,000-square-foot, one-story recreation building that included a kitchen facility, snack bar, restrooms, meeting room, and mechanical and storage areas, as well as a lighted parking lot and a 800-square-foot covered open area.

Eureka Villas Park, Miami-Dade Parks and Recreation Department Miami, Florida. Project Manager. Provided complete architectural services for a 3,000-square-foot, one-story recreation building that included a kitchen facility, snack bar, restrooms, meeting room, and mechanical and storage areas, as well as a lighted parking lot and a 800-square-foot covered open area.

U.S. Postal Service Roof Replacement Program, Various Sites, Florida. Project Manager. Performed a comprehensive roof condition assessment for 35 facilities in Florida and New York state. Provided recommendations for roof repair and replacement including life cycle cost analysis, energy calculations and wind calculations. Prepared procurement documents including drawings, specifications and cost estimate. Scope of work included bid assistance, construction administration and construction observation. Provided drawings for partial or total demolition of the roofing system.

U.S. Postal Service Site Improvements Projects, Various Sites Florida. Project Manager. Performed a site investigation of the parking lots conditions on 12 USPS facilities across the country. Provided recommendations, life cycle cost analysis and design including drawings and specifications for pavement replacement, repairs and site improvements. The project also included partial or total demolition of the existing pavement. Performed bid assistance and construction administration for these projects.

Robert M. Draper, RA

Architecture

Relevant projects

- Collier County Facilities Condition Assessment
- Village of Islamorada/Monroe County Wayfinding Sign Design
- City Hall and Police Headquarters Design-Bid-Build

Core skills

Architecture, ADA compliance, construction documents, permitting, construction management, cost estimating, peer review, and architectural visualization

Education

Bachelor of Architecture, Florida Atlantic University, 2004

Bachelor of Architecture Design, Florida International University, 2002

Professional qualifications/ registration(s)

Registered Architect, Florida No. AR96257

Experience

Amec Foster Wheeler: 2016

Industry: 1996

Professional summary

Mr. Robert Draper has more than 20 years of experience designing large-scale commercial, industrial, and public projects. He has extensive experience in developing construction documents, permitting, and on-site construction observation. Additionally, he has experience in construction management, cost estimating, peer review, and architectural visualization.

Representative projects

Facilities Condition Assessment, Collier County, Florida. Architect/Inspector. Responsible for conducting an on-site condition assessment of 84 county facilities and providing a comprehensive condition report for each. These reports included cost estimates for major items deemed in poor to fair condition. Additionally, the reports included a photo log and description of all deficiencies and maintenance items. Duties included evaluation of the building envelope, plumbing, electrical, HVAC, structural integrity, and building finishes. The output provided information to the county that was used as a planning tool for short- and long-term maintenance budget requests and planning.

Village of Islamorada/Monroe County Wayfinding Sign Design, Monroe County, Florida. Architect/Designer. Provided study/design of a wayfinding signage that reduced signage clutter along U.S. 1 by developing an approach that recognizes the uniqueness of the corridor, provides identification for the communities, supports local businesses, and conveys important information to motorists and public at large, visual continuity between all elements: the portal signs for the north and the south ends of the scenic highway, gateway elements announcing arrival at the constituent communities, and directional signage for public amenities (boat launches, parks, shopping areas, etc.) and historical features.

City Hall and Police Headquarters Design-Bid-Build, City of Miami Gardens, Florida. Architect. Provided design and construction services, including document preparation for this new municipal complex. The project included a city hall, a police building, and a multi-story parking garage. Sustainable design and state- of-the-art green technology was incorporated to achieve a LEED Platinum certification by USGBC.

Zoo Miami Improvements, Miami-Dade County Parks and Recreation Department, Miami, Florida. Architect. Provided design services necessary to implement zoo-wide improvements and master plan recommendation expansion for the new "Florida Exhibit." The scope of services included professional architectural and engineering services, such as civil, structural, mechanical/plumbing, electrical, landscape, and interpretive design services. The project also included programming, schematic design, design development, construction document development, construction administration, bidding, and award.

Continued.

Pre-Trail Detention Center Kitchen Renovation Peer Review, Miami-Dade County Corrections Department, Miami, Florida. **Architecture.** Project included a peer review of the architectural/engineering design for the detention center kitchen, loading dock, and courtyard. Duties included QA/QC and value engineering of the construction documents at various phases.

Ives Estates Park Youth Ballfield, Miami-Dade County Parks and Recreation Department, Miami, Florida. **Architect.** Provided complete architectural services for a 3,000-square-foot recreational facility, which included meeting rooms, offices, restrooms, and a snack bar. Also included in this project was a lighted parking lot for 437 vehicles; two lighted, irrigated baseball fields; an irrigated soccer field; and storage for both athletic equipment and scooters. A gas methane mitigation and management system was implemented since the property is located on a former landfill.

Amelia Earhart Park, Aquatic Complex and Park Improvements, Miami-Dade County Parks and Recreation Department, Miami, Florida. **Project Architect.** The project included the development of approximately 100 underutilized acres in the northern section of an existing park in the county park system. Work included the review and coordination of environmental, ecological, and archaeological services in the development of the property into a family-orientated water park and mountain bike facility.

Dock Master Building at Pelican Harbor Marina, Miami, Florida. **Architect.** Provided design development and construction documents for a two-story, 3,500-square-foot office building for the operations of the dock master's marina. The project included offices, a multipurpose room, a laundry, showers, and site improvements. The dock master building is the only building incorporated in this project and conforms to a streamline modern style of art deco.

North Trail Park, Miami-Dade County Parks and Recreation Department, Miami, Florida. **Architect.** Provided complete architectural services for a 4,450-square-foot recreational facility, which included multipurpose rooms, a game room, an arts and crafts room, offices, a restroom, and a kitchen. Storage for athletic equipment was also designed. Services included design development, construction documents, permitting, and construction administration for the project. As part of the construction administration service, the design work was coordinated and monitored with the construction contractors, as well as review of shop drawings and payment requisitions.

Bird Lakes Park, Miami-Dade County Parks and Recreation Department, Miami, Florida. **Architect.** Provided complete architectural services for a 3,000-square-foot, one-story recreation building. The building included a kitchen facility, a snack bar, restrooms, a meeting room, and mechanical and storage areas, as well as a lighted parking lot and an 800-square-foot covered open area.

Eureka Villas Park, Miami-Dade County Parks and Recreation Department, Miami, Florida. **Architect.** The project included complete architectural services for a 3,000-square-foot, one-story recreation building. The building included a kitchen facility, snack bar, restrooms, meeting room, mechanical and storage areas, as well as a lighted parking lot and 800-square-foot covered open area.

Port of Miami Parking Garage for Cruise Terminal D, Miami, Florida. **Architect.** Responsibilities included construction documents and permitting assistance for a four-story, 750-vehicle parking facility. The facility was designed with precast and pre-stressed concrete.

North Dade Optimist Park, Miami Gardens, Florida. **Architect.** Complete architectural services for a 2,700-square-foot recreational facility, which included meeting rooms, offices, restrooms, and a snack bar. The project also included a lighted parking lot for 114 vehicles; a lighted, irrigated football field; and a new perimeter fence.

Snake Creek Trail Visual Rendering, Miami, Florida. **Architect.** Services included the design of bicycle trail enhancements, including geometrical re-alignment of trail segments, sidewalk ramps, pavement markings, and regulatory signs. Duties included preparation of engineering plans, site details, sign data tables, and project specifications. Provided construction administration services, including supervision, technical inspection, project reports, and punch list.

Biscayne Trail Visual Rendering, Miami, Florida. **Architect.** Services included the design of bicycle trail enhancements, including geometrical re-alignment of trail segments, sidewalk ramps, pavement markings, and regulatory signs. Duties included preparation of engineering plans, site details, sign data tables, and project specifications. Construction administration services were also provided, including supervision, technical inspection, project reports, and punch list.

Ricardo Fraxedas, PE

Environmental/Permitting - Environmental Services

Relevant projects

- Monroe County Residential Canals Inventory, Water Quality Assessment, and Geographical Information System Services
- Miami-Dade County Aviation Department Opinion of Cost

Core skills

Environmental regulatory affairs and resolution of environmental issues for commercial and government clients; assessments, remediation, and litigation support

Education

Master of Science, Environmental Engineering, University of Florida, 1977

Bachelor of Science, Microbiology, University of Florida, 1975

Professional qualifications/ registration(s)

Professional Engineer, Florida No. 43287

Certifications and Training

Qualified Stormwater Management Inspector, Florida No. 25665

Experience

Amec Foster Wheeler: 2003

Industry: 1979

Professional summary

Mr. Ricardo Fraxedas is a Chief Engineer with 37 years of environmental engineering experience. He has an extensive background in environmental regulatory affairs and resolution of environmental issues for commercial and government clients. He has been responsible for assessments, remediation, and litigation support for a variety of industries and sites, including airports, fuel terminals, manufacturing facilities, educational facilities, and waste disposal sites in the United States, Caribbean, and Latin America. He has authored articles and presented numerous lectures on environmental consulting, site assessments, design of remediation systems, and environmental regulatory compliance and sustainability. He has also served as an expert witness on various environmental compliance, remediation, and permitting matters and has provided review and interpretation of Latin American environmental regulations for multi-national clients.

Prior to joining Amec Foster Wheeler, Mr. Fraxedas served as the head of the hazardous materials section for Miami-Dade County, Florida. In this role, he authored the county's underground storage tank regulations and industrial waste pretreatment regulations. He was responsible for the investigations and remediation of contaminated sites, including one of the first Superfund cleanups to be completed.

Representative projects

Residential Canals Inventory, Water Quality Assessment, and Geographical Information System Services, Monroe County Marine Resources Department, Florida. Program Manager. Services included inventory and assessment to determine physical characteristics of water in canals in residential areas of the Florida Keys. The program included review of existing data and setup of a GIS database and metadata file of information on the canal system. Since the initial services, the program has expanded to the current evaluation, selection, and installation of demonstration technologies to improve the water quality in selected Monroe County Canals. Mr. Fraxedas participated in outreach programs to disseminate information to homeowners and residents to explain the goals of the program and educate residents on Best Management Practices to prevent water quality degradation in their canals. Mr. Fraxedas has been active in meeting with individual homeowners, County staff, and other stakeholders to explain the program goals and address issues and concerns dealing with the implementation of the various program components. As the program manager, Mr. Fraxedas has been involved in the technology evaluation and selection as well as the oversight of technology installation permitting and construction projects.

Opinion of Cost, Miami-Dade County Aviation Department, Miami, Florida. Program Manager. Reviews cost projections for anticipated environmental remediation to the County and provides guidance and addresses questions from the county's financial auditors. Provides consulting services to document the costs spent on environmental projects at Miami International Airport (MIA), and to project the cost of moving forward with assessment and remediation at the airport. The project initially was focused on a consent agreement between Miami-Dade County Aviation Department (MDAD) and the local regulatory agency, Miami-Dade Department of Environmental Resources Management (DERM). The project

Continued.

evolved from the initial scope, which projected cleanup levels of soil to "clean fill" and cleanup of groundwater to Florida drinking water standards (Chapter 62-550) of the Florida Administrative Code.

Environmental Services, Beckman Coulter, Hialeah, Florida. Project Manager. As key client contact, provided client communications and reviewed and sealed engineering submittals to the regulatory agencies. Provided environmental services at various sites in Hialeah, Florida. Projects included the spill cleanup for a 1,000-gallon diesel fuel release from an above ground storage tank at Building 740. Excavated and disposed of approximately 2,100 tons of impacted soils, and 25,000 gallons of petroleum contact water, and restored the site. Performed post source removal site assessment for soil and groundwater delineation and prepared source removal and site assessment reports. Additional projects included air samples for lead dust and mercury and a Phase II ESA to evaluate the potential impacts from paint cleaning solvents and assessment of the former underground wastewater pretreatment tank.

Las Olas Boulevard Groundwater Monitoring, City of Fort Lauderdale, Florida. Project Engineer. Performed quarterly monitoring events to monitor isopropylbenzene and polynulear aromatic hydrocarbons in the groundwater. Prepared a RAP for removal of contaminated soil to expedite the remediation process to construct a proposed replacement pump station. Assisted the City with bid specifications for the bid package for the construction of the pump station and handling of contamination. It included site safety, environmental issues such as free product and contaminated soil, contaminated water dewatering, surface water controls, environmental permitting, and waste handling, etc. **Reference:** Larry Teich, Project Manager, 954.828.7844, lteich@fortlauderdale.gov.

Chick-Fil-A Site, Bank of America, Fort Lauderdale, Florida. Project Engineer. Performed supplemental ESAs at the 20,000 square-foot parking lot for Bank of America. Petroleum hydrocarbon discharges were discovered during due diligence activities for a potential real estate transaction. The Phase II investigation identified Benzo(a)pyrene (BaP) in soil, and benzene and xylenes in groundwater at levels exceeding the regulatory limits. Submitted the discharge notification to Broward County and performed additional soil and groundwater assessments.

Environmental Services at a Former FPL Site, Miami-Dade Aviation Department, Miami, Florida. Project Principal/Project Engineer. Installed several groundwater delineation monitoring wells in the airside and landside portion of MIA. Site access for drilling was coordinated with MIA airside operations and airport tenants. Prepared and submitted quarterly groundwater monitoring reports for arsenic. Also prepared a draft covenant for Institutional Controls running with the land to Miami-Dade County Department of Regulatory and Economic Resources (RER) to qualify for a No Further Action (NFA) with Conditions Closure for groundwater at the site. **Reference:** Rod Buenconsejo, Project Manager, 305.876.0268, rbuenconsejo@miami-airport.com

Permitting Services, American Tire Recycling Group, LLC, Miami, Florida. Project Manager/Project Engineer. Provided assistance in permitting the tire collection, shredding, and recycling facility. The permitting effort required coordination between DERM, the Miami-Dade Solid Waste Department, and FDEP. Worked closely with the facility architect and the shredding equipment suppliers in order to create a facility that would be approvable. Research was performed and presentations were made to the applicable agencies to show that the facility would be a legitimate recycler and not a transfer or disposal facility.

Various Environmental Projects, Chevron Environmental Management Company, Latin America and the Caribbean. Principal Engineer. Services provided include ESAs, remedial system design, site remediation, and interaction with regulatory agencies in several countries. Awarded a "Best in Class Performance" service award from Chevron in 2011. As part of the services for one of the sites in Nicaragua, a presentation to the Supreme Court in Managua was provided in Spanish to establish the appropriate cleanup protocol. Projects included:

- Jamaica ECR Sites, Jamaica
- Texaco Pollyberg, St. Thomas
- Texaco Tabarre, Port-au-Prince
- Paramaribo (Suriname) Site Remediation, Paramaribo
- Grand Cayman Island Groundwater Sampling and Site Remediation, George Town, Grand Cayman
- Coenesa Generacion Site Assessment, Rio Dulce

Jeremy M. Paris, PWS

Environmental/Permitting - Permitting

Relevant projects

- Monroe County USEPA Grant Water Quality Improvement
- Florida Keys Overseas Heritage Trail Restorations

Core skills

Environmental services, biological assessments, wetland delineation, wetland determinations, species identification, and mangrove protection

Education

Master of Science, Wetland Ecology, University of Florida, 2005

Bachelor of Science, Plant Science, University of Tennessee, 2001

Professional qualifications/ registration(s)

Professional Wetland Scientist, No. 2306

Certifications and training

USACE-approved Indigo Snake Monitor

USACE-approved Bird Monitor

Experience

Amec Foster Wheeler: 2009

Industry: 2005

Professional summary

As a project manager and senior biologist with Amec Foster Wheeler, Mr. Jeremy Paris is a valuable resource in a range of environmental services, compliance, ecological permitting, and biological assessments. Mr. Paris has a portfolio of a coastal biologist for Monroe County, South Florida and Southwest Florida Water Management Districts, United States Department of Defense, and the National Oceanic Atmospheric Association.

As a project manager, he has been responsible for all phases of environmental projects, including ecological assessment and permitting, research and development, civil design, including design development, as well as environmental compliance for large-scale transportation projects.

As a senior scientist, Mr. Paris' responsibilities include technical writing, research, and review of regulatory statutes; vegetative restoration; hydrologic restoration; sensitive aquatic resource assessments; wetland determinations; species identification; and mangrove protection. Mr. Paris regularly develops and participates in coastal water and sediment quality studies, stormwater, groundwater, effluent, and soil sampling.

Representative projects

USEPA Grant Water Quality Improvement, Monroe County, Florida. Project Manager/ Senior Biologist. On behalf of Monroe County and the NOAA Water Quality Canal Subcommittee, wrote a grant to fund the collection of sediment and water quality data from within the Florida Keys National Marine Sanctuary. The EPA awarded the grant in August 2016. Conducting two separate scopes of work for the purpose of characterizing water quality and sediment quality in the Florida Keys canals located within sanctuary boundaries. Sediment cores (135 cores) are being collected from 15 canals using a piston core sampler deployed from a mini-barge. The sediment cores will be characterized, sampled, and analyzed for a host of parameters to determine the presence or absence of contamination. Water quality is monitored along a depth profile in 312 canals using a multi-parameter meter. Dissolved oxygen, temperature, salinity, and conductivity are being measured to determine the locations of anoxic zones within the marine sanctuary.

Florida Keys Overseas Heritage Trail Restorations, Florida Department of Environmental Protection, Monroe County, Florida. Wetlands Scientist. Developed pre-construction plans for the restoration of three disturbed sites located within the Crocodile Lake National Wildlife Refuge. The plans were a U.S. Fish and Wildlife requirement for the loss of wood rat habitat as part of the trails project. Designed the planting plan and invasive species management plan. Provided biological monitoring during the construction.

USEPA Grant Water Quality Improvement, Monroe County, Florida. Project Manager. Assisted Monroe County in writing the 2015 water quality grant. Conducted four separate scopes of work for the purpose of identifying alternative methods of improving water quality in Monroe County residential canals as well as identifying funding mechanisms for development of a countywide restoration program. The aforementioned studies included

Continued.

the following: 1) A method for conducting sediment washing to reduce sediment salinity concentrations in canal sediments with application to future dredge projects; 2) Conceptual designs for three alternative technologies for in-situ organic sediment treatment with associates engineering cost estimates; 3) Conceptual designs for the top three alternative technologies for improvement of canal water quality; and 4) Completion of a business plan, which will provide the County with a practical guide to achieving its strategic goals for funding future canal water quality improvement projects.

Canal Master Plan (Phase I and II) Water Quality Monitoring and Biological Evaluation, Monroe County, Florida. Field Scientist. Conducted water quality monitoring and limited biological assessments on several hundred canals throughout Monroe County, Florida. During phase I, utilized data sets developed during canal visits as well as existing information to rank a subset of canals for potential restoration.

Ecological Evaluations and Permitting Services, All Aboard Florida High Speed Passenger Rail, South Florida. Senior Biologist. Led a team of scientists, engineers, and public policy experts for the purpose of completing the permitting phase of the high speed passenger rail project. Responsible for obtaining permits from the United States Coast Guard, United States Army Corps. Of Engineers, South Florida Water Management District, and St. Johns Water Management District. Conducted in-water benthic surveys for 16 railroad bridges along Florida's east coast for the purpose of identifying sensitive aquatic resources and assessment of the North South corridor for wetland resources and threatened and endangered species. Served as the prime author of the environmental permit sections dedicated sensitive aquatic resources, wetlands, and the protection of state and federally-listed threatened and endangered species (i.e. smalltooth sawfish, West Indian manatee, and numerous species of sea turtles). Responsible for coordinating the Section 7 endangered species consultation with both NOAA Fisheries and USFWS. Served as the co-author of the Endangered Species and Biological Assessment submitted to NOAA and the Biological Assessment submitted to USFWS. Primary author of the Environmental Impact Statement (EIS) Technical Memorandums on Public Utilities and Energy Consumption and co-author of the EIS Tech Memo titled Summary of Impacts Cumulative. Participated in the EIS public scoping events for Miami-Dade and Broward Counties. Currently serves the project by providing guidance to the design-build team on environmental compliance issues.

Gulf of Mexico Regional Environmental Baseline Study – Phase I, AMEXHI Senior Biologist/Deputy Project Manager. Assisted in the management of the project and was responsible for reviewing deliverables before their submittal to the group's members. In addition, was the primary author of the Gap Analysis performed on the Preliminary Environmental Baseline Study Report.

Eagle Creek Weir, Collier County, Florida. Project Manager/Senior Biologist. Conducted structural testing of the Eagle Creek Weir, evaluated and designed the weir's flood control gates and hardware, designed an employee service access area with security fencing, performed an assessment of the environmental conditions for SFWMD and USACE permitting, and reviewed existing hydrologic studies to evaluate the weir's current elevation to prevent flooding. Prepared the documentation for USFWS consultation for the federally-listed bonneted bat.

Canal Demonstration Projects, Monroe County, Florida. Senior Biologist. Performed wetland, benthic (seagrass, coral, and sponges), and sediment surveys as part of the projects design and permitting (local, state, and federal). Developed and presented an outreach presentation for three public scoping meetings that were attended by representatives from both public and private sector. Primary author of the Biological Assessment and Essential Fish Habitat reports which were submitted and concurred on the USFWS and NMFS PRD and HCD, respectively. Completed and submitted permit applications to USACE, NOAA National Marine Sanctuary, and the South Florida Water Management District.

Threatened and Endangered Species Surveys, MacDill Air Force Base, Tampa, Florida. Field Scientist. Performed protected species surveys for the Florida mouse and bald eagle. The ecological services included migratory bird surveys within beach and coastal ecosystems. Additional services included nesting surveys for bald eagle fledglings, delineation of mangrove forests, and identification of migratory birds.

Beth L. Howard, EI

Environmental/Permitting - Permitting

Relevant projects

- Former Broyhill Furniture Company Conover Plant
- Environmental Services at Former Cardinal Chemicals Facility
- TSG Finishing Plant

Core skills

Environmental site assessments. soil and groundwater remediation, and groundwater monitoring

Education

Bachelor of Science, Environmental Engineering, University of Florida, 2012

Professional qualifications/ registration(s)

Engineer Intern

Experience

Amec Foster Wheeler: 2015

Industry: 2012

Professional summary

Ms. Beth Howard is a graduate from the University of Florida and has more than three years of experience in the environmental consulting field. Her primary responsibilities as an engineer at Amec Foster Wheeler include Phase I and II environmental site assessments (ESAs); conducting groundwater, soil, soil-gas, and indoor air sampling events; and supervising underground storage tank removals and soil excavation activities. She also has extensive experience with dam observations in support of assessing dam stability. Her fieldwork experience has primarily been in Florida, Georgia, North Carolina, South Carolina, New York, and New Jersey.

Representative projects

Former Broyhill Furniture Company Conover Plant, Conover, North Carolina. Staff Environmental Engineer. Provided various environmental consulting services at the former Broyhill Furniture Company Conover Plant. Services at the site included soil-gas boring installation and sampling in general accordance with the North Carolina Department of Environment and Natural Resources (NCDENR), Division of Waste Management (DWM) Vapor Intrusion Guidance. Responsible for reviewing workplans for the delineation of contamination via soil-gas sampling and preparing report deliverables in accordance with workplans.

Environmental Services, Former Cardinal Chemicals Facility, Greensboro, North Carolina. Staff Environmental Engineer. Services included delineation and removal of soils impacted by select pesticides and herbicides at the Former Cardinal Chemicals Facility. Disposal area is 30 feet long by 20 feet wide and waste materials were worked into the soils to a depth of approximately 13 feet below ground surface. Responsible for supervising and conducting the delineation and excavation of approximately 800-tons of impacted soils, conducting waste-characterization sampling of on-site soil stockpiles, conducting post-excavation confirmation soil sampling activities, and preparing report deliverables.

Groundwater Monitoring, Sampling and Reporting and System O&M, Confidential Client, Union, South Carolina. Staff Environmental Engineer. Responsible for supervising the installation of groundwater monitoring wells, conducting groundwater sampling events, and preparing report deliverables. The project included environmental services related to the delineation, sampling and monitoring of volatile organic compound (VOC)-impacted groundwater resulting from historic on-site activities. Conducted an Air Sparge AS11-13 installation and utilization in 2014.

TSG Finishing Plant, Soil Assessment and Groundwater Monitoring, Conover, North Carolina. Staff Environmental Engineer. Responsible for supervising the installation of groundwater monitoring wells, conducting soil and groundwater sampling events, and preparing report deliverables. The project included a groundwater assessment on a 3.14-acre parcel of land containing an approximate 48,000-square-foot synthetics finishing plant. Samples were taken from six monitoring well locations in order to determine the concentrations of VOCs found in the groundwater by EPA Method 6200.

Continued.

Groundwater Remediation, Charlotte Gateway Village, LLC, Charlotte, North Carolina. Staff Environmental Engineer. The project included operations, maintenance, and monitoring of the permanent dewatering treatment system. Assisted client in NPDES permitting and maintained compliance with NPDES permit by performing operator-in-responsible-charge (ORC) inspections, monitoring, and reporting. Provided monthly system inspection visits by a certified ORC and monthly discharge monitoring reports to the NCDENR for a three-year period. Amec Foster Wheeler provided consulting services regarding water quality issues for use of reclaimed groundwater for the facility's cooling towers as part of a LEED initiative for LEED Gold for Existing Buildings: Operations and Maintenance certification for the Gateway Village 900 building. Managed financial aspects of the project and acted as primary client contact.

Wastewater Treatment Plant and Former Drum Cleaning Area - Elkin, CMI Industries, Elkin, North Carolina. Staff Environmental Engineer. Provided services to address environmental contamination at the CMI Wastewater Treatment Plant and Former Drum Cleaning Area site, which is part of a multi-parcel textile mill complex. Services included soil and surface water sampling, installation of two monitoring wells, sampling and analysis of the monitoring wells, removal of the remaining silt fence, and a risk-based RAP addendum report for the Former Drum Cleaning Area site.

Environmental Services, Confidential Client, New York, New York. Staff Environmental Engineer. Responsible for preparing workplans for the delineation of petroleum contamination via sampling of soil, groundwater, sediment, sub-slab soil-gas, and indoor air; supervising the installation of groundwater monitoring wells; conducting soil, groundwater, sediment, sub-slab soil-gas and indoor air sampling in accordance with workplans; and preparing report deliverables. The project included environmental services conducted at the 125th Street branch of Columbia University in New York City.

Phase I Environmental Assessments, Confidential Client, New York and New Jersey. Staff Environmental Engineer. Responsible for conducting Phase I ESAs and preparing report deliverables. The project included Phase I ESAs for approximately 30 retail service station and petroleum/home heating oil storage and distribution properties located in two states in the Northeastern U.S. (New York and New Jersey), completed within six months.

R. Michael Jones, PLS, CFedS

Survey and Mapping

Relevant projects

- SR 5 (U.S. Highway 1) Subsurface Utility Engineering Services
- Pine Hills Recreation Trail Phase II Evaluation and Review

Core skills

Survey management, project planning, estimating, implementation, geodetic control surveys, engineering design surveys, subsurface utility surveys, bathymetric surveys, and boundary determinations

Professional summary

Mr. Michael Jones is a Senior Principal Surveyor and Project Manager as well as a registered Professional Land Surveyor with more than four decades of professional experience in surveying and mapping. He is extremely proficient in all aspects of survey management, including project planning, estimating, and implementation. He has specific expertise in the areas of geodetic control surveys, engineering design surveys, subsurface utility surveys, bathymetric surveys, and boundary determinations. He has managed surveying and mapping projects for government agencies at the local, regional, and state levels, including SWFWMD, SFWMD, Tampa Bay Water, USACE, and FDEP.

Representative projects

SR 5 (U.S. Highway 1) Subsurface Utility Engineering Services, Florida Department of Transportation District 6, Key West, Florida. Project Manager. Provided SUE services along Florida SR 5, also known as U.S. Highway 1 or the "Overseas Highway" in Monroe County. Services included location, verification, and mapping of a 24-inch water main that supplies the Florida Keys to support roadway design. Responsible for overseeing project, signing, and sealing final documents.

Pine Hills Recreation Trail Phase II Evaluation and Review, Orange County Parks and Recreation Department, Orlando, Florida. Project Manager. Responsible for review and evaluation of title work for 3.5-mile recreational trail acquisition parcels and necessary survey activities for documentation. Work involved 40 parcels. Responsible for overall project direction, management, and review.

Continuing Surveying Services, City of Orlando, Florida. Project Manager. Served as project manager from 1993 to 1999, 2001 to 2008, and 2011 to 2013 under three separate contracts. Work under these contracts has involved supporting various City departments, including Public Works, Engineering, Legal, Parks and Recreation, and Drainage. Assignments have included platting, boundary and topographic surveys, utility designation and location, and geodetic control surveys.

Home Office Security and Parking Area Improvements, CFI/Wesgate, LTD., Orlando, Florida. Principal Surveyor. Provided topographic and utility location surveys and civil site engineering services for redevelopment of site parking area at a two-building office complex. Site included high-voltage electrical tower. The tower's easement/ROW rights across parcel were taken into consideration for permitting and design. Services included provision of additional parking and gated entryway to seal parcel within fenced periphery. Engineering included layout, utility, grading, pavement plans, and site details. Responsible for oversight and coordination of all survey activities, serving as client liaison, and signing and sealing all survey documents.

Rock Pond Restoration Project, Southwest Florida Water Management District, Tampa, Florida. Survey Project Manager. Responsible for all surveying and mapping activities to support the rehabilitation and restoration of this 4,500-acre parcel in south Hillsborough

Education

Associate of Science, Civil Engineering, Central Florida Community College, 1976

Associate of Science, Land Surveying, Central Florida Community College, 1976

Coursework, Surveying and Mapping, University of Florida

Professional qualifications/ registration(s)

Professional Land Surveyor, Florida No. LS4201, Georgia No. LS2367, Alabama No. LS16447, Mississippi No. LS3172, Texas No. LS6231, California No. LS8707

Certified BLM Federal Surveyor, No.1486

Certification and training

Standards of Practice

Physical Evidence for Boundary Surveys

Chapter 455 Florida Statutes

Finding and Sizing a Section

Hunting Easements and Right-of-Way

Business Management for Surveyors

Bureau of Land Management Certified Federal Surveyor Training

Experience

Amec Foster Wheeler: 1987

Industry: 1976

Continued.

County. Survey activities involved topographic surveys of specific project areas and the bathymetric survey of a +/-85-acre existing man-made lake using a single beam echosounder in conjunction with GPS RTK navigation and positioning systems.

Minimum Flows and Levels Bathymetric and Topographic Surveys of Estero Bay Tributaries, South Florida Water Management District, Lee County, Florida. Project Manager. Responsible for providing surveying and mapping services to support the District's ongoing MFLs study of Estero Bay. Performed bathymetric and overbank topographic surveys of the bay's primary tributaries, including Hendry Creek, Mullock Creek, Estero River, Spring Creek, and Imperial River from U.S. 41 to their confluence with the bay, for a total of 35 miles of waterways. Utilized a specialized shallow draft vessel equipped with an Odom HydoTrac single frequency echo sounder and shallow water transducer coupled to a Trimble GPS navigation/positioning system with an inertial measurement unit to acquire the bathymetric survey data.

Annual Surveying and Mapping Services, St. Johns River Water Management District, Florida. Contract Manager. Projects were primarily related to water resources studies and design, scientific studies, and land management. Included geodetic control, topographic, hydrographic, and specific purpose surveys.

Statewide Continuing Surveying and Mapping Services Contract, Florida Department of Environmental Protection, Florida. Contract Manager. Responsible for the successful completion of more than 115 task assignments performed under five successive contracts since 1994. Work under these contracts has involved land acquisition, land management, and land restoration survey projects associated with the state's land acquisition programs to include Save our Rivers, Rails to Trails, Conservation and Recreational Lands (CARL), P-2000, and Florida Forever.

Shingle Creek Trail Design and Planning Services, City of Orlando, Florida. Principal Surveyor. Provided site planning, design, project management, construction inspection, ROW coordination, and permitting services for development of a 4.5-mile-long, 14-foot-wide pedestrian, bike, and skating path alongside Shingle Creek in Orlando. The creek is a starting point for rainwater flowing to the Florida Everglades. Project is divided into the 3.25-mile phase I and 1.25-mile phase II sections. Responsible for managerial oversight and direction for all survey activities and serving as client liaison.

Condominium Site Survey, Platting, and Documents Preparation, Colby Woods RV Park, Silver Springs, Florida. Project Manager. Responsible for surveys, platting, mapping, and preparation of documents for proposed site of condominium development at RV park location. Work included creation of easements beneficial to future condominium properties, along with lot line development, and overseeing and directing project activities.

Groveland Development Conceptual Design Topographical Survey, Groveland, Florida. Principal Surveyor. Provided topographic survey to locate aboveground existing improvements and elevation data, threatened/endangered species survey, preliminary geotechnical work including soil borings, and civil-site conceptual designs for potential real estate development along SR 50. Responsible for principal-level oversight and coordination of all survey efforts, and signed and sealed survey documents.

Memberships/affiliations

American Association for Geodetic Surveying

National Society of Professional Surveyors

Florida Surveying and Mapping Society

American Society of Civil Engineers

Charles B. Gardiner, PLS, CFedS

Survey and Mapping

Relevant projects

- SR 5/U.S. Highway 1 Subsurface Utility Engineering Services
- Miami-Dade County Surveying and Mapping Services

Core skills

Management of personnel and resources, scheduling and tracking of projects, quality assurance, geodetic surveying (conventional and GPS), route/design surveying and mapping, and boundary surveying

Professional summary

Mr. Charles Gardiner has more than 34 years experience in a wide range of surveying and mapping activities, including management and execution of projects for both private and public sector clients. His extensive technical background accentuates his ability to manage personnel and projects effectively. He is currently the Operations Manager of the Surveying and Mapping department for Amec Foster Wheeler's Orlando, Florida office. In this capacity, he is tasked with the management of personnel and resources, scheduling and tracking of projects, and quality assurance within the department.

He has specific expertise in geodetic surveying (conventional and GPS), route/design surveying and mapping, boundary surveying, and a background with an emphasis on the new technologies, including GNSS, GIS, and LiDAR being utilized for the surveying and engineering professions.

Representative projects

SR 5/U.S. Highway 1 Subsurface Utility Engineering Services, Florida Department of Transportation District 6, Key West, Florida. Principal Surveyor. Provided SUE services along SR 5, also known as U.S. Highway 1 or the "Overseas Highway" in Monroe County. Services included location, verification, and mapping of 24-inch water main that supplies Florida Keys to support roadway design. Responsible for providing QA/QC oversight.

Surveying and Mapping Services, Miami-Dade County, Florida. Project Manager/ Surveyor. Since 2004, under three successive contracts has been responsible for the successful completion of survey projects to support engineering and design missions. Typical assignments included right-of-way surveys, utility locations, topographic surveys, boundary surveys, bathymetric surveys, and the preparation of legal descriptions and sketches.

As-Built Construction Survey, Construction Materials Testing and Threshold Inspection, The Vue Condominiums at Lake Eola, Orlando, Florida. Principal Surveyor. Construction as-built surveys on as-needed basis prior to construction of 35-story, 384-unit condominium tower along Lake Eola in heart of downtown Orlando. Also scheduled to provide construction materials testing and threshold inspection services during construction. Responsible for providing QA/QC oversight for survey-related activities including an unusual, innovative technique for surveying elevator shafts in this 30-story structure

Continuing GIS Support, International Drive Master Transit and Improvement District, Orlando, Florida. Survey Project Manager. GIS Support Services provided on a continuing basis to the International Drive Master Transit and Improvement District, located in Orange County's bustling tourist district south of Orlando. Maintained an ESRI ArcView GIS geodatabase for this special taxing district. Information was provided on demand at the client's request, including mapping of specific data queries and providing data subsets in client-specific formats.

Education

Bachelor of Science, Surveying and Mapping, University of Florida, 1987

Associates of Science, Civil Engineering, Central Florida Community College, 1984

Professional qualifications/ registration(s)

Professional Land Surveyor, Florida No. LS5046, North Carolina No. L4598, South Carolina No. 27735, Missouri No. 2011017289, Louisiana No. 5077, Oklahoma No. LS1836, Ohio No. PS8614, Indiana No. LS21500006

Certified BLM Federal Surveyor, No. 1475

Certification and training

Terrestrial Laser Scanning

Standards of Practice

Surveying Water Bodies and MHW Lines

Geographic Information Systems

Starting and Operating a Surveying Business

Swamp and Overflow Lands

CERP Vertical Controls

Bureau of Land Management Certified Federal Surveyor Training

Experience

Amec Foster Wheeler: 1988

Industry: 1982

Continued.

Drainage System Topographic and Aerial Surveys, Miami-Dade County Department of Environmental Resource Management, Miami, Florida. **Principal Surveyor.** Topographic and aerial surveys in support of drainage improvement project covering approximately 20 city blocks and more than 25,000 linear feet. Responsible for providing QA/QC oversight for project activities; ensured that all work was accomplished in accordance with Florida Administrative Code and all other governing statutes and standards.

Statewide Continuing Surveying and Mapping Services Contract, Florida Department of Environmental Protection, Florida. **Project Manager/Surveyor.** Has served as project manager since 1995 under five successive contracts. Work under these contracts has involved land acquisitions, land management, and land restoration projects associates with the state's land acquisition programs to include Save our Rivers, Rails to Trails, Conservation and Recreational Lands (CARL), P-2000, and Florida Forever.

Condominium Site Survey, Platting, and Documents Preparation, Colby Woods RV Park, Silver Springs, Florida. **Principal Surveyor.** Provided surveys, platting, mapping, and preparation of documents for proposed site of condominium development at a RV park. Work included creation of easements beneficial to future condominium properties, along with lot line development. Responsible for principal-level oversight and review.

Etoniah Creek Property Acquisition Surveying and Mapping, Florida Department of Environmental Protection, Florahome, Florida. **Project Manager.** Provided surveying and mapping for acquisition of properties in Etoniah Creek west of Palatka. Area comprised of approximately 12,000 acres and identified as black bear habitat and the link between Ocala and Osceola National Forests. Amec Foster Wheeler served as surveying/mapping consultant since 1994. Responsible for managing and directing all survey activities.

Roadway, Bridges and New Base Entry Gate Design Services Camp Lejeune, U.S. Department of the Navy, Camp Lejeune, North Carolina. **Principal Surveyor.** Design and final PS&E for a new base entry point, new security gate, 6.5 miles of new divided highway used in the interior of the base, four new interchanges, at-grade intersections and thirteen new bridges over existing water bodies or roadways. Additionally, two miles of existing street widening has been added to the contract. Services include full topographic survey; SUE; geotechnical field investigations; traffic data collection analysis and simulation modeling. Also included are NEPA analysis and documentation for NC24, additional traffic studies, fish habitat studies and USCG Section 9 permitting; anticipated wetland impact and proposed mitigation; environmental permitting process for staging the project (404/401 and USGS permitting); and sustainability goal management. Responsible for providing principal level review of all project activities and products including mapping geodetic control, alignment, hydrographic, topographic, utility location and burrow pit surveys to support roadway and bridge design.

Horizons West Community RIBs Boundary Survey, Orange County Utilities Department, Orlando, Florida. **Principal.** Reestablishment of boundaries of the RIB No. 6 site, including control surveys, section retracement surveys and boundary mapping, for primarily residential community covering 1,320 acres. Project area includes 11 miles of boundary line and services also included establishing Rights-of-Way for SR 429, which now bisects the area. Responsible for principal-level oversight and coordination of all survey efforts including technical insight and consultation with respect to GPS survey techniques and boundary determinations.

Resident's Drive Survey, Orange County Board of Commissioners, Winter Garden, Florida. **Principal.** This contract involved providing surveying and mapping services to various departments within the County including Capital Projects, Utilities, Public Works, Real Estate and Parks and Recreation. Assignments have included horizontal and vertical geodetic control, photo control, boundary and right-of-way surveys, topographic surveys, bathymetric surveys, preparation of legal descriptions, GIS mapping, and review of survey products by others. We completed all 48 task assignments on schedule and within budget. Orange County reselected our firm for this contract to cover the timeframe of 2009-2012. Responsible for providing principal-level review of project activities including GPS Height Modernization techniques, and operations management with respect to committing all available resources for successful project/contract execution.

James Santiago, RLA

Landscape Architecture

Relevant projects

- Young Circle Arts Park
- The Cleveland Clinic
- Zoo Miami Florida Exhibit and New Entrance

Core skills

Planning, landscape and irrigation design, landscape and creative water use systems, roadway and park landscape design

Education

Bachelor of Landscape Architecture, Louisiana State University, 1978

Bachelor of Architecture, University of Kentucky, 1975

Bachelor of Arts, Speech and Theater Arts, Georgetown College, 1973

Professional qualifications/ registration(s)

Landscape Architect, Florida No. 0000795

Experience

Amec Foster Wheeler: 2012

Industry: 1978

Professional summary

Mr. James Santiago has more than 39 years experience in planning and landscape and irrigation design that includes working in both the public and private sectors. He has designed significant projects for Florida Atlantic and Florida International Universities, where he has completed four major LEED-based projects, including projects for the FAU School of Engineering and the College of Arts and Sciences. These projects consisted of not only planning, but landscape and creative water use systems. Recently, Mr. Santiago completed planning and design work for three major South Florida hospitals, spanning more than 30 acres each.

In addition, Mr. Santiago has extensive experience in park and roadway design, and he recently completed the redesign for several unique landmark recreational areas, including Amelia Earhart Park and the Trailglades Shooting Park in Miami, Florida, and Young Circle Park in Hollywood, Florida.

Representative projects

Young Circle Arts Park, Hollywood, Florida. Principal Landscape Architect. This nationally recognized park consisted of the complete breakdown and reinvention of a highly used and well known park. The program consisted of the revisiting of the elements of the park and it adaptation to the current needs of the community which had become much younger in the last decade. Being an arts-themed park, major elements drawn from the artist's contribution also formed a framework for play areas, performance arts, and active recreation. Responsible for planning and programming as well as the design of the landscape and irrigation systems. Responsibilities focused on the community's needs, the artists' vision, and the historical nature of the area.

The Cleveland Clinic, Weston, Florida. Landscape Architect. Supported the design and installation of landscape and irrigation projects on this campus. Completed the design and construction administration services for the new Neurological Centre and the creation of new lots in the North East and Central core. Also established the documentation of all landscape on the site providing a base line for which the City can evaluate the progress of the campus on an ongoing basis. Extensive tree relocation and permitting was necessary and the establishment of a process with the City was essential to the project being done in the allotted time frame.

Zoo Miami Florida Exhibit and New Entrance, Miami, Florida. Landscape Architect. The project consisted of the reinvention of the entry areas and the new exhibit focusing on the wildlife of Florida. Tasks included site evaluation, tree permitting, irrigation and landscape design, and site planning of exterior pedestrian circulation.

Amelia Earhart Park, Phase I, Miami Gardens, Florida. Landscape Architect. This is an existing 100-acre park in Miami Gardens, Florida. Approximately 50% of the park had been previously developed and the task was to program the future development of the park and

Continued.

develop a budget for these future phases. It was determined that a water park would also be added to the program for immediate construction. Developed plans for the perimeter and entry revisions as well as development of irrigation water sources, which would accommodate the future expansions. Developed concepts for directional and information signage.

American High School (Phase I), Miami, Florida. **Landscape Architect.** This project included the complete revitalization of the campus, including parking lots, playing fields, and main buildings. Tasks included tree removal and permitting for more than 200 trees as well as the redesign of all landscape and irrigation systems.

Coral Springs Tennis Center, City of Coral Springs, Florida. **Principal Landscape Architect.** The project's purpose was to work with the City and their design staff to establish a concept for design and construction services for this professionally used complex. Also established the design for the lighting and irrigation systems.

Cleveland Clinic Parking Addition, Weston, Florida. **Landscape Architect.** This campus located in Weston, Florida, includes a 150-bed facility on a 40-acre campus. Instrumental in the ongoing expansion for the campus since it was created. Services included reconfiguring the existing parking area and relocating the nuclear medicine facilities.

Downtown Mangrove Park, Florida. **Principal Landscape Architect.** The project included a park located within a tidal pool that contained mature mangroves. The scope of services included the evaluation of the site and existing irrigation systems. As a qualified mangrove specialist, oversaw the parameters established for the care and maintenance of the mangroves within the project area. The park's facilities included pathways, meeting rooms, and nature conservancy areas.

Crystal Lake Country Club/Clubhouse, Deerfield Beach, Florida. **Principal Landscape Architect.** This project, located in Deerfield Beach, Florida, entailed the demolition of a long standing building to accommodate a new clubhouse facility better suited to the current group using the golf course. Work included the inventory of the landscape and irrigation system (which was derived from the main golf course system). Other duties included the permitting of tree removals, water use permitting, and the redesign of the pathways and landscape lighting. The clubhouse is now open and the project met the expectations of the members and the owners.

DeLevoe Park and Meeting Center, Florida. **Principal Landscape Architect.** Located on approximately 12 acres, DeLevoe Park and Meeting Center was the revitalization of a park that was not fully utilized. Funds were secured to add a meeting/recreation center as well as outdoor activities and additional parking and pathways. With an already mature canopy in much of the park and a small body of water next to the proposed building, the project included enhancing the views from the water's edge and at the same time locating the outdoor amenities so as to shield the waterfront from the parking areas. Security was of great importance in this park since many young children would be using this facility during summer breaks. Safety from vandalism and the danger of the interaction between the water and the children was achieved through the creative design of the fence, lighting, and the placement of the building. This facility is used for community meetings, annual holiday gatherings, and summer camp.

Franklin Park Pathway, Broward County, Florida. **Principal Landscape Architect.** This project consisted of a 5-acre arts park whose elements were to be coordinated with the need for a healthful and meaningful environment. The scope included the coordination of the physical and artistic facets, including the environmental evaluation and the hardscape supporting the artistic elements. The artist's desire to use the actual pathway as the framework of his expression required coordinating the artist's forms with the physical characteristics of the park's central pathway and landscape.

Mel Reese Golf Training Center, Miami, Florida. **Principal Landscape Architect.** Located in the Doral area of Miami, this center replaced an aging facility which housed training space and the cart and club storage for the golf course. The task was to evaluate the site for the location of the new building and then develop landscape and irrigation plans. Since the existing landscape was to be removed, permitting for that task was also secured. Secured the required permitting and prepared mitigation plans. The building was built to LEED Silver standards and particular attention was given to the native materials and irrigation efficiency. Since the existing golf facility used well water, efficiencies were met by utilizing low gallonage heads.

Terminal 4 Port Everglades, Fort Lauderdale, Florida. **Landscape Architect.** The project was to revise an existing building adjacent to the Convention Center, into a major entry point into the port. The exterior landscape of the Convention Center was to be respected and all new landscape for a newly established parking and entry drive enhanced. Our tasks included site evaluation, tree permitting, irrigation and landscape design (LEED certified), and site planning of exterior pedestrian spaces.

Charles A. Phillips, ASLA, LEED AP

Landscape Architecture

Relevant projects

- Miami-Dade County Public Schools TT-1 Overlook Design, Homestead, Florida
- South Florida National Cemetery
- Terra Ceia Preserve State Park

Core skills

Planning, landscape and irrigation design, landscape and creative water use systems, roadway and park landscape design

Professional summary

Mr. Charles Phillips has more than 35 years of landscape architectural experience. Mr. Phillips has used his expertise to provide recreational opportunities to meet a wide variety of needs in parks ranging in size from passive parks to regional sports facilities. Additional open space projects that he has been involved in include the preparation of master plans and construction documents for veteran and private sector cemeteries. Throughout his career, he has actively been involved in the interaction with various government personnel and the public.

Representative projects

Miami-Dade County Public Schools TT-1 Overlook Design, Homestead, Florida. Landscape Architect. Prepared the overall design and construction documents for this boardwalk/overlook component of the wetland mitigation project associated with the development of the school. Responsible for developing the design concept, preparing hardscape details that included interpretive signage, and coordinating this work with that of the structural engineer.

South Florida National Cemetery, Lake Worth, Florida. Landscape Architect/Project Manager. Prepared construction documents and provided construction period services for the expansion of the cemetery. Components included burial areas, a columbarium, and the relocation of a pre-engineered metal building. The project required permitting with the South Florida Water Management District and the Florida State Historic Preservation Office.

Terra Ceia Preserve State Park, Tampa Bay Florida. Landscape Architect. As part of the restoration of this marshland, the Florida Department of Environmental Protection hired Amec Foster Wheeler to design a new boat ramp and canoe launch to replace a make shift facility used by local residents. The design utilizes pervious pavement and a central water quality pond to minimize the impact of the project, while providing access for birdwatchers and fishermen into the area.

Lake Conine Park – Winter Haven, Florida. Landscape Architect. The project goals were to restore the natural character of the wetland area, manage stormwater quality and provide recreation opportunities for the citizens of Winter Haven. In addition to fishing, walking, jogging, bicycling, bird-watching, picnicking and children's play activities, the park will also facilitate up to 2 miles of kayaking within the restored wetland areas. Coordinated the development of recreational opportunities within the constraints of the hydrological requirements.

Matt Community Park Master Plan, Phase 1 Construction Documents and Construction Administration, Forsyth County Georgia. Project Manager/Landscape Architect. Master planning, site engineering, and landscape architecture services for this 184-acre athletic park facility. The proposed improvements include four baseball fields with associated concessions buildings, tennis facility, four multi-purpose soccer fields with associated

Education

Bachelor of Landscape Architecture, University of Arkansas, 1981

Professional qualifications/registration(s)

Landscape Architect, Florida No. 0000956, Georgia No. 769, South Carolina No. 1018, Arkansas No. 332, Pennsylvania No. 2794, North Carolina No. 1482, Virginia No. 501

LEED Accredited Professional, No. 10223253

Experience

Amec Foster Wheeler: 2007

Industry: 1981

Continued.

concessions buildings, a maintenance facility, natural amphitheater, library, and senior center. Several miles of walking trails are planned to meander through the site, providing access to multiple natural overlooks.

City of Albany - Dougherty County Radium Springs Botanical Gardens Park Master Planning and Design Services, Albany, Georgia. Project Manager. Master Planning and Phase 1 landscape/hardscape design services, permitting and construction administration for development of 5-acre municipal park at this historic facility and site of largest natural spring in the state. Historic structure destroyed during heavy flooding in 1990s. New botanical garden designed within the ruins of the former resort. New facilities include flood-resistant restroom facilities, pedestrian trails/walkways, and parking area.

City of Albany Engineering Department Gordon Sports Complex Renovation Construction Documents, Albany, Georgia. Project Manager. Construction documents for master planned renovation of, and improvements to, sports complex with five softball and general sports fields (300 feet each in diameter), picnic facilities and parking area. Construction services included site grading, stormwater drainage, asphalt paving, curbs and gutters, sanitary sewers, walkways, field lighting and fencing, landscaping, and facility renovation. Responsible for overseeing project activities, managing resources, and addressing project issues as needed.

Deerfield Trail Phase 2, Kennesaw, Georgia. Project Manager. Design services for Phase 2 development of 3,000 feet of this community trail. Topographic and boundary surveys performed along with title and deed verification; design services included initial design analysis, development of drawings and erosion/sediment control plan, and permitting services. Coordinated the survey work for the extension of the trail.

Croom Motorcycle Area RV Campground Master Planning, Brooksville, Florida. Landscape Architect. Master Planning for the development of 50-unit RV campground area within 2,600-acre Croom Motorcycle Area of Withlacoochee State Forest in Hernando County. Responsible for developing the master plan for the campground within a popular ATV-use area managed by the Division of Forestry, and coordinating design with the civil engineers investigating alternative utility service options.

Lions Club Park Recreational Facility Design, Lilburn, Georgia. Project Manager. Construction documents for this 81-acre active recreational facility, including five lighted baseball fields, picnic area, playgrounds, boardwalks, and trails. Tasks included surveying; floodplain and Federal Emergency Management Agency (FEMA) study; FEMA permitting, streambank restoration; architectural plans; sustainable design site engineering; grading, drainage, and hydrology; wetland permitting; irrigation; cost estimating; and construction administration.

City of Kennesaw Plaza Main Street Concept, Kennesaw, Georgia. Project Manager. Development of a plaza master plan to link the new, pedestrian underpass to Main Street and the sidewalk system. Responsible for keeping task on schedule and on budget, reviewing conceptual and final design, and invoicing.

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Tab 3
Past Work Experience

Past Work Experience

Amec Foster Wheeler has completed all aspects of engineering design – from concept design through as-built certification, including post-construction monitoring. Our objective is to ensure that available dollars are directed toward sound engineering and design services, successful construction, and affordable operation. We understand the challenges facing government agencies today with an ever increasing demand for services while operating under budget constraints and shortfalls. We have firsthand experience with your project needs and our wealth of knowledge and expertise delivered by our skilled professionals provides you with the assurance that tasks will be completed competently, professionally, on time, and within budget.

Amec Foster Wheeler has worked on numerous continuing engineering services contracts for municipalities, counties, and other agencies throughout Florida over the past 30 years, several of which have received recognition for innovative approach and design. The continuing services contracts have had a diverse mix of practice area requirements, including utilities engineering, redevelopment, roadway design, drainage design, streetscaping, geotechnical engineering and testing, stormwater master planning, and parks and recreational facilities planning and design. Our experience has included working with municipalities like the City of Key West. Our relevant experience includes:

- SFWMD Engineering, Water Quality, and Survey Services
- Monroe County Canal Restoration Demonstration Program
- CEI for the Florida Keys Overseas Heritage Trail
- Collier County Eagle Creek Weir
- USDA NRCS Wetland Reserve Plans of Operation
- City of Lakeland Continuing Engineering Services
- Village of Islamorada Canal Restoration Design and Permitting
- FKRAD State Park Sanitary Sewer Connections
- Milton Keynes Residual Waste Treatment Facility
- City of Groveland Continuing Engineering Contract

Our expertise on similar projects is evidenced by the number of clients who have hired Amec Foster Wheeler for this service area as well as, more importantly, the renewals that our project team has been granted which attests to our commitment to responsive and high quality service. At the end of the day, the most important issue for us is that a project is completed successfully and our client's goals and objectives have been achieved.

On the following pages are more detailed descriptions for Amec Foster Wheeler's specific relevant experience in the past five years.

"As usual, customer service with (Amec Foster Wheeler) is impeccable. (Amec Foster Wheeler) is by far the best consulting firm we work with, largely due to the expertise and customer service we get from you (Jeff PeQueen), Mr. Phelps, and Mr. Kelly. Just wanted to let you all know that we appreciate you guys!"

Curtis Porterfield
City of Lakeland

SFWMD Engineering, Water Quality, and Survey Services

Project description

Since 2002, Amec Foster Wheeler has held various engineering, water quality, and surveying contracts with SFWMD.

Water Quality

Amec Foster Wheeler has held two water quality contracts with SFWMD — the first from 2006 to 2009 and a second contract that is ongoing. As part of the first contract, Amec Foster Wheeler provided water quality monitoring and data assessment services to SFWMD to collect various surface water samples throughout the District. Field Sampling was conducted in accordance with the SFWMD Field Sampling Quality Manual (FSQM) and the Florida Department of Environmental Protection Field Sampling Standard Operating Procedures (SOP) 001/01.

Amec Foster Wheeler's role consisted of water quality monitoring services to support the District's mission to utilize technology based services to meet the demands of its fiduciary responsibility, scientific research, operational and permitting activities, water management policy and decision making processes. Water quality monitoring and assessment is critical in evaluating the health of the everglades ecosystem and the effectiveness of conservation management.

The scope of work included the collection of water quality monitoring samples for laboratory analysis from 42 locations within Stormwater Treatment Areas STA-1 East and STA-1 West from both autosamplers and utilizing the grab method. Preparation of technical and scientific reports with respect to water quality were prepared to characterize water resources and to assess the water quality conditions based on the data collected.

Amec Foster Wheeler recently began a new contract with SFWMD to conduct water quality management at the St. Lucie Estuary Tributaries (SLT) and at the Everglades Agricultural Area (EAA). Amec Foster Wheeler is collecting biweekly surface water samples and associated field data at 31 monitoring locations within the St. Lucie Estuary. Amec Foster Wheeler is documenting the presence and direction of flow at each station during each biweekly trip. Surface water samples are only being collected at locations with observable

Client/customer
South Florida Water Management District

Client reference
Kim Hanes, PG
Field Contract Manager
8894 Belvedere Road
West Palm Beach, Florida
USA 33411
561.753.2400 ext. 4749 (p)

Location
Statewide, Florida

Dates/timing
Ongoing

Design services fee
Master contract with various task orders - fees varies per project

Project cost
$2.8 million

Amec Foster Wheeler personnel
Les Bromwell, ScD, PE
Brian S. Hathaway, PE
Jeffrey Beriswill, PE
Luis A. Ponce, PE, CGC
Michael Kelley, PG
Walter Reigner, PE, CPESC
Keith Beriswill, PE
Scott Wuitschick, PE
Coleman Bender
Nirjhar Shah, PhD, PE, CFM, GISP
Mark Chomtid, PhD, PE
Valwin Knight
R. Michael Jones, PLS, CFedS
Charles B. Gardiner, PLS, CFedS

SFWMD Engineering, Water Quality, and Survey Services

Continued.

positive flow (toward the estuary). Amec Foster Wheeler is collecting biweekly surface water samples and in-situ field measurements at nine monitoring locations within Everglades Agricultural Area. There are two different scenarios for the EAA sampling trips. The first is a regular biweekly monitoring trip and the other is a sampling trip associated with a significant rainfall event where discharges to the L10/12 Canal are anticipated.

Regional Ecosystem Watershed Study

Amec Foster Wheeler was selected by SFWMD to conduct a large scale watershed study for hydrologic restoration of District owned lands located within the Imperial River watershed in Lee County. The project was listed as a critical component of the Comprehensive Everglades Restoration Plan (CERP) and was focused on hydrologic restoration of the environmentally sensitive Southern Corkscrew Regional Ecosystem Watershed (Southern CREW) that has been altered by the residential development, roads, and agricultural ditches.

Historically, water from the Corkscrew Swamp and Lake Trafford has been known to sheetflow south toward the CR-846 and Camp Keais Strand.

However, continual modifications of the historical sheetflow paths due to man-made ditches, dikes, farm roads, and highways, etc. significantly modified the natural basin divides over the last 30 years. Lack of understanding about the interconnection of Cocohatchee, Estero, and Imperial River basins further resulted in failure to recognize the need for a regional approach for water management. Several agricultural practices also contributed to increased flooding within Corkscrew Swamp. The project was thus commissioned by SFWMD to improve general understanding on the regional watershed and develop restoration options that can be implemented to restore historical flow paths to the greatest extent possible without causing any adverse off-site impacts.

The project involved extensive review of existing literature, historical data, man-made changes, and existing numerical models in the area. As a part of this project Amec Foster Wheeler developed a three dimensional integrated surface and ground water model to simulate all aspects of expected hydrologic and hydraulic processes expected using computer program MIKE SHE. The numerical MIKE SHE model was parameterized to included detailed description of channels and hydraulic controls within the project area in addition to refined topography, soils, and landforms. The numerical model was used for evaluating several possible restoration alternatives and developing site management

Amec Foster Wheeler personnel continued

Christopher J. Lindstedt, PSM
Max Ramos, PSM
Paul Wilson, PLS
Richard W. Towne, PLS
Richard Emig
Jason Hudson, CST III
Concepcion Barrios

Name of contractor awarded project

Multiple contractors

Continued.

strategies. The results from the developed integrated ground and surface water model were compiled into a Design Documentation Report for Basis of Design (DDR) which provided recommendations for project design to be developed in future phases of this initiative.

The project team successfully completed all the required deliverables, such as model development reports and DDR required for the first phase of the project and subsequently assisted TKW Consulting Engineers, Inc. as the recommendations in the DDR were converted into design drawings and specifications.

Geotechnical Engineering and Materials Testing

Amec Foster Wheeler has provided SFWMD with Geotechnical and Construction Materials Testing Services on a task work order basis since 2002 under our continual service contracts.

Amec Foster Wheeler has performed numerous task order assignments consisting of various geotechnical, construction inspections, and construction material testing services. In general, the services performed consisted of, but are not limited to:

- Subsurface explorations, including limestone rock coring and standard penetration test (SPT) borings
- Subsurface and lithology characterization
- Groundwater sampling
- Hydrogeologic characterization
- Geophysical services
- Deep artesian-well abandonment
- Geotechnical engineering analysis
- Seepage studies
- Drainage tests
- Slope stability analysis
- Laboratory testing services
- Construction QC/QA inspections and material testing services during the construction or repair of earthen levees, roadways, culverts and water control structures

In addition, we performed environmental well installation; Pile Driving Analyzer (PDA) dynamic load testing during the installation of prestressed concrete driven piling and seismograph vibration monitoring during sheet piling installation construction.

Land Surveying Services

Since 2002, Amec Foster Wheeler has provided miscellaneous surveying and mapping services on an as-needed basis to various departments within the District, including Real Estate, Legal, Engineering, Planning, and Construction. Services primarily involved engineering, bathymetric, and boundary surveys for acquisition, and horizontal and vertical geodetic control densification surveys.

Projects under this contract include:

- South Florida feasibility study wells and staff gauges survey in Collier and Miami-Dade Counties
- Bathymetric surveys of Estero Bay tributaries in Lee County
- Bathymetric and topographic surveys of structures S-65 and S-65A in Osceola County
- Topographic surveys of water control structures in Osceola County
- Bathymetric and topographic surveys of Canal C-31 in Osceola County
- Bathymetric surveys of Canals C-29A, C-35, and C-37 in Orange and Osceola Counties
- Kissimmee River Basin horizontal and vertical control surveys for wells and staff gauges in Okeechobee and Highlands Counties
- Right-of-Way surveys of Canals C-24 and C-25 in St. Lucie County
- Topographic survey of a portion of the 2,000-acre Allapattah Ranch Parcel C in St. Lucie County
- Topographic survey of the 15,000-acre Stormwater Treatment Areas (STA) 3 and 4 in Palm Beach County
- Bathymetric and topographic survey of 90 miles of existing canal/levee systems as part of the District's Canal Conveyance Capacity Program (CCCP) in Martin, St. Lucie, and Palm Beach County
- As-built and quantity surveys at the 8,000- acre Lakeside Ranch STA in Martin County to support construction management operations

Monroe County Canal Restoration Demonstration Program

Project description

As part of the Monroe County Canal Restoration Program, Amec Foster Wheeler completed the design, permitting, and construction oversight for six demonstration projects that were completed to evaluate the feasibility and cost of implementation of the technologies selected as part of Phase II of the Canal Management Master Plan. The selected technologies consisted of:

- Air curtains to prevent the influx of weed wrack into canals
- Removal of accumulated organic sediment
- Installation of a culverts to promote flushing
- Backfilling of a deep canal

Data collection consisting of bathymetric surveying, geotechnical sampling, tidal studies, and polymer performance testing was completed as needed to facilitate design. Additionally, hydraulic modeling was used to properly size the flushing culverts.

Amec Foster Wheeler worked closely with Monroe County to increase involvement with stakeholders, both homeowners and government agencies, to help ensure that the implementation of the projects caused minimal disruption to homeowners and the environment.

During implementation, optimization of the construction activities was completed; including permitting an alternative polymer to increase the production rate for organic sediment removal, and implementing noise reducing measures for the air curtains to mitigate homeowner concerns.

Amec Foster Wheeler provided oversight of the construction activities to ensure that the project performance specifications were followed, and worked closely with contractors to correct items of non-compliance in a timely manner.

The completion of the demonstration projects achieved significant success, with the most notable being the reestablishment of seagrass in the canal that was backfilled.

Client/customer
Monroe County

Client reference
Rhonda Haag
Director Sustainability and Projects
102050 Overseas Highway
Suite 212
Key Largo, Florida
USA 33037
305.453.8774 (p)

Location
Monroe County, Florida

Dates/timing
2014 to 2016

Design services fee
$1 million

Project cost
$4.2 million

Amec Foster Wheeler personnel
Wendy C. Blondin, PG
Ricardo Fraxedas, PE
Gregory Corning, PE
Stephen J. Hanks, PE, LEED AP
Jeremy M. Paris, PWS
R. Michael Jones, PLS, CFedS
Michael B. Woodward, PE
Lance Lumbard, CLP

Name of contractor awarded project
Multiple contractors

CEI for the Florida Keys Overseas Heritage Trail

Project description

Amec Foster Wheeler was awarded a contract with the Florida FDEP to provide construction engineering inspection services, construction administration services, and environmental permitting services for the Florida Keys Overseas Heritage Trail —a shared-use path in the Florida Keys — at six segments, including the following:

- Grassy Key to Long Key
- Ramrod Key to Big Pine Key
- Channel 5 to Tollgate Road
- Key Haven to Big Coppitt Key
- Bay Point to Lower Sugarloaf Key
- Lower Sugarloaf Key to Summerland Key

Services included observing and documenting general construction progress and the means and methods that were implemented to finish the work. Operations inspected included earthwork such as embankment and base placement, concrete for structures, and asphalt placement along U.S. 1. Amec Foster Wheeler also provided pre-construction meetings, stormwater pollution prevention plans, document reviews and contractor reviews, as well as technical assistance in identifying project impacts to wetlands and developing suitable mitigation strategies as applicable.

Services also included:

- Kept the construction project manager informed of all significant activities, decisions, correspondence, reports, and other communications, and sought input from the construction project manager in order for him to oversee the consultant's performance
- Administrative duties related to Invoice approval requests, time extension requests, and supplemental amendment requests were reviewed/negotiated by Amec Foster Wheeler prior to review and approval by the construction project manager
- Reviewed construction documents to ensure completeness and consistency with FDOT design standards
- Submitted plans that were included in the construction contract

Client/customer
Florida Department of Environmental Protection

Client reference
James Post
Construction Projects Consultant
3 La Croix Court
Key Largo, Florida
USA 33037
305.853.3571 (p)

Location
Florida Keys

Dates/timing
2009 to 2014

Design services fee
$1.2 million

Project cost
$9.1 million

Amec Foster Wheeler personnel
Nestor Fernandez

Name of contractor awarded project
Charley Toppino & Sons, Inc. and Otak Group

CEI for the Florida Keys Overseas Heritage Trail

Continued.

- Provided a photographic record of construction activities;
- Reviewed change order requests and RFIs
- Reviewed invoices prior to submittal to FDEP
- Reviewed shop drawings, product data sheets, and material testing results
- Participated in a pre-construction meeting with FDEP and the contractor
- Upon project completion, provided a complete record of CEI activities associated with the project

On-Site Inspections:

- Monitored the contractor's on-site construction activities and inspected materials entering into the work in accordance with the plans, specifications, and special provisions for the construction contract to determine that the projects were constructed in reasonable conformity with such documents
- Kept accurate records of the contractor's daily operations and significant events that affected the work

Testing:

- Responsible for job control samples that determined the acceptability of all materials and completed work items on the basis of either test results or verification of a certification, certified mail analysis, FDOT label, FDOT stamp, etc.
- Documented reports on sampling and testing submitted to responsible parties during the same week that construction work was completed

Administrative Services:

- Coordinated the construction contract administrative activities of all parties other than the contractor involved in completing the construction project
- Maintained the required level of surveillance of contractor activities
- Interpreted plans, specifications, and special provisions for the construction contract
- Maintained complete, accurate records of all activities and events relating to the project
- Properly documented all significant project changes
- Prepared and made a presentation before the Dispute Review Board in connection with the project covered by the agreement
- Monitored each contractor and subcontractor's compliance with specifications and special provisions of the construction contract in regard to payment of predetermined wage rates in accordance with Department procedures
- Prepared and submitted to the construction project manager monthly a construction status report

Collier County Eagle Creek Weir

Project description

Due to the age of the Eagle Creek weir located, Collier County had very limited data as to the weir's design, date constructed, and maintenance history. Representatives from SFWMD had expressed their concerns regarding the weir's structural integrity and whether or not it was structurally sound enough to have its flood control gates and associated hardware upgraded. Neighboring entity's that have historically held an interest in the management of the weir include Rookery Bay National Estuarine Research Reserve and the Eagle Creek Golf Community.

Amec Foster Wheeler was contracted to provide the following:

- Survey and data collection
- Environmental permitting
- Hydrologic study
- Site design
- Structural testing of existing weir gates and hardware
- Flood control gates design
- Geological field evaluation, including borings and sediment pile characterization
- Invasive species identification, bat study
- Mangrove assessment
- Wetland delineation

Client/customer
Collier County Board of Commissioners

Client reference
Shane Cox, PE
Project Manager
2685 South Horseshoe Drive
Naples, Florida 34104
239.252.5792 (p)

Location
Naples, Florida

Dates/timing
2015 to 2016

Design services fee
$38,000

Project cost
$129,000

Amec Foster Wheeler personnel
Nestor Fernandez
Jeremy M. Paris, PWS
David Soler, PE

Name of contractor awarded project
Haskins, Inc.

USDA NRCS Wetland Reserve Plans of Operation

Project description

The U.S. Department of Agriculture/Natural Resources Conservation Service (USDA/NRCS) contracted Amec Foster Wheeler to prepare Wetland Reserve Plans of Operation (WRPO) and Engineering Services for eight projects within Highlands, Hendry, Glades and Okeechobee Counties, Florida. These projects total more than 55,000 acres and were broken down into three phases to restore historic ecological communities. The goal of the WRPO is to restore the property to more historic ecological communities that existed prior to agricultural manipulation. The program offers landowners the opportunity to protect, restore, and enhance wetlands on their property. The program goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, and long-term conservation and wildlife practices and protection within the project areas.

These properties have been historically altered for agricultural usage, which has generally consisted of some type of long-term hydrologic alteration, which has resulted in large-scale community shifts and an overall degradation of historic soil characteristics, vegetation community structure, and wildlife utilization. The first phase of the projects includes preliminary site assessments which provide a comprehensive catalogue of ecosystem health, community structure, and drainage infrastructure. Ecosystem surveys include mapping of historic ecological communities, identification of existing ecological communities, hydric soils identification, and invasive/exotic species identification and mapping. A description of native communities to be restored/enhanced, mapping of threatened and endangered species or habitat present, and special habitat needs of migratory birds or other targeted species were also compiled in a GIS data base. The first phase also includes preparation of hydrologic and hydraulic models for existing and proposed conditions, methods used in the engineering and environmental analysis, a description of hydrologic conditions at the site, and a discussion of the results of the preliminary engineering and environmental analysis.

The USDA-SPAW model was used to define wetland hydro periods for each individual wetland community. The SPAW model uses daily historic climate data to model long-term single upland/detention basin system dynamics, and was adapted by Amec Foster Wheeler staff to apply to the network of interconnected, individually simulated wetland communities. SPAW input parameters were defined, including soil profiles, vegetation

Client/customer
U.S. Department of Agriculture and Natural Resources Conservation Service

Client reference
Jessica Mixon Robbins
Agricultural Engineer
452 Highway 98 North
Okeechobee, Florida
USA 34972
863.763.3619 ext. 220 (p)

Location
Various Locations, Florida

Dates/timing
2011 to Ongoing

Design services fee
$3.7 million

Project cost
$3.7 million

Amec Foster Wheeler personnel
Charlene Stroehlen, PE
Dustin Atwater, GISP
Tiffany Davies, PE
William Tucker, PhD
Katherine Deliz Quiñones, PhD
Joy Ryan, PWS
Shannon McMorrow
Gregory Corning, PE
Grant Gatson, EI
Taylor Kroll, EI
Jennifer Sagan

Name of contractor awarded project
Multiple contractors

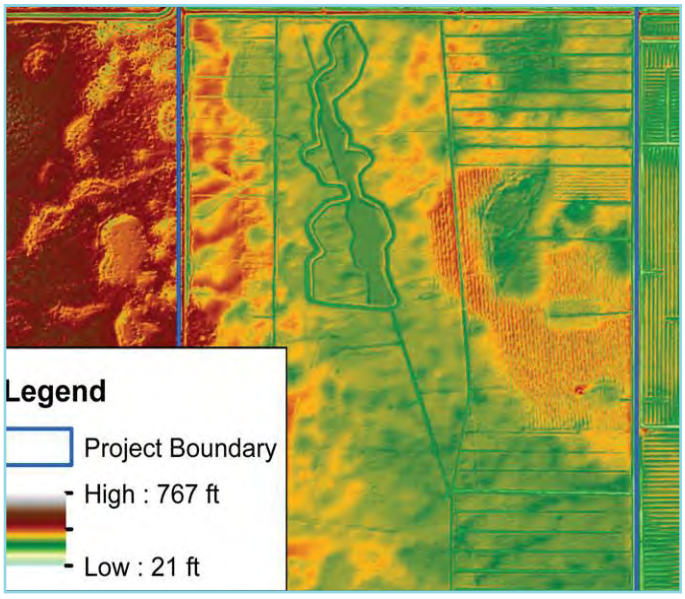
Continued.

cover, and subsurface hydrologic characteristics of the upland and wetland communities. Amec Foster Wheeler also developed an approach for modeling shallow groundwater seepage onto the site. Initial model results were supported by field observations. Final model outputs, in the form of daily inflows, outflows, and water levels for each wetland over the 20 year simulation period, were analyzed for a number of wetland indicators, including long- term annual inundation durations, seasonal inundation durations, seasonal water depths, and total acreages. Amec Foster Wheeler worked closely with NRCS to define site-specific wetland hydrologic criteria for post-processing analysis and cumulative result summaries.

The Streamline Technologies ICPR model was used to hydraulically model on- and off-site drainage features, in order to establish baseline flooding conditions and to evaluate and eliminate off-site flooding impacts that may result from the WRP plan.

The goal of the WRPO is to restore the property to historic ecological communities to that which existed prior to agricultural manipulation. The scope of work for each project included preparing the:

- Restoration goals and objective
- Landowner's goals
- Alternatives to achieve wetland restoration, including pros and cons of each alternative
- Wetland restoration requirements to achieve wetland restoration goals
- Hydrologic restoration required to achieve wetland restoration goals
- Structures and management activities required to achieve wetland restoration
- On-site and off-site drainage effects for each alternative
- Adverse on-site or off-site conditions or concerns that could restrict or limit restoration
- Description of native plant communities to be restored/ enhanced and their habitat
- Threatened and endangered species or habitat present
- Special habitat needs of migratory birds or other targeted species
- Restoration success criteria
- Recommended plant species to be established and methods



- Noxious/non-native invasive species and management strategies
- Anticipated seasonal hydrologic regime based on 30 years or rainfall data
- Conservation practices and proposed sequence of implementation
- Estimated cost to install conservation practices and proposed alternatives
- Operation and maintenance/management requirements and estimated annual costs
- Interagency assistance provided
- Summary of potential environmental or cultural resource concerns
- List of potential permits needed and agency contacts
- Photo points at ecological communities and at existing engineering structures

All information obtained was geo-referenced on maps. The program is voluntary, offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The program goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, within the project area. This program additionally offers landowners an opportunity to establish long-term conservation and wildlife practices and protection.

City of Lakeland Continuing Engineering Services

Project description

Amec Foster Wheeler has completed various projects as an engineering consultant with the City of Lakeland. Those projects include:

Wayman Ditch Repairs

The City of Lakeland contacted Amec Foster Wheeler to help them re-do a design to replace an existing 2,500 ft long concrete ditch with an enclosed culvert. Amec Foster Wheeler's design resulted in smaller proposed box culverts as well as utilizing unused City right of way for a surge pond. Value engineering suggestions included adding wetland plantings to the surge pond to provide water quality benefits and possible NPDES and TMDL permitting credits for nutrient reductions.

Central Avenue Drainage Improvements

This project involved drainage review of existing flooding conditions along Central Avenue. Construction plans were prepared to install a new storm sewer collection system with inlets. The plans included utility information, conflict resolution, and avoidance of potential wetland impacts.

Lake Hollingsworth Shoreline Restoration

This shoreline has experienced wave erosion as well as erosion from boat docking and foot traffic. The City commissioned us to develop a long-term solution to the shoreline erosion. Amec Foster Wheeler developed alternative seawall options since an aesthetically pleasing seawall was the City's preference as alternatives such as rubble or other erosion control alternatives would not be acceptable in this high traffic area. Our firm performed a geotechnical investigation and preliminary engineering tasks, developed a concept site plan, and provided a recommended alternative to the City with preliminary construction cost estimates. We then provided an architectural rendering of improvements using site photographs with the recommended seawall protect superimposed for a clear graphic display. The display was used by the City at public meetings to educate all stakeholders on the proposed improvements and to receive feedback from the stakeholders. In addition, Amec Foster Wheeler performed final design and permitting services for the project.

Client/customer
City of Lakeland

Client reference
Joe Baan, PE
Manager of Engineering
228 S. Massachusetts Avenue
Lakeland, Florida
USA 33801
863.834.6041 (p)

Location
Lakeland, Florida

Dates/timing
2006 to Ongoing

Design services fee
Master contract with various task orders - fees varies per project

Project cost
$789,000

Amec Foster Wheeler personnel
Michael D. Phelps, PE
Timothy J. Kelly, PE, CPSWQ, CPESC
Jeffrey D. PeQueen, PE, CFM, CPSWQ
David Butcher, PE, LEED AP
Nirjhar Shah, PE, PhD, CFM, GISP
Jie Gao, PE, CFM, GISP
Mark J. Frederick, PE, CFM
R. Michael Jones, PLS, CFedS
Scott Wuitschick, PE
Mikhal Moberg, PE, GISP
Lance Lumbard CLP
John Cawthron IV, EI
Aziza R. Baan, GISP
Eric Brown

City of Lakeland Continuing Engineering Services

Continued.

Amec Foster Wheeler personnel continued

Timothy Howard
Kevin Shelton
Joshua Raysin
L. Kevin Welch
Alan L. Pixley
Tonya J. Morris

Name of contractor awarded project

Multiple contractors

Oak Hill Burial Park Mitigation

The Oak Hill Burial Park project was designed to provide mitigation for the effects of the SWFWMD's Lake Hancock Lake Level Modification project. Amec Foster Wheeler provided design, environmental assessment, permitting, and construction phase services for this project. Project also included two stormwater management ponds, designed in accordance with SWFWMD criteria. The stormwater retention pond along the east project boundary was designed with check valves in the discharge pipes. Additionally, the east pond was designed with a stormwater pump station to be used as a discharge when the pond water elevations increase above the 25-year peak stage elevation.

Magnolia Avenue and Pond G Drainage Improvements

Geotechnical investigation, design support, and construction details were provided for a number of items related to the Magnolia Avenue drainage improvement project including roadway upgrades, pedestrian trail repairs, drainage improvements, and replacement of approximately 200-feet of asbestos-concrete (AC) water main.

Oakpark Wastewater System Remediation

A technical review of conceptual designs for a replacement wastewater system for the City of Lakeland was completed. The conceptual design included provisions for the replacement of all mains, manholes, and laterals for the existing damaged system in the Oakpark subdivisions. The wastewater system pipelines experienced significant settlement since their installation in the mid to late 1990s.

Village of Islamorada Canal Restoration Design and Permitting

Project description

The Village of Islamorada joined Monroe County's Canal Restoration Demonstration Program by committing $100,000 to demonstration canal restorations. The first step in implementing a demonstration project was to objectively and scientifically select canals for water quality improvements. Amec Foster Wheeler was contracted by the Village to assist in the selection process. Amec Foster Wheeler implemented a ranking process approved by the Water Quality Protection Program Canal Restoration Advisory Subcommittee that paralleled the process utilized by Unincorporated Monroe County. Out of the 62 residential canals located in the Village, a list of the top ten canals that were the best candidates for a canal demonstration restoration project was identified. A report detailing the selection process was provided to the Village. The number one canal identified for inclusion in the demonstration program was Treasure Harbor Canal No. 137.

The Treasure Harbor Canal No. 137 was selected for a weed barrier system along the mouth of the canal to reduce seaweed loading and the upgrade of the existing aeration system within the canal basin to improve water quality parameters such as dissolved oxygen and turbidity.

The next steps required to proceed with implementation of the construction of the canal restoration at Treasure Harbor was to complete the design, obtain necessary permits, and obtain homeowner approvals. Below outlines the scope of services that Amec Foster Wheeler provided to the Village to complete the project:

Design included:

- Review of bathymetric survey data to finalize air curtain design
- Review of VERTEX aerator and air curtain design packages
- Preparation of an Erosion and Sediment Control Plan
- Preparation of an existing plan and proposed plan incorporating VERTEX designs

Client/customer
Village of Islamorada

Client reference
Susan Sprunt
Environmental Resources Program Manager
86800 Overseas Highway,
Islamorada, Florida
USA 33036
305.664.6427 (p)

Location
Islamorada, Florida

Dates/timing
2014 to 2015

Design services fee
$17,000

Project cost
$57,000

Amec Foster Wheeler personnel
Ricardo Fraxedas, PE
Wendy C. Blondin, PG
Stephen J. Hanks, PE, LEED AP
Jeremy M. Paris, PWS
R. Michael Jones, PLS, CFedS
Gregory Corning, PE

Name of contractor awarded project
Vertex Water Features

Village of Islamorada Canal Restoration Design and Permitting

Continued.

Environmental Permits preparation and submittal to the following agencies:

- South Florida Water Management District (SFWMD) Environmental Resource Permit (ERP)
- U.S. Corp of Engineers (USACE) Dredge and Fill 404 permit
- Florida Keys National Marine Sanctuary Permit

Assistance with homeowner approval coordination, including:

- Preparation of homeowner approval letters for project
- Preparation of homeowner meetings to discuss project
- Responding to comments from homeowners on project

Additionally, Amec Foster Wheeler will provide engineering inspection services during the construction to ensure compliance with permitting design drawings and requirements.

FKRAD State Park Sanitary Sewer Connections

Project description

The Key Largo Wastewater Treatment District (KLWTD) constructed a wastewater collection and transmission system to facilitate the abandonment of on-site sewage treatment and disposal systems (OSTDSs) in the Florida Keys within the KLWTD service area. Property owners with OSTDSs were required to connect to the public collection system and discontinue the use of their OSTDS. Amec Foster Wheeler worked with the Florida Department of Environmental Protection's Bureau of Design and Construction for the design and permitting of connections to the public wastewater collection system and abandonment of existing OSTDSs at three locations in the Florida Keys: John Pennekamp Coral Reef State Park, Lignumvitae Key Botanical State Park, and Windley Key Geological State Park.

John Pennekamp Coral Reef State Park

This portion of the project included design of new sanitary drain line to connect the existing gate house buildings to a new duplex grinder pump station. The new pump station was designed to discharge to an existing on-site sanitary sewer pump station. The design also included sanitary connections for a new recreational vehicle hook-up. Following the public system connection, the onsite OSTDS was abandoned per health department requirements.

Lignumvitae Key Botanical State Park

This portion of the project included design of new sanitary drain line to connect the existing office building, ranger residence, and proposed recreational vehicle parking spaces to a new sanitary sewer main. The sanitary sewer main was designed to discharge to a new quadplex grinder pump station to facilitate connection to the existing low pressure wastewater collection system. Following the public system connection, the onsite OSTDS was abandoned per health department requirements.

Windley Key Geological State park

Client/customer
Florida Department of Environmental Protection

Client reference
Theresa Carron
Project Manager
3800 Commonwealth Boulevard 260L, MS 520
Tallahassee, Florida
USA 32399
850.245.2721 (p)

Location
Monroe County, Florida

Dates/timing
2015 to 2016

Design services fee
$60,000

Project cost
$310,000

Amec Foster Wheeler personnel
David Soler, PE
Mark J. Frederick, PE, CFM
Loren Furland, PE, BCEE
Gregory Corning, PE
John Cawthron, IV, EI

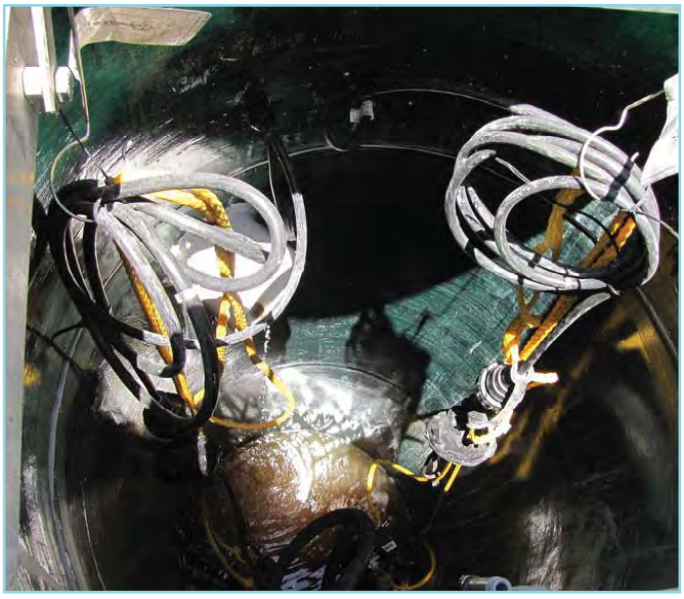
Name of contractor awarded project
3rd Generation Plumbing, Inc.

FKRAD State Park Sanitary Sewer Connections

Continued.

This portion of the project included design of new sanitary drain line to connect the existing visitor center to a new duplex grinder pump station to facilitate connection to the existing low pressure wastewater collection system. Following the public system connection, the onsite OSTDS was abandoned per health department requirements.

Amec Foster Wheeler provided construction administration services during the construction phase and coordinated with the utility service provider to place the new wastewater systems into operation.



Milton Keynes Residual Waste Treatment Facility

Project description

In 2013, Milton Keynes Council signed a contract with AmeyCespa to procure and construct a Residual Waste Treatment Facility, comprising of mechanical pre-treatment, anaerobic digestion, and gasification processes capable of treating 132 ktpa of municipal waste.MKC subsequently appointed Amec Foster Wheeler as Authority Engineer. Tasks include:

- To provide and sdvice the Council with regard to technical matters arisings throughout the works,
- Provide an overview of the general progress of the contract, including periodical observing and monitoring progress,
- Critically review and audit the design, construction testing and commissioning of the works and to provide technical support as requested and required from time to time.

Amec Foster Wheeler has advised and supported the Council during the construction program, including:

- Review of contractor proposed design changes;
- Observation of construction activities;
- Auditing of design health and safety (CDM),
- Technical review of construction progress for all four activities (civil, mechanical treatment, organic treatment and thermal treatment technologies);
- Review of independent certifier progress reports;
- Liaison with the IC with regard to issuance of the Readiness Test Certificates and Acceptance Test Certificates.

In the summer of 2016 the thermal treatment technology provider Energos entered administration. During this time Amec Foster Wheeler provided technical review of Contractor activities as Amey, the Contractor, developed Cure Plans to recover the situation and continue with the build. To date the anaerobic and composting facility, and the mechanical treatment plant have been accepted and are now operational. The thermal treatment plant build is complete and cold commissioning tests have commenced. Commissioning on waste is expected to commence April 2017 with Acceptance, and full Service Commencement in July 2017.

Client/customer
Milton Keynes Council

Client reference
David Proctor
Project Manager
9 Dickens Road, Old Wolverton, MK12 5QF
44(0)1908 253 755 (p)

Location
Milton Keynes, United Kingdom

Dates/timing
2011 to Ongoing

Design services fee
$490,350

Project cost
$244 million

Amec Foster Wheeler personnel
Alex Green
Alison Leavens
Ken Rigby
Oshiro Omogabi
Tom Mitchell
Brendan Sharpe

Name of contractor awarded project
Amy Cespa

City of Groveland Continuing Engineering Contract

Project description

Amec Foster Wheeler was selected by the City of Groveland to provide comprehensive as-needed engineering support. Services to date include the following:

CRA Stormwater Master Plan

The City of Groveland employed Amec Foster Wheeler to develop a stormwater master plan (SMP) for the community redevelopment area contained within its city limits. During phase I of the project, Amec Foster Wheeler defined problem areas and prepared conceptual designs for alternatives to address water quality and flooding issues within the study area. Flooding issues were assessed by incorporating information obtained from reported problems, site investigations during and after rainfall events, and development of a surface water model of existing conditions. Water quality issues were assessed from reported problems and a pollutant load model was developed to estimate pollutants contributing to the lakes and surface waters within the study area. One-foot topographic contours were generated for the study area using LIDAR.

A priority matrix was developed for selecting basins for retrofit projects based on modeling results for both flooding and water quality. Conceptual alternatives were proposed for each of the selected priority basins. Five stormwater ponds were proposed to provide both floodplain storage and water quality treatment. Three french drain systems also were proposed. Seven grant applications were submitted to the LCWA for the opportunity to receive Stormwater Treatment Grants.

Stormwater Master Plan Updates

In 2012, the City requested Amec Foster Wheeler to update the existing SMP completed in 2006 to include 937 acres within the city limits and to perform a stormwater utility rate study to address dedicated funding for the City's NPDES permit requirements and assist with capital projects for known flooding areas.

Lake Audrey Stormwater Improvements

As a part of the City's SMP, stormwater quality improvements were proposed to discharges to Lake Audrey. Lake Audrey, one of the City's valuable natural resources, is a closed basin

Client/customer
City of Groveland

Client reference
James Huish
Public Services Director
1198 Sampey Road
Groveland, Florida
USA 34736
352.429.0227 ext. 17 (p)

Location
Groveland, Florida

Dates/timing
2005 to Ongoing

Design services fee
Master contract with various task orders - fees varies per project

Project cost
$2 million

Amec Foster Wheeler personnel
Walter Reigner, PE, CPESC
Timothy J. Kelly, PE, CPESC, CPSWQ
David Butcher, PE, LEED AP
Michael D. Phelps, PE
Mark J. Frederick, PE, CFM
Loren Furland, PE, BCEE
Mark Chomtid, PhD, PE
Kristen Nowak, PWS
Aziza R. Baan, GISP
Kevin Shelton
L. Kevin Welch
Tonya J. Morris
Eric Brown

Name of contractor awarded project
Multiple contractors

Continued.

with a 84-acre contributing basin. The lake is surrounded by residential homes, and has several locations where the right-of-way extends down to the lake for public access. Many of the roadways around the lake are brick-paved, retaining the historical look of Groveland's streets. Amec Foster Wheeler selected a combination of french drains and second generation baffle boxes due to limited right-of-way, permeable soils, and depth to water table, so that treatment is provided upstream of each of the five outfalls to the lake. The existing drainage system was improved to include approximately 1,500 feet of a 24-inch french drain designed outside the pavement, and avoiding disturbance to the brick roads. Second generation baffle boxes were designed at four of the five outfalls to the lake. Annualized pollutant load removal estimates were made based on hydrodynamic infiltration modeling and event mean concentration-based load inputs. The project has been constructed. Amec Foster Wheeler assisted the City to obtain funding for the project from LCWA.

Coverboard Survey and Threatened and Endangered Species Survey

Amec Foster Wheeler scientists conducted a coverboard survey to determine the presence or absence of sand skink (Neoseps reynoldsi) and blue-tailed mole skink (Eumeces egregius lividus) within a 20-acre property owned by the City and proposed for development of an active park. This project included preparation and placement of 2-foot by 2-foot plywood coverboards at a maximum density of 40 per acre, for a total of 800 coverboards on the 20-acre property. The boards were inspected once per week for four consecutive weeks for skinks or associated indicators. A final report was developed and submitted to include maps of board locations and results of the study. Amec Foster Wheeler responded to the City's tight schedule by initiating the project immediately so that a one-year delay in the project schedule could be avoided. Amec Foster Wheeler also conducted a threatened and endangered species survey for any other listed species on the subject property. This included plants and animals such as scrub jays, indigo snakes, scrub plum, scrub beargrass, etc. A final report was developed and submitted listing all species observed on the site and potential species in the area.

Catherine Lane and Wendell Avenue Sanitary and Water Line Extension

Amec Foster Wheeler designed approximately 2,200 linear feet of gravity sewer with two lift stations, as well as 1,900 linear feet of force main and 1,400 linear feet of water main. Thirty-seven hook-ups to the sewer, both residential and commercial, were completed. Power upgrades were required to serve both lift stations. An obstacle faced by the project team was the narrowness of the right-of-way, which made it challenging to avoid conflicts with other water and sewer utilities and meet separation requirements. Two directional bores under SR 50 were required to connect to the mains. Restoration included full replacement of a portion of the

pavement and overlay of the remainder of the pavement. Amec Foster Wheeler staff also provided a geotechnical investigation of the utility alignment and lift station locations. The investigation showed unsuitable soils for portions of the utility alignment and in the lift station locations. Amec Foster Wheeler also provided technical specifications and contractual documents and assisted the City with bidding and construction of the project.

Lake David Stormwater Improvements

The City hired Amec Foster Wheeler to design a retrofit to improve the water quality of discharges to Lake David from an untreated commercial/residential area within the City. Amec Foster Wheeler assisted the City to obtain funding for the project from LCWA. Lake David is the focal point for the City, as it is adjacent to one of the City's parks and provides a venue for a number of annual festive occasions. The water quality of the lake is of great importance to residents.

Amec Foster Wheeler selected a treatment train including inlet baskets to remove organics from stormwater at the upstream end of french drains. These BMPs were selected over other potential BMPs due to the limited right-of-way, clear zone issues with swales, well draining soils, deep water table, and the ability to achieve the required treatment volume. Annualized pollutant load removal estimates were made based on hydrodynamic infiltration modeling and event mean concentration-based load inputs.

Eagle Ridge Reclaimed Water System – Phase II

Amec Foster Wheeler designed the Phase II extension to the City's Eagle Ridge Reclaimed Water System which involved approximately 9,000 linear feet of 12" pipe installed within the FDOT Right of Way for SR 50. Amec Foster Wheeler's services

Continued.

included survey, design, permitting, and construction phase assistance. This project was cooperatively funded by the SJRWMD.

Palisades Well Replacement

Amec Foster Wheeler designed the pumping system for the replacement of a well at the Palisades Water Production Facility. Amec Foster Wheeler's services included survey, design, permitting, and construction phase assistance.

Park Conceptual Site Planning

Amec Foster Wheeler prepared conceptual site plans for two proposed City parks, the Robert A. Davis Park and the Ronald Sefton Gaffney Park. Davis Park was originally designed as a sports complex and later revised to a concept that featured an amphitheatre as the primary amenity. Gaffney Park amenities included a dog park, pavilions, and nature trails. Amec Foster Wheeler provided preliminary design services including survey and ecological evaluations.

Development Review Services

Amec Foster Wheeler provides site/civil engineering code-compliance review services to the City for proposed development projects. Services include review of the development engineer's calculations and construction drawings, summary of design deficiencies relative to the City codes, and attendance at meetings. The applications were reviewed based on City ordinances, City construction standards and specifications, and industry standards.

Tab 4
Ability to Perform Services

Ability to Perform the Services Expeditiously at the Request of the City

The Amec Foster Wheeler team's primary goal is to provide a strong and diverse staff with the interdisciplinary skills and depth of experience necessary to produce all the required tasks on time and within budget, while achieving a quality product.

Location

Amec Foster Wheeler Environment & Infrastructure, Inc., is an architecture and engineering design, environmental consulting, and construction company operating with more than 3,300 professionals in 90 locations across the United States. In Florida, Amec Foster Wheeler has 400 employees in 11 offices, including more than 100 in the South Florida region. The Amec Foster Wheeler team brings specialized Florida knowledge and experience to our clients with aided service delivery driven by our expansive financial, project management, and IT systems. Utilizing these combined services allows us to draw on vast resources of personnel and experience to meet our clients' needs.

The City of Key West projects will be managed and serviced from our Miami Lakes office with additional support from our West Palm Beach, Lakeland, and Orlando offices. While we have team members in multiple offices, our project managers and highly qualified professionals form seamless and flexible project teams that provide uninterrupted continuity to project tasks. We have a proven working history with a high success rate of coordinating and executing high-value engineering and architectural

Key Staff Member Availability

Team Member	% Available	10	20	30	40	50	60	70	80	90	100
Michael Nardone, PG	40%										
Gregory Corning, PE	70%										
Michael D. Phelps, PE	50%										
David Soler, PE	80%										
Zully Hemeyer	70%										
Jeffrey D. PeQueen, PE, CFM, CPSWQ	70%										
Timothy J. Kelly, PE, CPSWQ, CPESC	50%										
Melanie Fowler, PE	60%										
Tiffany Davies, PE	50%										
David Butcher, PE, LEED AP	70%										
Mark J. Frederick, PE, CFM	70%										
Loren Furland, PE, BCEE	40%										
Rebecca Vanderbeck, PE	60%										
Mikhal Moberg, PE, GISP	50%										
Joe Wagner, PE, DNE	70%										
Stephen J. Hanks, PE, LEED AP	60%										
Randy A. Knott, PE	50%										
Kenneth W. Ashe, PE, PMP, CFM	60%										
Andrew Hadsell, CFM	50%										
Peter J. Hall, CG, CEA	40%										
Phil Scott	70%										
Ken Rigby	50%										
Jonathan Bebb	60%										
Claire Brown	50%										
Alex Green	60%										
Armando Hernandez, PE, CCM, SI	70%										
Ryan Kane, PE	60%										
Mark A. Leon, PE	50%										

projects throughout the state. The close proximity of our offices to the City of Key West will enable the Amec Foster Wheeler project team to rapidly respond to all project needs in a timely and cost efficient manner.

Amec Foster Wheeler has been serving the City of Key West and Monroe County for more than a decade and is familiar with all aspects of permitting and regulations for projects in the Keys.

Workload

Our project managers and highly qualified professionals form seamless and flexible project teams that provide uninterrupted continuity to project tasks. We have a proven working history with a high success rate of coordinating and executing high-value engineering and design projects throughout the state. **Mr. Michael Nardone, PG** will serve as the Principal-in-Charge to ensure that all of Amec Foster Wheeler's resources are available as required to satisfy all project commitments.

The Amec Foster Wheeler team has ample capacity, at any given time, to support the City of Key West with this contract. The staff members proposed for this assignment will be available daily to provide the services indicated, and individual staff members' hours can and will be adjusted as dictated by project needs and in accordance with the project work plan and schedule. We understand that the nature of this contract may not be one of uniform workload, but rather of varying labor requirements, and the Amec Foster Wheeler team commits to the City that it will provide sufficient staff resources to handle even peak workload demands. Our team has the resources available to expedite schedule at any time if needed and all are equally committed to client satisfaction and to outstanding technical performance on each and every task assignment.

The Amec Foster Wheeler team's primary goal is to provide a strong and diverse staff with the interdisciplinary skills and depth of experience necessary to produce all the required tasks on time and within budget, while achieving a quality product.

We are confident that our team's ability to handle the scope of services required under this RFQ is not affected by our existing workload, which does not include any substantial long-term project commitments for any of our team members. We feel that the project management methods discussed in the previous section would facilitate the efficient implementation of this contract.

Ability to Provide Services

Our daily ability to handle the scope of services will be facilitated primarily by continuously tracking staff needs and availability to ensure project commitments are met, and costly staff overloading or under loading is avoided. Our team's project manager, **Mr. David Soler, PE,** will oversee and coordinate this effort to ensure an effective staff allocation whereby team adjustments will be made as dictated by the project requirements and in accordance with the designated work plan. Equally important will be coordination with City staff.

We are confident that this contract will be an excellent fit for the Amec Foster Wheeler team in terms of experience and proficiency as well as the availability of the personnel who are proposed. The professionals who would be utilized for this project are committed to client service and accustomed to providing the individual time and effort necessary to successfully achieve the objectives of our clients. We are looking forward to partnering with you for this contract and are ready to start work immediately. The Amec Foster Wheeler team is fully confident that we will complete the scope of services successfully and to the full satisfaction of the City of Key West.

Project Management - Budget and Schedule Adherence

We recognize that every project is critical for the City and the adherence to schedule is of the essence. We further understand that technical, operational, and budgetary issues have to be addressed concurrently. Most importantly,

however, we recognize that all of these issues must be addressed, coordinated, and resolved in a timely manner without interrupting the project schedules.

To address this challenge, we will adhere to proven management approaches to assure quality and on-time performance within budget. Amec Foster Wheeler's project management approach is based on our core belief in providing the highest level of service and product quality to our clients. Amec Foster Wheeler's project management procedure and strategy for each component of a project is designed to maximize the efficient execution of each task and to ensure the City's satisfaction. **Our management process is proven to be one of the most efficient for controlling numerous activities in a timely and cost-effective manner.** These processes are tailored to meet the individual needs of each of our clients.

We believe that the fundamental aspects of client service are communication, responsiveness, technical expertise, and most importantly developing a client's-perspective understanding of the project's objectives, constraints, and potential challenges. A practical understanding of both the technical and non-technical aspects are essential to the efficient execution of this project. In summary, the key elements of our project management plan are:

- Effective client interface and communication
- Assignment of a senior project manager and experienced key personnel
- Preparation of a comprehensive technical approach based on a sound understanding of the project
- Development of a fair and complete budget to accomplish the work
- Use of proven, computerized systems for monitoring and control of project cost and schedule
- Commitment to the schedule and budget from all team members
- Frequent team interaction on project tasks, deliverables, and challenges
- Continuity of staff on project tasks and development of "project teams"

To accomplish this level of service standard, the Amec Foster Wheeler team will strive to work closely with City staff and stakeholders as extensions of our project team. This will be facilitated through regular status reports, conversations, and meetings.

As a matter of corporate policy a project execution plan (PEP) will be prepared at the initiation of the project based on the contractual scope, schedule, and budget. The PEP serves as a blueprint for internal assessment and management of project delivery performance. **The plan specifically requires identification of factors which have the potential to affect the project schedule or budget along with mechanisms to measure performance and corrective action plans.** The Amec Foster Wheeler PEP is a living document that requires continual update throughout the course of the project along with independent internal project reviews.

At a task execution level, Amec Foster Wheeler employs several effective project management tools to monitor the project budget and schedule. We track work efforts and progress for each element of the work plan on a weekly basis and employ aspects of Earned Value Management to monitor our performance. Weekly goals are set for our staff based on our work plan and we hold them accountable for attaining those goals within the allotted hours.

Quality and Cost Controls

Controlling quality and costs on a project require the consultant to have an inherent philosophy of using qualified staff, scoping the project properly, implementing routine procedures to ensure quality control is instituted throughout the contractual engagement, and finally implementing routine procedures to ensure project costs are paced with deliverable status.

We understand the challenges facing government agencies today with an ever increasing demand for services while operating under budget constraints and shortfalls. As such, we know that diligent project management that focuses on maintaining project schedules and budgets - while providing the City of Key West with high quality products and services - will be the tool that measures the success of this contract.

As Project Manager, Mr. Soler's responsibilities will include applying diligent project management and continuous QA/QC throughout the life of the contract. It is equally important that the project manager has a comprehensive understanding of all tasks at hand and the necessary skills and level of experience to allow for timely performance. Mr. Soler has succeeded in that regard for many years on similar stormwater, street rehabilitation, and general civil engineering projects.

Amec Foster Wheeler staff members also have significant experience with securing and working on cooperative funding applications and grants and are prepared to assist the City in securing funds that may facilitate the City's capital improvement project progression, as well as for achieving regulatory permit compliance.

Amec Foster Wheeler utilizes only the most qualified staff for all our jobs since they will know the technical requirements and what is required, when, to what degree, etc. These staff will be able to implement the project in the most cost-effective way with the most efficient means of getting to the desired end result.

One great way to control costs on a project is for the consultant and client to properly define the scope. Amec Foster Wheeler's staff has the expertise to know exactly what is required for Civil Engineering services contracts as well as the list of services listed in the RFQ. We are highly confident we are the most cost-effective firm because of this knowledge base.

It is Amec Foster Wheeler's philosophy that maintaining weekly reviews on project staff's hours to a project are critical to completing the project within the budget and making the project successful for the client and the consultant. Weekly charges (hours) are compared to the project deliverables' status (percent complete) to see if there is a match. If there is not a match, the project manager immediately meets with staff to obtain details on specific task standing, etc. and to resolve any questions on the issue. Amec Foster Wheeler has had a tremendous success rate with this approach and extremely rare change orders are required only when the original project scope has to be adjusted due to changes occurring beyond control of Amec Foster Wheeler.

Project Staff

Perhaps more so than any other factor, the project staff assigned to the project is a key to maintaining the project budget and schedule. Possession of a pragmatic understanding of the scope of services ensures that the final result is consistent with the intended final end-uses. Equally important is a team-wide functional knowledge and understanding of the project guidelines.

Amec Foster Wheeler has a very effective mix of engineers and scientists who understand the big picture of Clean Water Act initiatives such as TMDLs, NNCs, and NPDES Municipal Separate Stormwater Sewer System (MS4) permit requirements. But just as important, our staff also has the knowledge of local Environmental Resource Permit (ERP) and design conditions which allows our staff to provide the most cost-effective solutions from a short- and long-term standpoint. Amec Foster Wheeler staff routinely use the most progressive and technologically advanced pollutant load reduction analyses (as mentioned in the draft Statewide Stormwater Handbook of March 2010) to evaluate projects for cost effectiveness early on during the preliminary engineering phase.

The Amec Foster Wheeler Project Team was carefully assembled and organized to provide superior expertise, resources, and service to the City. Along with the team's management, highly experienced and uniquely qualified individuals have been chosen to fulfill key team roles. Amec Foster Wheeler's team will be led by senior project managers with overlapping and complementary skills. By serving both small city and large state government clients, we have gained a broad experience base that enhances our ability to know current regulations and probable future regulatory requirements.

In summary, we are fully committed to conducting our work within the specified project terms and conditions and are fully confident that our team's exceptional level of expertise, experience, and commitment coupled with our strong team structure and project management plan will service the City throughout the course of the Contract.

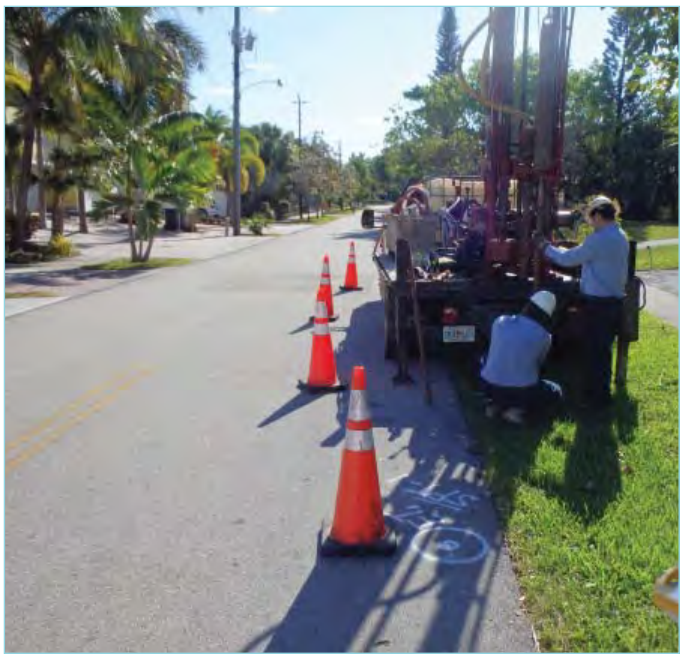
Engineering and Management QA/QC

Amec Foster Wheeler's QA/QC process is a comprehensive tool that establishes protocols and procedures for activities at Amec Foster Wheeler, including the following key components:

- Budget and schedule tracking
- Project documentation
- Document development and review
- Communication protocol
- Invoicing
- Plan preparation standards

Amec Foster Wheeler believes in the value of Quality Assurance (QA) and Quality Control (QC) measures and has developed a QA/QC plan specific for use in our projects. The project team will follow a rigorous protocol that requires QA/QC reviews at critical steps throughout the project process. Qualified staff will be utilized for review and comment on all project deliverables before progressing to the next defined phase of work.

We have found that continuous senior level review is essential to meeting project goals and objectives within allocated schedules and budgets. Our specific goal is to identify and correct potential issues during the process to avoid costly and time consuming backtracking in subsequent elements of



the work plan. For similar reasons, we believe in maintaining staff consistency throughout our projects. Assuring and controlling the quality of our work is a never ending process. A comprehensive QA/QC plan is necessary to minimize errors and omissions and to increase efficiency and effectiveness.

Budget and schedule are only part of the equation, work quality is essential. Amec Foster Wheeler recognizes our staff dedication and professional pride that our project team members possess as an integral component in a project's success. Our project team is focused on maintaining a common sense approach throughout our projects and avoiding over-complication and over-engineering. Basically, our experience with similar projects and services allows us to know what to expect, what to do, and how to do it.

Generally, QA/QC steps are interlaced within each step of the project. QC review of actual work products will be performed continuously throughout the project. QA activities include a planned system of review procedures conducted by personnel not directly involved in the project, to produce and evaluate data in accordance with predefined quality objectives. Quality Control is a system of routine administrative and technical activities to measure, manage and control the work product to ensure integrity of data, identify and address errors and omissions, to document and archive data, and to record all QA/QC activities. The QA/QC reviewers document their review of work products and any recommendations to support staff, task leader(s) or client through memorandum or notes to the file.

Amec Foster Wheeler has found through practical experience with previous projects that it is essential to have qualified professionals other than the main project engineer review the project technical approach as well as the details incorporated into the work product. Such reviews provide an unbiased test of whether the product appears to meet the expectations of the client.

A good QA/QC review will often challenge the designer's work but the end result and goal will be to provide a work product that serves the client in the fullest way possible.

Amec Foster Wheeler's Corporate QA/QC Plan

We recognize that consistently providing quality services and products in a timely manner is the only way to achieve consistent exceptional client satisfaction. The assembled project team will be required to follow Amec Foster Wheeler's Quality Management Program, as well as any additional QA/QC protocols that may be required by the City during this continuing services contract.

QA/QC activities, including schedule and budget adherence, are directed by Amec Foster Wheeler's Corporate Plan, with oversight by senior level managers. Amec Foster Wheeler's QA/QC Plan is a comprehensive document that establishes protocols and procedures for activities at Amec Foster Wheeler. The following sections outline the main components of our Corporate plan that will be used in conjunction with independent QA/QC reviews, to provide the highest level of quality in our work products.

Job Set-up and Administration

Job setup and project kickoff are considered high priorities for Amec Foster Wheeler Project Managers (PM). Before a task or assignment is initiated, PMs must be absolutely sure that the intent and objectives of the client are fully understood. Amec Foster Wheeler also employs numerous administrative support personnel who assist PMs in day-to-day organization, filing, word processing and document review activities.

Budget and Schedule Tracking

Amec Foster Wheeler uses BST Enterprise software to track schedule progress and evaluate resource allocations and needs. In addition, this software allows our PMs to track all hours and expenses posted to the project on a weekly basis by labor type, activity and phase/task.

Project Documentation

Submission of regular updates, on an agreed upon schedule, regarding the status of the project will be given to the client as well as report cards soliciting input pertaining to the services provided.

Document Development and Review

All documents leaving Amec Foster Wheeler are required to undergo a QA/QC review prior to transmittal. Reviews are generally conducted by peers, senior management and/or administrative staff. The Quality Assurance Review Checklist is signed and dated by all reviewers.

Communication Protocol

Amec Foster Wheeler believes that frequent communication with our clients is one key to success. Our PM's are accessible via e-mail, fax, cellular and office phones, and voice mail.

Invoicing

Our accounting department is responsible for managing and coordinating all billing related activities including PM billing reviews and client follow-up.

Plan Preparation Standards

Our technical support staff (CAD and GIS) follows comprehensive standards regarding the layout and style of plans and specifications.

Exceptional Customer Service

We are committed to providing exceptional client service and quality work. Client service is at the core of Amec Foster Wheeler's business model. Our corporate mission statement and number one priority is to provide exceptional client service.

To keep us continually focused on our service, we solicit customer satisfaction feedback through our report card program, which measures satisfaction ratings, so that we can incorporate exceptional service into our everyday project management routine. This process of continued improvement means you get what you need when you need it. The evaluation allows us to determine precisely our client's requirements and to gain a better understanding of their priorities. Our clients provide feedback on how we can better meet their business needs and expectations.

The process is designed to foster an additional level of communication. It helps us identify what adjustments are needed to improve our service for current and future clients. Our goal is to gather and take action on information that will drive continuous performance improvement.

Tab 5
Ability to Complete Services with In-House Staff

Ability to Complete Services with In-House Staff

For decades, Amec Foster Wheeler has provided innovative, sustainable, and comprehensive solutions to challenges that affect our constructed and natural environment. Our team has worked on more than 100 continuing master engineering design service contracts for government agencies throughout Florida over the past 30 years. Our team's experience includes a diverse range of projects that comprehensively, and in some cases, individually include all of the services covered under this contract. **Amec Foster Wheeler has the in-house expertise to perform all tasks within the project scope.**

Amec Foster Wheeler offers the City a prime consultant with a continuity of management and staff with a proven record of performance to meet our clients' needs, as well as a tradition of excellence in the quality of work produced. As you will note when reviewing this SOQ, our professional and technical staff to be assigned to your contract have extensive experience on similar projects and work together routinely on projects of many types. Our example projects submitted in this SOQ shows many of these staff working together to complete projects.

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Tab 6
Other Certifications

Other Certifications

Amec Foster Wheeler understands that the City needs a consultant that has qualified personnel available to serve with the utmost responsiveness throughout the term of this contract. That consultant needs to have a deep bench of staff from whom to pull from throughout the contract period. A deep, experienced bench translates to rapid delivery of quality products to help the City execute its capital improvements plans as well as to complete other services for its citizens. Amec Foster Wheeler has a stable group of qualified staff to serve the City of Key West in all services listed in the RFQ.

Our project team represents some of the most qualified engineers and scientists in the state with extensive knowledge and expertise directly correlating to the City's anticipated scope of services. Our staff includes licensed professional engineers and licensed professional geologists, many of whom have earned additional certifications as floodplain managers, professionals in erosion and sediment control, stormwater quality, wetland scientists, environmental scientists, soil scientists, and GIS professionals. Our team also consists of construction managers, registered architects, and professional surveyors. The Amec Foster Wheeler project team has been carefully assembled and organized to provide superior expertise, resources, and service to the City of Dade City.

LEED Accredited Professionals

Our team for this project includes four LEED-certified professionals who are supported by a network of nearly 60 similarly-certified Amec Foster Wheeler professionals throughout the United States. Further, Amec Foster Wheeler is a member of the U.S. Green Building Council and has LEED accredited personnel in a variety of engineering and design disciplines.

FDOT Certified Staff Professionals

Our firm promotes cross training, which provides our team with the flexibility to service multiple work assignments with highly qualified technicians while ensuring safety during our field services. Amec Foster Wheeler has extensive familiarity with FDOT's Certification and Qualification Program (CTQP) and we have invested significantly in the training and technical development of more than 130 personnel obtaining field and laboratory certifications. We also employ 21 Maintenance of Traffic (MOT)-certified personnel in Florida alone.

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Tab 7
Additional Information

Licenses

State of Florida
Department of State

I certify from the records of this office that AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC. is a Nevada corporation authorized to transact business in the State of Florida, qualified on August 3, 2000.

The document number of this corporation is F00000004389.

I further certify that said corporation has paid all fees due this office through December 31, 2017, that its most recent annual report/uniform business report was filed on January 11, 2017, and that its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Eleventh day of January, 2017

Secretary of State

Tracking Number: CU2410326777

To authenticate this certificate,visit the following site,enter this number, and then follow the instructions displayed.

https://services.sunbiz.org/Filings/CertificateOfStatus/CertificateAuthentication

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State of Florida

Board of Professional Engineers

Attests that

Amec Foster Wheeler Environment & Infrastructure, Inc.

FBPE

Is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2019

Audit No: 228201902396 R

CA Lic. No: 5392

RICK SCOTT, GOVERNOR — MATILDE MILLER, INTERIM SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF ARCHITECTURE & INTERIOR DESIGN

LICENSE NUMBER
AA26002187

The ARCHITECT CORPORATION
Named below IS CERTIFIED
Under the provisions of Chapter 481 FS.
Expiration date: FEB 28, 2019

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
150 COCOA ISLES BLVD
COCOA BEACH FL 32931

ISSUED: 01/24/2017 DISPLAY AS REQUIRED BY LAW SEQ # L1701240000838

RICK SCOTT, GOVERNOR — KEN LAWSON, SECRETARY

STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF LANDSCAPE ARCHITECTURE

LICENSE NUMBER
LC26000333

The LANDSCAPE ARCHITECT BUSINESS
Named below HAS REGISTERED
Under the provisions of Chapter 481 FS.
Expiration date: NOV 30, 2017

MACTEC FACILITIES DESIGN LLC
1105 LAKEWOOD PARKWAY #300
ALPHARETTA GA 30009

ISSUED: 11/11/2015 DISPLAY AS REQUIRED BY LAW SEQ # L1511110002490

Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500

License No.: **LB7932**
Expiration Date: February 28, 2019

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
1105 LAKEWOOD PKWY STE 300
ALPHARETTA, GA 30009-7625

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

RICK SCOTT, GOVERNOR — KEN LAWSON, SECRETARY

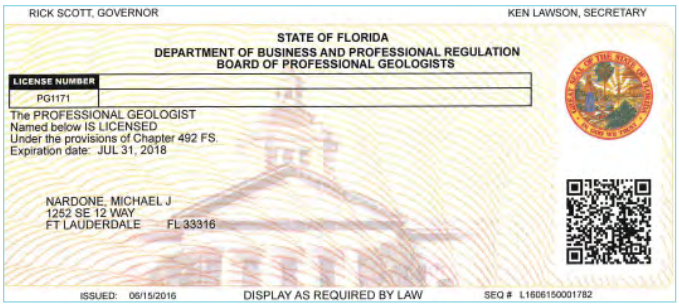
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS

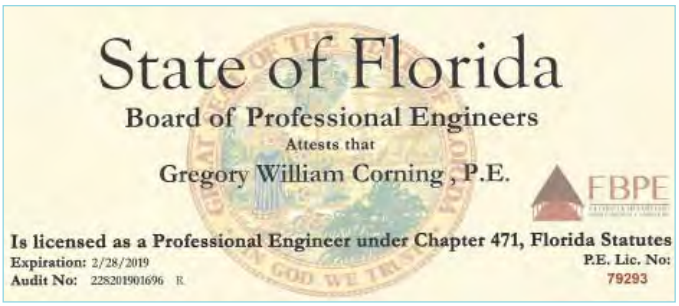
LICENSE NUMBER
GB514

The GEOLOGY BUSINESS
Named below IS CERTIFIED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2018

AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
1105 LAKEWOOD PKWY STE 300
ALPHARETTA GA 30009

ISSUED: 06/06/2016 DISPLAY AS REQUIRED BY LAW SEQ # L1606060000989


RICK SCOTT, GOVERNOR
KEN LAWSON, SECRETARY
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF PROFESSIONAL GEOLOGISTS
LICENSE NUMBER
PG1171
The PROFESSIONAL GEOLOGIST
Named below IS LICENSED
Under the provisions of Chapter 492 FS.
Expiration date: JUL 31, 2018
NARDONE, MICHAEL J
1252 SE 12 WAY
FT LAUDERDALE FL 33316
ISSUED: 06/15/2016
DISPLAY AS REQUIRED BY LAW
SEQ # L16061500017B2


State of Florida
Board of Professional Engineers
Attests that
Gregory William Corning , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
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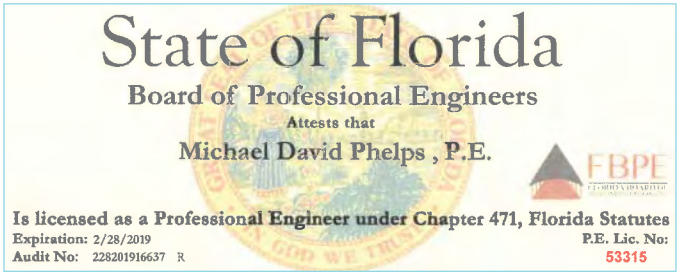
P.E. Lic. No:
79293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Board of Professional Engineers
Attests that
Michael David Phelps , P.E.
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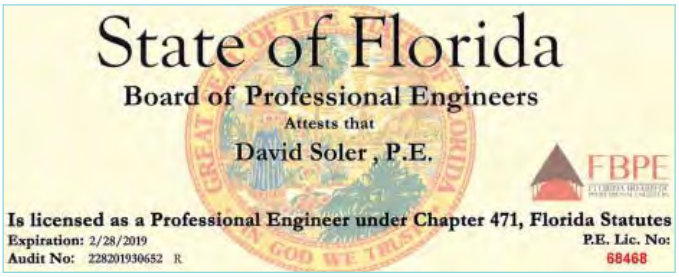
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Board of Professional Engineers
Attests that
David Soler , P.E.
FBPE
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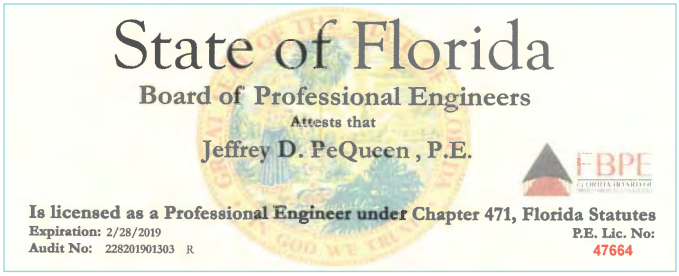
State of Florida
Board of Professional Engineers
Attests that
Jeffrey D. PeQueen , P.E.
FBPE
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P.E. Lic. No:
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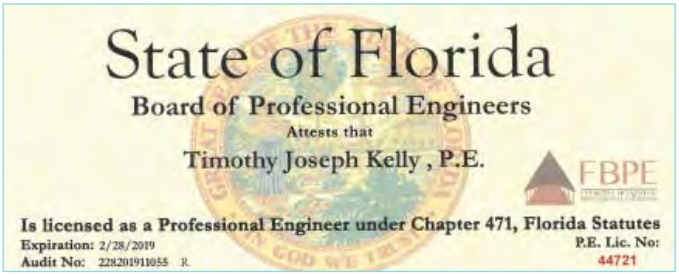
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Board of Professional Engineers
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Timothy Joseph Kelly , P.E.
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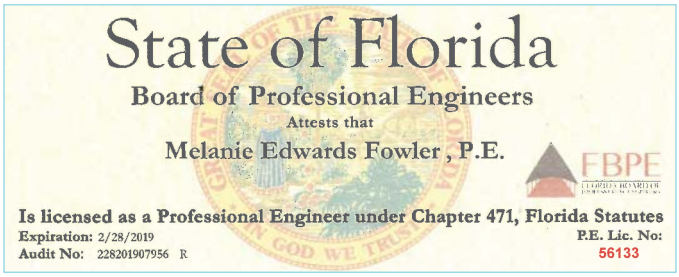
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Melanie Edwards Fowler , P.E.
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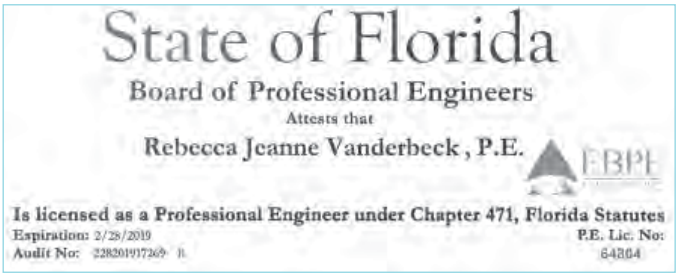
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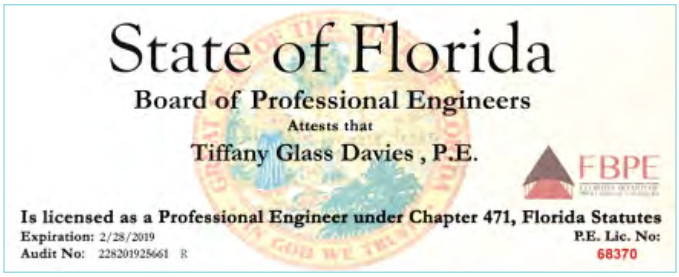
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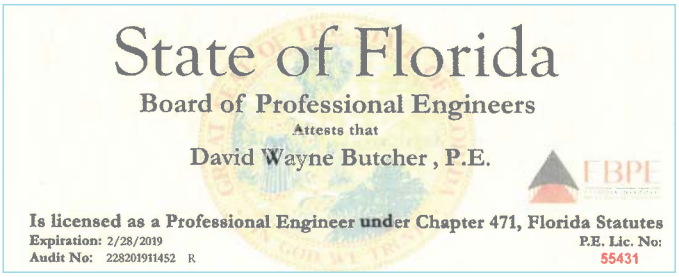
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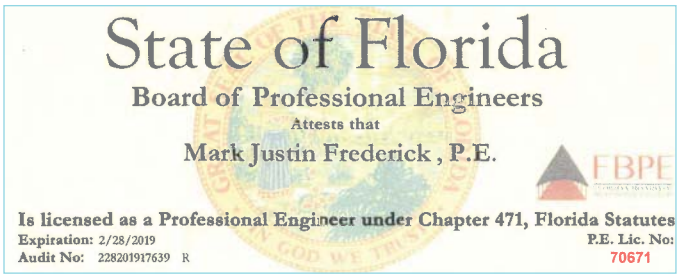
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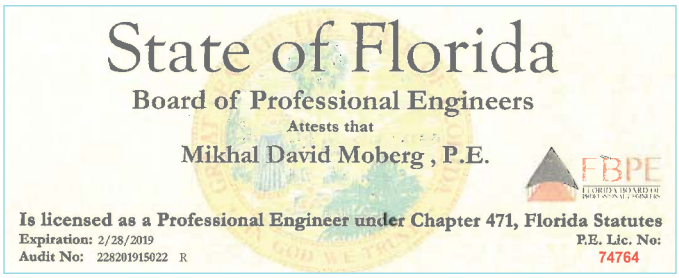
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Board of Professional Engineers
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FBPE
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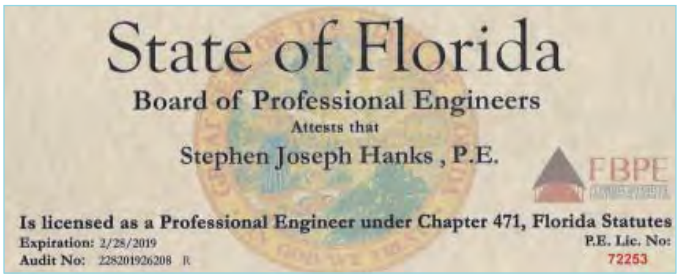
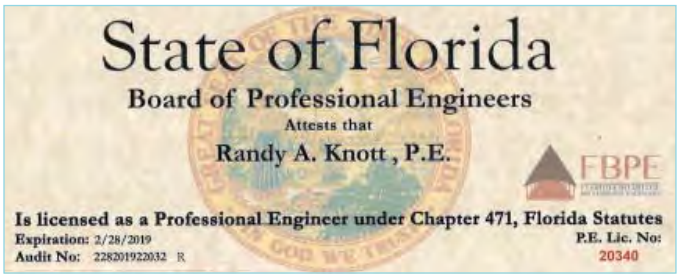
P.E. Lic. No:
74764


State of Florida
Board of Professional Engineers
Attests that
Stephen Joseph Hanks , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201926208 R
P.E. Lic. No:
72253


State of Florida
Board of Professional Engineers
Attests that
Randy A. Knott , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201920232 R
P.E. Lic. No:
20340


State of Florida
Board of Professional Engineers
Attests that
Armando Hernandez , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201918490 SI
SPECIAL INSPECTOR
P.E. / SI Lic. No:
63211 7392809


DBPR ONLINE SERVICES
Home
8:09:29 AM 4/11/2017

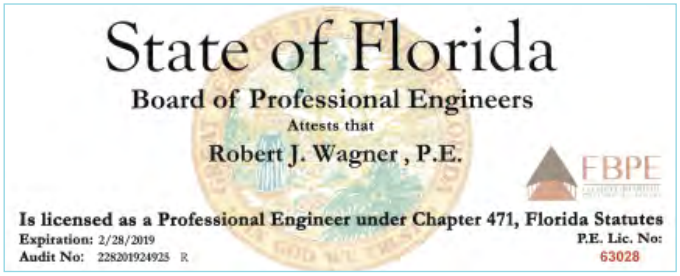
Licensee Details

Licensee Information

Name:	FURLAND, LOREN P (Primary Name)
Main Address:	736 S. LAKESHORE BLVD. LAKE WALES Florida 338530000
County:	POLK
License Mailing:	736 SOUTH LAKESHORE BLVD. LAKE WALES FL 33853
County:	POLK
LicenseLocation:	

License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	39121
Status:	Current,Active
Licensure Date:	11/23/1987
Expires:	02/28/2019


State of Florida
Board of Professional Engineers
Attests that
Robert J. Wagner , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201924925 R
P.E. Lic. No:
63028


THE NORTH CAROLINA BOARD OF EXAMINERS
FOR
ENGINEERS AND SURVEYORS
Be It Known That
Kenneth W. Ashe
HAVING GIVEN SATISFACTORY EVIDENCE OF THE NECESSARY QUALIFICATIONS WITH REGARD TO CHARACTER, EDUCATION, AND EXPERIENCE AS REQUIRED BY THE CURRENT NORTH CAROLINA ENGINEERING AND LAND SURVEYING ACT, WAS EXAMINED – DULY LICENSED – AWARDED THIS CERTIFICATE – AND IS HEREBY AUTHORIZED TO PRACTICE AS A
PROFESSIONAL ENGINEER
IN THE STATE OF NORTH CAROLINA
IN TESTIMONY WHEREOF, THE BOARD OF EXAMINERS ISSUED THIS CERTIFICATE UNDER THE SEAL OF THE BOARD AND SIGNATURES OF THE CHAIR AND SECRETARY
THIS 10th DAY OF January A.D. YEAR 2002
17467

State of Florida
Board of Professional Engineers
Attests that
Ryan M. Kane , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201921095 R
P.E. Lic. No: 72050

DBPR ONLINE SERVICES
Home
4:49:40 PM 4/11/2017

Licensee Details

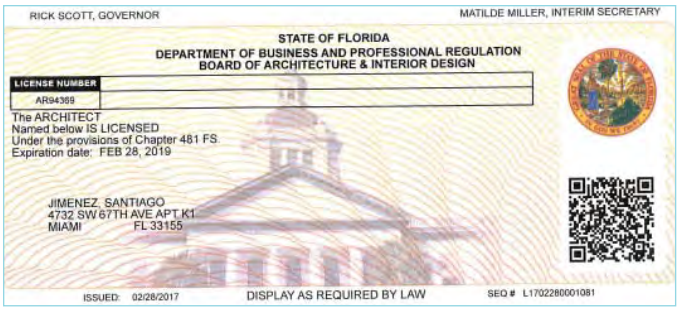
Licensee Information

Name:	LEON, MARK A. (Primary Name)
Main Address:	POST OFFICE BOX 195 MAGNOLIA SPRINGS Alabama 36555
County:	OUT OF STATE
License Mailing:	POST OFFICE BOX 195 MAGNOLIA SPRINGS AL 36555
LicenseLocation:	

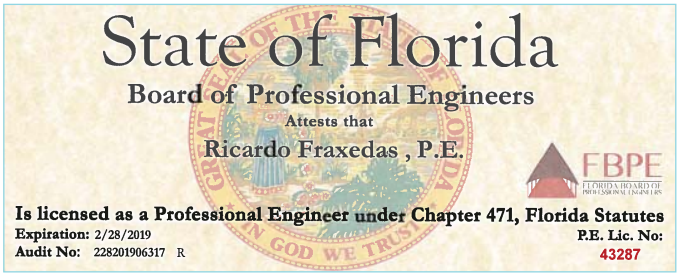
License Information

License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	72832
Status:	Current,Active
Licensure Date:	05/10/2011
Expires:	02/28/2019

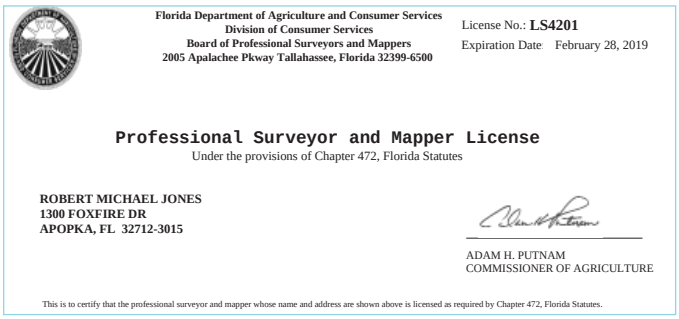
RICK SCOTT, GOVERNOR
MATILDE MILLER, INTERIM SECRETARY
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF ARCHITECTURE & INTERIOR DESIGN
LICENSE NUMBER
AR95257
The ARCHITECT
Named below IS LICENSED
Under the provisions of Chapter 481 FS.
Expiration date: FEB 28, 2019
DRAPER, ROBERT M
5410 NW 82 TERR
LAUDERHILL FL 33351
ISSUED: 02/08/2017
DISPLAY AS REQUIRED BY LAW
SEQ # L1702080000702



RICK SCOTT, GOVERNOR
MATILDE MILLER, INTERIM SECRETARY
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF ARCHITECTURE & INTERIOR DESIGN
LICENSE NUMBER
AR94389
The ARCHITECT
Named below IS LICENSED
Under the provisions of Chapter 481 FS.
Expiration date: FEB 28, 2019
JIMENEZ, SANTIAGO
4732 SW 67TH AVE APT K1
MIAMI FL 33155
ISSUED: 02/28/2017
DISPLAY AS REQUIRED BY LAW
SEQ # L1702280001081



State of Florida
Board of Professional Engineers
Attests that
Ricardo Fraxedas , P.E.
FBPE
Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201906317 R
P.E. Lic. No: 43287



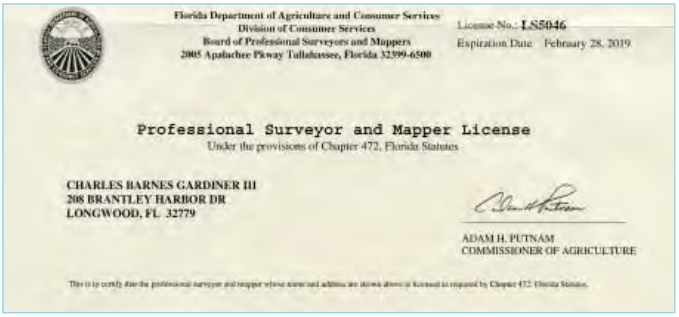
Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
License No.: LS4201
Expiration Date February 28, 2019

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

ROBERT MICHAEL JONES
1300 FOXFIRE DR
APOPKA, FL 32712-3015

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.



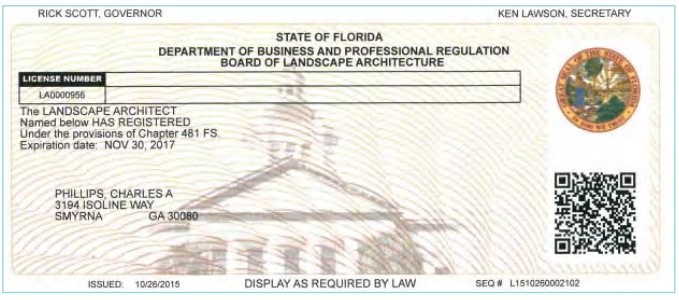
Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkway Tallahassee, Florida 32399-6500
License No.: LS5046
Expiration Date February 28, 2019

Professional Surveyor and Mapper License
Under the provisions of Chapter 472, Florida Statutes

CHARLES BARNES GARDINER III
208 BRANTLEY HARBOR DR
LONGWOOD, FL 32779

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

RICK SCOTT, GOVERNOR
KEN LAWSON, SECRETARY
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF LANDSCAPE ARCHITECTURE
LICENSE NUMBER
LA0000795
The LANDSCAPE ARCHITECT
Named below HAS REGISTERED
Under the provisions of Chapter 481 FS.
Expiration date: NOV 30, 2017
QUALIFIED PROFESSIONAL MANGROVE TRIMMER
SANTIAGO, JAMES
512 NE 14TH AVE
APT A
FT LAUDERDALE FL 33304
ISSUED: 06/10/2015
DISPLAY AS REQUIRED BY LAW
SEQ # L1506100001503



RICK SCOTT, GOVERNOR
KEN LAWSON, SECRETARY
STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF LANDSCAPE ARCHITECTURE
LICENSE NUMBER
LA0000956
The LANDSCAPE ARCHITECT
Named below HAS REGISTERED
Under the provisions of Chapter 481 FS.
Expiration date: NOV 30, 2017
PHILLIPS, CHARLES A
3194 ISOLINE WAY
SMYRNA GA 30080
ISSUED: 10/26/2015
DISPLAY AS REQUIRED BY LAW
SEQ # L1510260002102

Mr. Charles A. Phillips is a LEED Accredited Professional (No. 10223253). A copy of his certification is not available at the time of submission.

Addendum Acknowledgement

THE CITY OF KEY WEST

Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3883

ADDENDUM NO. 1

GENERAL ENGINEERING SERVICES / RFQ # 17-002 **March 20, 2017**

This addendum is issued as supplemental information to the RFQ for clarification of certain matters of both a general and a technical nature. The referenced Request for Qualifications (RFQ) package is hereby amended in accordance with the following items:

On Page 2 of 49 Please make the following change:

For information concerning this Request for Qualifications please contact **Janet Muccino, Project Manager**, Engineering Services Department only in writing and requests for information must be received at least ten (10) days prior to the date fixed for opening of responses to RFQ. The contact email address is jmuccino@cityofkeywest-fl.gov . The City's "Cone of Silence" Ordinance Section 2-773 does not allow verbal communication.

On Page 9 of 49 Please make the following change:

Contacts:

All requests for information should be only in writing and emailed to **Janet Muccino, Project Manager at jmuccino@cityofkeywest-fl.gov** and requests for information must be received at least ten (10) days prior to the date fixed for the opening of responses to the RFQ. Any and all such interpretations and any supplemental instructions will be in the form of written addendum to the RFQ. If City issues an addendum, the Respondent has sole responsibility to receive any such addendum or any interpretations shall not relieve such Respondent from any obligation under his response as submitted. All addenda so issued shall become a part of the Contract document.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 with Attachment by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

Signature

Amec Foster Wheeler Environment & Infrastructure, Inc.

Name of Business

Page 1 of 1

THE CITY OF KEY WEST
Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3883

ADDENDUM NO. 2

GENERAL ENGINEERING SERVICES / RFQ # 17-002 **April 12, 2017**

This addendum is issued as supplemental information to the RFQ for clarification of certain matters of both a general and a technical nature. The referenced Request for Qualifications (RFQ) package is hereby amended in accordance with the following items:

1.) I was curious if for this contract, and MEP firm can apply as Prime for our area of discipline? Or would we need to team with other engineers – i.e. civil, structural, etc.

An MEP can be prime; however, this RFQ is for general engineering services spanning the disciplines identified in the RFQ and teaming would be required. Discipline specific contracts will not be awarded

2.) No 'Scope of Work' (listed on Page 7) has been provided for "Structural Engineering" services, mentioned on Page 4. Please clarify.

Consultant team shall include licensed structural professional engineer/structural engineering firm to support evaluation and design of buildings (renovation and new), foundations, roof systems, coastal engineering, etc.

3.) ***ADD THE FOLLOWING TO ARTICLE 4 / PART 3 / DRAFT AGREEMENT***

ARTICLE 4

TERM OF AGREEMENT; TIME FOR PERFORMANCE; CONTRACTOR DAMAGES;

4.6 The CONSULTANT shall provide design assistance to City staff and attend City Commission Meeting(s) should an omission, lack of detail or design considerations result in a Change Order issued by the Contractor against the City utilizing plans prepared and sealed by CONSULTANT. This assistance will be provided at no charge to the City to allow CONSULTANT the opportunity to address the issue leading to the Change Order to the satisfaction of the City Commission.

4.) **Consultant team shall include licensed Landscape Architect/Landscape Architectural firm to support landscape and irrigation system design requirements. Experience with local landscaping conditions and plant materials preferred.**

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 2 by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

	Amec Foster Wheeler Environment & Infrastructure, Inc.
Signature	Name of Business

Certificate of Insurance

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 04/27/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-908-566-1010 Construction Risk Partners, LLC Campus View Plaza 1250 Route 28, Suite 201 Branchburg, NJ 08876	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS:
INSURED Amec Foster Wheeler Environment & Infrastructure, Inc. 1105 Lakewood Parkway, Suite 300 Alpharetta, GA 30009	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A : ACE AMER INS CO — 22667 INSURER B : ZURICH AMER INS CO — 16535 INSURER C : ACE PROP & CAS INS CO — 20699 INSURER D : AMERICAN ZURICH INS CO — 40142 INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 46705241 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [X] PRO-JECT [X] LOC OTHER:			HDO G24557728	05/01/16	05/01/17	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 2,000,000 $ 100,000 $ 10,000 $ 2,000,000 $ 4,000,000 $ 4,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO X ALL OWNED AUTOS — [ ] SCHEDULED AUTOS X HIRED AUTOS — [X] NON-OWNED AUTOS X Comp $1,000 X Coll $1,000			BAP 9483148-05	05/01/16	05/01/17	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
C	X UMBRELLA LIAB [X] OCCUR EXCESS LIAB [ ] CLAIMS-MADE DED RETENTION $ 10,000			XOO G27240665	05/01/16	05/01/17	EACH OCCURRENCE AGGREGATE	$ 1,000,000 $ 1,000,000
D D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N: N — N / A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			WC 3504866-15 WC 3867133-09	05/01/16 05/01/16	05/01/17 05/01/17	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ 1,000,000 $ 1,000,000 $ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Evidence of Insurance.

CERTIFICATE HOLDER

Amec Foster Wheeler Environment & Infrastructure, Inc.

1105 Lakewood Parkway, Suite 300

Alpharetta, GA 30009 USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

William R. Hamilton

ACORD 25 (2014/01)
Sklein
46705241

The ACORD name and logo are registered marks of ACORD

ANTI-KICKBACK AFFIDAVIT

STATE OF FLORIDA)
: SS
COUNTY OF POLK)

I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: Michael D. Phelps, PE

Sworn and subscribed before me this

19th day of April, 2017.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: August 8, 2017

APOLONIA SANTIBANEZ
MY COMMISSION #FF044014
EXPIRES August 8, 2017
(407) 398-0153 FloridaNotaryService.com

SWORN STATEMENT UNDER SECTION 287.133(3)(a)
FLORIDA STATUTES ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICE AUTHORIZED TO ADMINISTER OATHS.

1. This sworn statement is submitted with Bid, Bid or Contract No. 17-002 for General Engineering Services

2. This sworn statement is submitted by Amec Foster Wheeler Environment & Infrastructure, Inc.
(Name of entity submitting sworn statement)

whose business address is 5845 NW 158th Street, Miami Lakes, Florida 33014

and (if applicable) its Federal Employer Identification Number (FEIN) is 91-1641772 (If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement.)

3. My name is Michael D. Phelps, PE and my relationship to
(Please print name of individual signing)

the entity named above is Office Manager.

4. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any Bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, material misrepresentation.

5. I understand that "convicted" or "conviction" as defined in Paragraph 287.133(l)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means

   1. A predecessor or successor of a person convicted of a public entity crime: or

   2. An entity under the control of any natural person who is active in the management of t entity and who has been convicted of a public entity crime. The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

7. I understand that a "person" as defined in Paragraph 287.133(1)(8), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter

into a binding contract and which Bids or applies to Bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

8. Based on information and belief, the statement, which I have marked below, is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies.)

X Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989.

___The entity submitting this sworn statement, or one or more of the officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

___There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

___The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order.)

___The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of General Services.)

(Signature)

(Date) April 19, 2017

STATE OF Florida

COUNTY OF Polk

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

Michael D. Phelps, PE (Name of individual signing) who, after first being sworn by me, affixed his/her signature in the space provided above on this 19th day of April, 2017.

My commission expires: August 8, 2017

NOTARY PUBLIC

APOLONIA SANTIBANEZ
MY COMMISSION #FF044014
EXPIRES August 8, 2017
(407) 398-0153 FloridaNotaryService.com

EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

STATE OF Florida)
: SS
COUNTY OF Polk)

I, the undersigned hereby duly sworn, depose and say that the firm of Amec Foster Wheeler Environment & Infrastructure, Inc. provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses per City of Key West Ordinance Sec. 2-799.

By: Michael D. Phelps, PE

Sworn and subscribed before me this

19th day of April, 2017.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: August 8, 2017

NOTARY PUBLIC STATE OF FLORIDA
(407) 398-0153
APOLONIA SANTIBANEZ
MY COMMISSION #FF044014
EXPIRES August 8, 2017
FloridaNotaryService.com

CONE OF SILENCE AFFIDAVIT

STATE OF Florida)
: SS
COUNTY OF Polk)

I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of Amec Foster Wheeler Environment & Infrastructure, Inc. have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).

(signature)

April 19, 2017
(date)

Sworn and subscribed before me this

19th Day of April, 2017.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: August 8, 2017

NOTARY PUBLIC STATE OF FLORIDA (407) 398-0153
APOLONIA SANTIBANEZ
MY COMMISSION #FF044014
EXPIRES August 8, 2017
FloridaNotaryService.com

INDEMNIFICATION

To the fullest extent permitted by law, the CONSULTANT expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents, and employees (herein called the "indemnitees") from liabilities, damages, losses and costs, including, but not limited to, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONSULTANT, its Sub-consultants or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONSULTANT's insurance or $1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any.

The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the CONSULTANT under workers' compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the CONSULTANT or of any third party to whom CONSULTANT may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

CONTRACTOR: Amec Foster Wheeler Environment & Infrastructure, Inc.

SEAL: AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC. SEAL

5845 NW 158th Street, Miami Lakes, Florida 33014
Address

Signature

Michael D. Phelps, PE
Print Name

Office Manager
Title

April 19, 2017
Date

Amec Foster Wheeler
5845 NW 158th Street
Miami Lakes, Florida 33014
305.826.5588

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 05/19/2017

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 1-908-566-1010 Construction Risk Partners a JLT Group Company Campus View Plaza 1250 Route 28, Suite 201 Branchburg, NJ 08876	CONTACT NAME: Lauren Bowman PHONE (A/C, No, Ext): 908-566-1010 FAX (A/C, No): 908-566-1020 E-MAIL ADDRESS: amecfw@constructionriskpartners.com
INSURED Amec Foster Wheeler Environment & Infrastructure, Inc. 5845 NW 158th Street Miami Lakes, FL 33014	INSURER(S) AFFORDING COVERAGE / NAIC # INSURER A : ACE AMER INS CO 22667 INSURER B : ZURICH AMER INS CO 16535 INSURER C : AMERICAN ZURICH INS CO 40142 INSURER D : INSURER E : INSURER F :

COVERAGES **CERTIFICATE NUMBER:** 49887882 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY			HDO G27851162	05/01/17	05/01/18	EACH OCCURRENCE	$ 2,000,000
	CLAIMS-MADE [X] OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
							MED EXP (Any one person)	$ 10,000
							PERSONAL & ADV INJURY	$ 2,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 4,000,000
	POLICY [X] PRO-JECT [X] LOC						PRODUCTS - COMP/OP AGG	$ 4,000,000
	OTHER:							$
B	AUTOMOBILE LIABILITY			BAP 9483148-06	05/01/17	05/01/18	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	X OWNED AUTOS ONLY; SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY; X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
	X Comp $1,000 X Coll $1,000							$
	UMBRELLA LIAB OCCUR						EACH OCCURRENCE	$
	EXCESS LIAB CLAIMS-MADE						AGGREGATE	$
	DED RETENTION $							$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WC 3504866-16	05/01/17	05/01/18	X PER STATUTE OTH-ER	
C	ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N [N] (Mandatory in NH)	N / A		WC 3867133-10	05/01/17	05/01/18	E.L. EACH ACCIDENT	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
B	Architects & Engineers Prof			EOC1008375-02	05/01/17	05/01/18	Any One Claim/Agg	2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: City of Key West General Engineering and Architectural Services
Project Start Date: May-19-2017 - Project Completion Date: May-19-2020
The City of Key West is an additional insured on the General Liability and Automobile Liability policies as required by written contract. Coverage is primary and non-contributory where required by written contract. Waiver of subrogation is applicable where required by written contract and allowed by law. 30 days notice of cancellation applies per policy provisions.

CERTIFICATE HOLDER

City of Key West

Attn: City Clerk
1300 White Street

Key West, FL 33040

USA

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Wilbur R. Hamson