



CITY OF KEY WEST

GENERAL ENGINEERING SERVICES

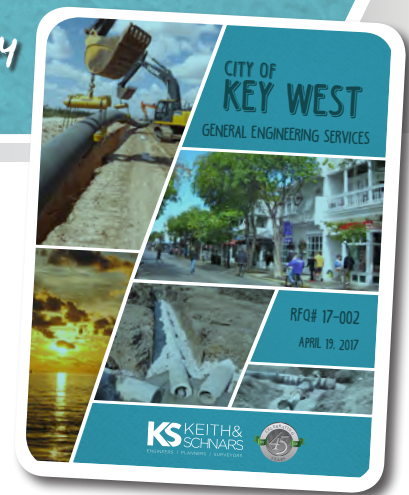


RFQ# 17-002
APRIL 19, 2017



KS KEITH &
SCHNARS
ENGINEERS | PLANNERS | SURVEYORS





April 18, 2017

City of Key West, Office of the City Clerk
1300 White Street
Key West, FL 33040

Re: General Engineering Services RFQ No. 17-002

Dear Selection Committee Members:

Keith & Schnars (K&S) has been closely following the direction that the City of Key West (the City) has been taking in the past decade. As such, we have witnessed the City's incredible economic and redevelopment evolution.

Our firm is a premier, full-service engineering and consulting firm. We offer multi-disciplinary expertise in the fields of engineering, land surveying, landscape architecture, planning and environmental services. Our company has played a key role in the development of Florida's growing environmental infrastructure.

The corporate history of K&S is rare and rich in tradition. We can trace our inception back to 1929, when we were one of Florida's first surveying firms, and our incorporation to 1972. We have distinguished ourselves by striving to retain a small firm feel and personal touch, while serving as one of Florida's industry leaders. K&S possesses extraordinary industry reach and experience; however it is dedicated to providing detailed, specialized care to each individual client. We combine insight with knowledge gained over the course of many successful years of operation. We offer innovative results that deliver value.

The depth and breadth of our technical knowledge and functional expertise is truly uncommon. Our practical understanding of regulatory requirements and diverse project experience has been developed over decades as a market leader in the industry. We take great pride in the fact that our work has literally influenced, shaped and redefined the landscape of Florida. We will be fully dedicated and committed to the details of this contract.

Understanding of the Scope of Work: Successful delivery for this "on-call" contract requires a team that has the expertise to address any type of project(s), meet all expectations and reach successful completion under any schedule required, including possible multiple assignments at the same time. K&S has this expertise and is uniquely qualified to fulfill this contract. We have contributed to a wide range of projects throughout the state of Florida - from mega-construction endeavors, valued at over \$200M, to small culvert replacement, pavement rehabilitation, and bicycle/pedestrian facility designs.

We pride ourselves on being adaptable and responsive to the needs of our clients. We have the flexibility to fashion our approach to meet all technical and non-technical requisitions; the ability to immediately "pivot" when conditions change; and can call upon our vast resources to meet any schedule commitment. Our staff's commitment to state-of-the-art technology and practices has allowed K&S to differentiate itself as a deliverer of superior, impactful solutions. K&S is fully equipped and experienced to perform HD 3D Laser Scanning for all types of projects including, Roadway DTM, Existing Building As-builts, New Construction As-builts, Historic Building Documentation, and many others that will benefit the City of Key West.

Beyond traditional Design-Bid-Build, we have completed numerous projects in Florida using Design-Build (DB), Construction Management at Risk (CM@R), and Public-Private Partnership (P3). During these projects, we worked directly with contractors. Our extensive resume has provided us with a deep understanding of construction means, methods and "what things cost" - from materials, equipment, labor, and general conditions. We will use this knowledge to design every proposal under this contract by first asking "how would a contractor build this most efficiently?" We will craft solutions and develop designs that are economical. We create value for our clients, while reducing their overall project costs.

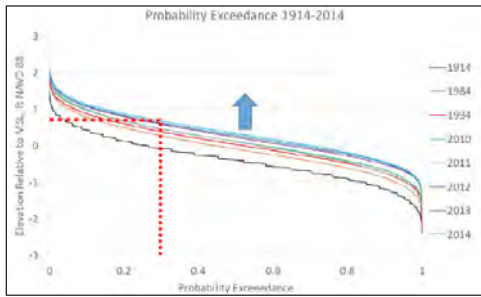


Figure 1: Probability Exceedance

Critical Issues for Key West: As climate change strains aging infrastructure through higher storm intensities and **Sea Level Rise**, the resilience of infrastructure is becoming a critical issue for the Florida Keys. Impacts of sea level rise present major challenges related to maintenance, accelerated failure of aging infrastructure, higher health risks associated with saltwater intrusion, elevated groundwater levels and greater leakages. The K&S Team has analyzed the hourly data for sea level trends, including 100 years of data with more than 870,000 points, and plotted the probability exceedance curves shown in Figure 1: Probability Exceedance.

As displayed in the graph, there is a trend of probability exceedance curves moving upwards, indicating the overall **Rise of Sea Levels** during any tidal conditions. For instance, the red dotted line indicates that 30% of the time (or more than 100 days during year 2014) sea levels rose approximately 8-inches. At K&S, we believe that we are well past adaptation of climate change. With our engineering and design solutions, we stay ahead of the curve in responding to these climate change effects. Our expertise is at the disposal of the City.

Familiarity with Local Agencies: The K&S Team is completely confident in our understanding of all city, county, state and federal regulations, guidelines and standards. We have completed numerous projects in the Florida Keys through our contracts with Monroe County and FDOT District 6. In addition, our Project Manager is a former Director of Operations for FDOT District 6 and understands the particulars of working in the unique environment of Key West.

The Team: To ensure successful completion of this important contract, K&S has partnered with **Gahagan & Bryant Associates, Inc. (GBA)** to provide Coastal Engineering. GBA is the largest engineering firm in the United States specializing in dredging and marine related projects. We rounded out our team with **Geosyntec Consultants (Geosyntec)** to provide Solidwaste and Geotechnical Engineering Services. Geosyntec has performed numerous projects for local municipalities in the Florida Keys.

Single-Point of Contact: The K&S Team is organized around a single contact point for Project Management – Joe L. Gómez, P.E. As a Senior Vice President of Engineering at K&S, Mr. Gómez is responsible for resource management on all of our engineering and construction projects throughout Florida. He has over 39 years of diverse civil engineering, transportation planning and design and construction experience and as noted previously, Mr. Gómez was the Director of Operations and District Construction Engineer for FDOT District 6.

For each effort, Mr. Gómez will select a Task Leader based on his/her relevant project history, availability for the duration of the task, and overall compatibility with the City's expectations. The selected Task Leader will serve as the day-to-day project delivery lead, responsible for project management and coordination of technical work. Mr. Gómez will be briefed weekly by each task leader on the progress of each specific assignment. This interaction will ensure: (1) performance at or higher than the levels expected by the City; and, (2) adequately resourced tasks. Mr. Gómez will also be available to meet with the City staff on a bi-weekly basis, or more frequently if requested by the City to discuss projects and K&S Team performance. He will also be available, at any time, to address unforeseen events, effects of related actions, new directions by leadership, and/or any other issues important to the City.

Our Commitment to the City: K&S has a long, distinguished history of working relationships with municipalities. As the Executive Vice President of Production for K&S, and the Principal-in-Charge for this contract, I will ensure that Mr. Gómez and his team have the full support of senior management at K&S; we will provide the City with the most experienced and qualified team available.

It is truly an honor to be considered for the immense responsibility of serving the City of Key West in its quest to design, develop and prepare its community for the future. We believe we are uniquely qualified for this project and welcome the City of Key West to take advantage of our talent and experience.

Respectfully submitted,

Keith & Schnars

Mark J. Moshier, P.E., Vice President of Production



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Section One

Experience and Technical Competence of the Firm

1. EXPERIENCE AND TECHNICAL COMPETENCE OF THE FIRM

Management & Organizational Structure ... how it aids in delivery of services and chain of command.

Successful delivery for this on-call contract requires a team that has **expertise to deliver any type of project, meet all expectations - yours and your stakeholders, and deliver under any schedule required!**

What sets our team apart is that we are extremely nimble - **responsive** to you and your immediate needs. We have the flexibility to fashion our delivery approach to meet all technical and non-technical requisitions; the ability to immediately “pivot” when conditions change; and call upon our deep bench of resources to meet any schedule commitment, regardless of how stringent. Our team is also innovative, regularly looking for ways to push the engineering-based problem-solving envelope. And, we bring value, providing you with cost-effective solutions.

Key Personnel Expertise

Under Mr. Gómez' direction, the K&S Team is ready to hit the ground running on your design/construction projects. Our team is staffed by a diverse and experienced group of Task Leaders and a full contingent of resources to support all task orders. To highlight a few:

- **S. Mark Kline, P.E.** has over 34 years of **Civil Engineering** design and management experience with projects involving roadway design, transportation planning and land development. Mr. Kline has become proficient in the engineering design aspects of roadway geometrics, drainage, signing and pavement marking, signalization, lighting and work zone traffic control. One of the notable projects that Mark is currently managing is West Avenue Improvements in the City of Miami Beach. This project is procured as a Design/Build which includes road construction for the extension of West Avenue from 17th Street to Dade Boulevard, Centerline Alignment and profile of roadway and bridge elements, analyzing existing and installed drainage system, signing and marking plans for roadway and bridge elements, analysis and design of new traffic signals, and analysis of existing lighting systems and proposed modifications.
- **Jake Ozyman, P.E.**, a knowledgeable Project Manager who has 20 years of **Utility Engineering** and Construction experience. He has successfully managed numerous utility projects, understood key stakeholder/agency needs and requirements, meeting those needs without compromising on project goals or client budgetary and schedule requirements. Jake is bringing to completion of Sunny Isles Beach Utility Undergrounding and Conversion project, which is the biggest utility undergrounding project K&S has undertaken to this date. Project includes undergrounding of all overhead electric, and low voltage utilities within the 5 miles stretch of Collins Avenue (A1A), one of the busiest corridors in the Miami-Dade County. Project is set to be completed within few weeks, well ahead of schedule and under budget.
- **Clay M. Bryant, P.E.**, a Coastal Engineer with over 30 years of experience specializing in the design, engineering, and construction of **Coastal Engineering**, navigation and beach restoration projects, as well as hydrographic and geotechnical surveys. Mr. Bryant has managed large-scale beach restoration projects and various inlet and deep draft channel projects across the country. His responsibilities include project management, topographic and hydrographic surveying of channels and beach profiles, permit procurement, channel design and layout, borings analysis and testing of borrow and fill materials, preparation of plans and specifications, construction inspection, tidal studies, and design of erosion control studies.
- **Kwasi Badu-Tweneboah, Ph.D., P.E.**, a **Solid Waste Engineer**, whom specializes in landfill design and permitting, geotechnical investigations, and containment system design. Dr. Badu-Tweneboah has been involved in the design, permitting, and construction of over 50 solid waste management and waste containment system facilities in 15 states. He has served as the program manager and engineer-of-record for the design, permitting, and construction of more than 20 solid waste management facilities (landfills and transfer stations) in Florida. The Florida Department of Environmental Protection (FDEP) invited Dr. Badu-Tweneboah to serve on the agency's Task Force for rewriting solid waste rules and regulations. He has also served on the Technical Advisory Group (TAG) for a post-closure care research project sponsored by Florida's Hinkley Center for Solid & Hazardous Waste Management. Dr. Badu-Tweneboah has published more than 30 papers on landfill design and solid waste issues. He regularly speaks at technical conferences (including the Florida Chapter and National SWANA) on solid waste management and innovative containment system design.

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- **Roberto Rubio, P.E.**, a Project Manager with over 20 years of experience in the field of **Structural Engineering** and miscellaneous infrastructure engineering, including water resources and marine structures. He is thoroughly familiar with all facets of design, rehabilitation, and reconstruction projects. He has extensive experience in the design of simple and complex concrete and steel bridges, including composite post-tensioned concrete girder bridges and curved composite steel built-up girder bridges, as well as pile and drilled shaft foundations, seawalls, cofferdams, culverts, and roadway sign and signal structures.
- **Bruce Reed, RLA**, a veteran Landscape Architect with over 30 years of extensive experience in **Landscape Architecture**, land development activities, master planning, programming, plan review, site design and development, landscape and irrigation design, cost analysis, environmental mitigation design/permitting, site approval processing/permitting and public/client presentation. Mr. Reed has developed a perceptive understanding of roadway, streetscapes, park and recreational facility design and has consistently established positive rapport with municipal and agency personnel.

For each effort, Mr. Gómez will select a **Task Leader based on his/her relevant project history, availability for the duration of the task, and overall compatibility with the City of Key West's (the City) expectations.** The selected Task Leader will serve as the day-to-day project delivery lead, responsible for project management and coordination of technical work. He will be briefed weekly by each Task Leader on the progress of each specific assignment. This interaction will ensure: (1) performance at or higher than the levels expected by the City; and, (2) adequately resourced tasks. Mr. Gómez will also be available to meet with the City staff on a bi-weekly basis, or more frequently if requested by the City to discuss projects and K&S Team performance. He will also be available, at any time, to address unforeseen events, effects of related actions, new directions by leadership, and/or any other issues important to the City.

K&S Construction Engineering and Inspection (CEI) staff have worked both in the field on fast-paced construction projects, and also on the design side. Team members have served in the roles of Design Project Manager, Constructability Reviewer, Plan Set Reviewers, General Contractors, and Schedule Consultants. This brings to our team a unique ability to relate to field personnel and also have excellent working relationships with design personnel. Our years of experience in the field and the design office provides us with the ability to identify issues and/or suggest modifications that could be applied to the delivery of the project, translating into value to the City.

Streamlined Project Delivery: Unique to K&S, our Task Leaders and staff are very well-versed in delivery options including Design/Bid/Build (DBB), Design/Build (DB), CM/GC and P3 contracting – this has allowed us to streamline our project delivery and documentation processes for all types of project delivery. Many of the subconsultants we selected for our team have partnered with us on several challenging schedule driven projects.

How subcontractors will be selected for specific assignments, utilized and managed to complete projects:

Our team brings **strong geographic coverage and depth of resources throughout our 5 offices in Florida.** K&S selected sub-consultants based on the successful working relationships we have enjoyed with them, their demonstrated competence in working on previous projects, and their reputation in providing responsive service. Given the potential for multiple assignments, we have provided depth and flexibility to accommodate any project at any of the City's reservations.

In response to a task order, Mr. Gómez will assign a Task Leader who will work with him to identify the services required on the project and begin a process to assess our subconsultants':

- Service capability and staff's previous experience with the City and with similar projects;
- Proximity to project location;
- Complete availability of proposed staff throughout the project schedule;
- Compatibility with the City's project expectations; and
- Cost effectiveness of utilization.

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Once the task order is assigned, the Task Leader will work with the team to develop the final contract documents and be the contact for that specific work. Unless otherwise agreed to by written consent, the City will receive services from the staff identified in our submitted proposal.

Our subconsultants are held to the same internal controls and standards required of our K&S staff, are fully integrated into our Work Plans, and are included in all related project management matters; e.g., team correspondence, work sessions, and QC and cost protocols.

It is from our working relationships with our subconsultants (on past and current projects) that we understand what to expect from one another to affect a smoothly run and successful project. This knowledge enables project staff to concurrently focus on their respective tasks while maintaining vision of overall project goals and expectations.

LEGEND	
K&S	Keith & Schnars
Geosyntec	Geosyntec Consultants, Inc.
GBA	Gahagan & Bryant Associates, Inc.



Principal-in-Charge & QA/QC
Mark J. Moshier, P.E. (K&S)

Contract Manager
Joe L. Gómez, P.E. (K&S)

- Task Leaders**
- Mark Kline, P.E., Civil Engineering (K&S)
 - Bryan Wilson, P.E., Civil Engineering (K&S)
 - Jake Ozyman, P.E., Utility Engineering (K&S)
 - Georgio Tachiev, Ph.D., PE, Utility Engineering (K&S)
 - Clay M. Bryant, P.E., Coastal Engineering (GBA)
 - Kevin M. Kremkau, P.E., Coastal Engineering (GBA)
 - Kwasi Badu-Tweneboah, Ph.D., P.E., Solid Waste Engineering (Geosyntec)
 - Thomas Ramsey, P.E., Solid Waste Engineering (Geosyntec)
 - Roberto Rubio, P.E., Structural Engineering (K&S)
 - Joannis Joannou, P.E., Structural Engineering (K&S)
 - Bruce Reed, RLA, Landscape Architecture (K&S)
 - Kirk Hoosac, RLA, Landscape Architecture (K&S)

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COMPANY PROFILE

Who We Are

Keith & Schnars (K&S) is a premier full-service engineering and consulting firm that has been serving clients throughout the state of Florida since 1972. K&S offers multi-disciplinary expertise in the fields of engineering, land surveying, landscape architecture, planning and environmental sciences. The firm has played a key role in shaping the development of Florida's growing commercial, residential, recreational, and transportation infrastructure. K&S is headquartered in Fort Lauderdale, with four satellite offices to better serve our clients throughout the state.

K&S is a vibrant company - unique in its vision and methodology. With over four decades of experience in the industry, the K&S name has become synonymous with high quality work, innovation, and competent, and dedicated staff; all while maintaining its warm, family-like atmosphere. We combine insight with knowledge gained over the course of many successful years in operation, to offer innovative results that deliver value.

K&S is not a typical engineering firm. The company strives to retain a small firm feel and personal approach, while serving as one of Florida's most influential industry leaders. This unique and delicate balance is special. It allows the firm to apply an inspired approach to problem-solving, and rely on its vast technical and functional expertise to implement change. K&S possesses extraordinary industry reach and experience, but is dedicated to providing detailed, specialized care to each individual client.

What Guides Us

Excellence is at the heart of the K&S culture. We strive to cultivate a professional philosophy - which is strong, collaborative and grounded in a clear set of simple values that are the cornerstone of our corporate legacy: Accountability, Authenticity, Integrity, Innovation, Professionalism, Trustworthiness and Commitment to Community.

These values drive the essential elements of our core business and resonate throughout every task we undertake. They also determine a distinctive character that is evident in every aspect of our work. Every day, these values guide and influence the way we work with each other - and the way we serve our clients and engage with our communities. We are passionately committed to doing the job right.

Our success is built on trust. Our clients, teammates and the people our projects affect rely upon us as a responsible partner who minimizes risk. We trust in principles that we believe are not only the right way to do business, but also define how we want to live and work.

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Experience and Technical Competence of the Firm

Our Rich History

The corporate history of K&S is rare, distinct and rich in tradition. We can trace our inception back to 1929 as one of Florida's first surveying firms, and our initial incorporation to 1972. Not many companies of its kind have such an extensive and decorated past. K&S experienced profound growth over several decades and transformed itself into not only one of Florida's most influential full-service engineering firms, but one of Florida's largest surveying companies. Our extensive client list includes various water management districts, governmental agencies, counties/municipalities and large private sector clients throughout the state of Florida.

We have a unique relationship with the state of Florida. The trajectory of our growth parallels Florida's rise in national stature. K&S has served as a key partner with Florida, having played a crucial role in helping the state manage rapid expansion by providing safe and responsible solutions for its residents and communities. Our work, present throughout the state, has shaped and influenced the very landscape of Florida.

Our Adherence to a Proven Schedule & Budget

K&S prides itself in its ability to serve your needs, on time and within budget. Dedication to timely and cost-efficient delivery of services is evident by decades of repeat business. For instance, FDOT found in their summary of design overruns (time and money), that K&S ranked among the best of more than 200 firms. Over a 6-year period studied, K&S designed and surveyed 12 projects for which the average cost overrun was only 4%, and average construction time overrun was 1%. No other firm in the study completed this volume of work and maintained such low overruns in cost and time.

What We Do

"Visionary" is not a term typically associated with technical and engineering professionals. Yet, for almost half a century, K&S has anticipated changes that would impact our clients and has expanded its capabilities in order to deliver solutions for any challenge.

At K&S, we help prepare our clients for the future. The depth and breadth of our technical knowledge and functional expertise is truly uncommon. Our practical understanding of regulatory requirements and diversity of project experience has been developed over decades as a market leader in the industry. We take great pride in the fact that our work has literally influenced, shaped and redefined the landscape of Florida.

A brief synopsis of our firm's services and experience includes:



Surveying and Mapping Services

Our firm began as one of Florida's earliest surveyors, and has grown into one of the leading GPS survey firms in the state. We offer a full range of land survey and mapping services, both in support of our design projects and as stand-alone services. We understand that successful design demands meticulous and accurate technical mapping. Our survey staff takes care in performing their work to ensure accuracy while maintaining efficiency.

We use state-of-the-art technology, including total stations and global positioning equipment, when providing survey information and mapping services to our clients. Our field personnel are trained in advanced survey techniques including those required for boundary delineations, bathymetric survey and the development of municipal GIS databases. Our GPS equipment includes modern Trimble Dual-Frequency Receivers, and mapping is prepared by our AutoCAD and GIS specialists.

Our six full-time crews have received Maintenance of Traffic (MOT) training to ensure proficient and safe work practices, on and around South Florida's busy roadways.

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Specific services include:

- Boundary, Topographic & Bathymetric Survey
- Bridge Data Surveys, Digital Terrain Models
- Construction and As-Built Surveys
- Construction Stakeout
- ALTA/ACSM Certifications
- Easement Mapping
- Land Record Research
- FEMA Certifications
- Expert Testimony
- GIS-Based Utility Mapping



Landscape Architectural Services

The landscape architects at K&S apply artistic principles and technical design standards to enhance every project that we produce. Through careful analysis of the natural landscape and the programmatic needs of our clients, the firm's landscape architects collaborate with engineers, planners and scientists to develop context-sensitive design solutions.

Our design work includes commercial facilities, municipal parks, streetscapes, traffic calming, residential communities and institutional facilities. We have provided landscape architectural services to more than 30 parks and recreation projects. We have also provided services to over 100 streetscape, traffic calming, and roadway landscape projects for both

state agencies and local municipalities. The variety of our client base has provided us with a broad range of experience in unique design elements ranging from urban skate parks and woodland trails to high-end commercial developments.

Specific services include:

- Master Planning
- Urban Design
- Site Planning
- Streetscape Design/Complete Streets
- Parks/Bikeways/Greenways/Multi-use Trails
- Residential and Commercial Developments
- Subdivisions
- Landscape & Maintenance Inspections
- Hardscape Design
- Irrigation Design
- Site Amenities
- Planting Design



Civil Engineering Services

K&S has been serving clients in all aspects of civil engineering throughout its history. Our engineers work with clients to realize their visions from concept development through construction, with an understanding that each project and client is unique. Our site design work is completed by a collaborative team of engineers, landscape architects and environmental scientists. Each team brings a variety of experience to each project. We believe this has contributed to our outstanding reputation, which has been built and perfected over time. Our private sector clients include counties, municipalities and drainage

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districts throughout the state of Florida. Over the past few years, we have designed over a half million linear feet of utility improvements. Our civil engineers are LEED accredited professionals, CPSWQs, and low impact development specialists. We strive to maintain the most up-to-date knowledge of advanced site design processes, minimizing environmental impact in all of our work.

Our private sector resume includes a list of well-known land development clients, for projects ranging from 2 to 5,000 acres in size. Having completed close to 100 DRIs, we've gained decades of experience in this specialty. From large modeling and master plans to specific construction documents and inspection services, our full array of Civil Engineering Services provides the versatility to meet the changing needs of our public and private clients.

Specific services include:

- Feasibility Studies
- Site Master Planning
- Site Planning and Design
- Hydrologic and Hydraulic Analysis
- Stormwater Management
- LEED Accredited Design
- Low Impact Design Solutions
- Erosion Control Plan Development
- Septic System Design and Permitting
- Structural Engineering and Design
- Land Use Permitting
- Flood Mitigation
- Coastal Structure Design
- Peer Review



Transportation Planning & Engineering

K&S has a long history of providing transportation planning and engineering services to numerous public sector clients throughout Florida. The team has participated in and/or managed every aspect of transportation improvement projects from traffic impact analysis and improvement recommendations through concept development and roadway/bridge design to construction administration. Services include preliminary and final design, permitting, utility coordination, right-of-way acquisitions, environmental assessments, remediation and construction engineering inspection and administration. We work hand in hand with our clients to understand the existing condition, and to develop solutions that exceed expectations. Whether we are widening and expressway, redesigning a

“complete street” or engineering a pedestrian bridge, our engineering staff routinely collaborates with our in-house planners, landscape architects and environmental scientists to satisfy the goals and objectives of our client.

If you have driven on any section of I-95, almost anywhere in South Florida, you are already quite familiar with our work. Our engineers are committed to sustaining the state of Florida’s infrastructure. For the better part of four decades, we are known for providing economical and low-maintenance solutions to difficult transportation infrastructure challenges.

Specific services include:

- Preliminary Engineering/PD&E Studies
- Corridor Planning & Feasibility Studies
- Traffic Studies and Analyses
- Traffic Calming Studies

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- Transportation Alternative Development and Analysis
- Transit-Oriented Development and Multimodal Planning
- Parking Studies & Design
- Traffic Control and Signal Design
- Roadway Design
- Structural Design
- Construction Engineering & Inspection
- Utility Relocation



Construction Engineering & Inspection

While many firms consider construction services to be ancillary, we view them as indispensable. Our construction services staff are proud of its broad project experience in municipal public works as well as private sector construction. Their experience includes public and private roadways, bridges, buildings, and infrastructure such as water treatment plants and water and sewer mains. The integration of our inspectors with our design team allows us to reduce project change orders and manage construction costs better than our competitors.

Our FDOT-certified inspectors play a pivotal role during project construction by providing and managing communication between contractors, design engineers, project proponents, and often times, the public. Consistent with all of our service offerings, our inspection staff fosters respect among construction site parties to achieve the common goals of an on-time and on-budget project completion.

Specific services include:

- Construction Document Development
- Construction Cost Estimating
- Design-Bid, Design-Build
- Local Agency Program (LAP) Projects
- Resident Engineering
- Project Administration Services
- Periodic Site Observation



Planning Services

The Planning Team at K&S has played a crucial role in the planning and design of new towns, cities, redevelopment areas, downtowns and award-winning private developments throughout Florida. We have decades of experience in the areas of comprehensive planning, land development regulations, strategic planning, and marketing & branding.

The Team is well-known for providing premier public involvement programs that truly engage the public. Our staff members pride themselves in their ability to work effectively with public and private stakeholders, as well as the general public, to forge consensus and achieve the desired outcome for every assignment. For example, our Team has conducted over 900 public meetings, hearings and workshops; designed and maintained numerous interactive project websites; conducted opinion and needs surveys; and prepared and distributed over 300,000 newsletters and flyers, including a number of bilingual publications.

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Specific services include:

- Evaluation and Appraisal Reports (EARs)
- Comprehensive Plans and Amendments
- Visioning and Strategic Planning
- GIS Mapping and Analysis
- Development Review
- Master Plans
- Regional, Community and Neighborhood Planning
- Transit-Oriented Development Planning
- Economic & Market Analysis
- Fiscal Impact Analysis
- Land Use Analysis & Regulation Preparation
- Facilities Planning, Enrollment Analysis & Management Services
- Zoning Regulations
- Community Outreach and Public Involvement
- Grant Application Preparation
- Urban Revitalization
- Public/Private Development Planning
- Marketing and Branding



Environmental Sciences and Water Resource Planning

K&S has offered environmental and water resource consulting services continuously for more than 25 years. Our projects range from small site monitoring activities – to multimillion dollar Environmental Site Assessments, planning and restoration programs. Our team collaborated on one of the largest, most complex watershed studies ever undertaken in the United States, a landmark project that received an Award of Excellence by the Florida Chapter of the American Planning Association.

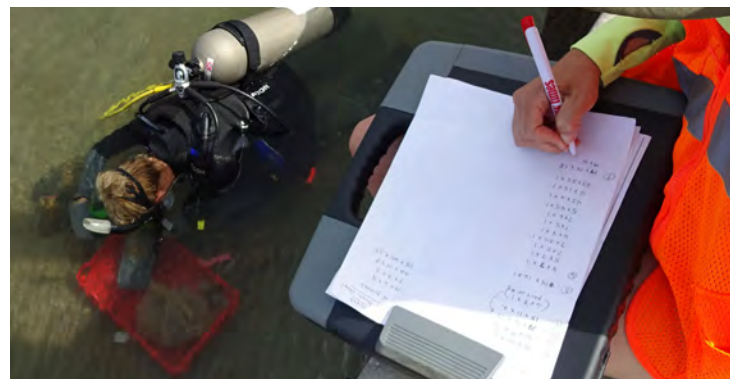
For the past 30 years, our expertise has grown to include environmental remediation, environmental planning and wetland delineation. We have long considered it important to not only understand, but to respect the

local, state and federal environmental regulations that govern our work. We understand that a design is only as valuable as its ability to be implemented, permitted and built.

Our relationships with the multiple permitting and governmental regulatory agencies allow us to provide clients with smooth and stable progress on their projects.

Specific services include:

- Wetland Delineation & Assessment
- Wetland Permitting
- Environmental Site Assessments (ESAs)
- Habitat/Protected Species Assessment
- Contamination Assessments
- Environmental Impact Evaluations
- Flood Management
- Water Use Permitting
- Environmental Policy
- Ecosystem Restoration Planning & Policy



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Honors, Awards & Accomplishments

K&S is proud of its multidisciplinary approach to projects and its commitment to excellence and service. These traits have been recognized by public and private organizations that have selected the firm for awards and peer recognition throughout our history.

2017

- “Top 25 Engineering Firms” - Ranked #9 by **SOUTH FLORIDA BUSINESS JOURNAL**

2015

- At the Florida Institute of Consulting Engineers (FICE) Annual Meeting, K&S was recognized for having the highest percentage of DBE Utilization – the top 29% of all engineering consulting firms in the entire state of Florida.

2011

- K&S received the prestigious “Transportation Firm of the Year Award” from the Greater Fort Lauderdale Chamber of Commerce.
- The American Society of Civil Engineers (Broward Chapter) selected K&S for “Project of the Year” for our work on the Seminole Creek project.
- The Florida Association of County Engineers and Road Superintendents selected K&S for “Project of the Year – Local & State Agency Collaboration” for our work on the Matanzas Woods Parkway Interchange.

2009

- K&S won the “Best Places to Work” Award for the third year in a row, at an event co-sponsored by Polk Workforce 2020 and the United Way of Central Florida.

2007

- The American Planning Association (Florida Chapter) selected K&S for the FAPA Award of Excellence for its project work on the South Miami-Dade Watershed Study and Plan.
- The McGraw-Hill Companies selected K&S as one of the Southeast’s Top-50 Firms in Design.
- Engineering News Record named K&S one of the nation’s Top-500 engineering firms over the past several decades.

Other K&S Honors & Awards

- Florida Transportation Builder’s Association – Two “Best in Construction” Awards (2006)
- South Florida Business Journal – Finalist, “Business of the Year” (’04, ’05, ’06, ’07, ’08)
- Polk Works Workforce 2020 – “Best Places to Work” (2005)
- Road and Bridges Magazine – “Top-10 Bridge Project” - Evans Crary Senior Bridge (2001)
- Florida Nurserymen & Growers Association – “Excellence Award” – Publix Supermarkets General Merchandise Warehouse Facility (2000)
- American Planning Association – “Outstanding Planning Project” – SR-26 Corridor Planning Study (2000)
- Florida Department of Transportation – “Pat Boltan Award” – SR-15/US 17 Milling and Resurfacing Project (2000)

Our Clients

Our client base at K&S is extremely diverse. Our clientele includes private developers, municipalities, contractors, architects, utility companies, state agencies, and an impressive number of City and County governments. The abbreviated listing of our long-term clients below gives some indication of the importance we place on maintaining relationships.

City of Marathon (2002 - Present)

Monroe County (2009 - Present)

Section One

Experience and Technical Competence of the Firm

City of Miami Gardens (2012 - Present)
City of North Miami (2011 - Present)
Broward County (1985 - Present)
City of Boca Raton (1995 - Present)
City of Fort Lauderdale (2002 - Present)
City of Port St. Lucie (2002 - Present)
City of Sebring (1995 - Present)
Florida Department of Transportation District 1 (1993 - 2006)
Florida Department of Transportation District 2 (1993 - Present)
Florida Department of Transportation District 4 (1993 - Present)
Florida Department of Transportation District 6 (1993 - Present)
Florida Department of Transportation District 7 (1993 - 2003)
Miami-Dade County (2002 - Present)
Palm Beach County (1998 - Present)
South Florida Water Management District (2002 - Present)
Seminole Tribe of Florida (2002 - Present)
City of Tamarac (2008 - Present)
City of Pompano Beach (2001 - Present)

We have offices staffed with 120 employees in Fort Lauderdale, Miami, Altamonte Springs, Naples and Jacksonville.



Section Two

Qualifications on the Team

QUALIFICATIONS AND EXPERTISE OF FIRM'S STAFF

The Team

K&S has assembled a locally-based project team that provides the technical resources, experience, and proven abilities to deliver General Engineering Services required by the City of Key West including the following wide range of engineering capabilities to projects:

- Civil Engineering
- Utility Engineering
- Structural Engineering
- Coastal Engineering
- Solid Waste Engineering
- Landscape Architecture

K&S (Civil, Utility, Structural Engineering and Landscape Architecture): Our extensive experience on projects similar to those highlighted in the RFQ offers the City in-depth local knowledge, sensitivity to environmental and community issues, credibility with regulatory agencies, and state-of-the-art expertise in all aspects of engineering and project implementation. Our experienced engineers, scientists, planners, landscape architects and other experts will ensure that your assignments are completed to your satisfaction on time and within budget. Our team's experience includes decades of engineering work for client throughout Florida.

One key to our success is that our staff focus on the local clients in the community in which they live. K&S has collaborated with the local municipalities provide substantial engineering services for nearly for 45 years.

Most recently, K&S has assisted the City of Fort Lauderdale with The Water Works 2011 program, a \$556 million water and sewer infrastructure upgrade program implemented by the City of Fort Lauderdale. Completion of the program was intended to coincide with the City's 100-year Anniversary in 2011 and K&S played a major role in the successful implementation of this initiative. As part of the Water Works 2011 Program, K&S has been involved in surveying, utility designation, civil engineering design of the water/wastewater systems, preparation of contract documents including specifications for bid, quantity and cost estimating, permitting services, on-site representation (construction management), review and assisting the City with responses to shop drawing review, RFIs, field changes and construction observation/inspection services for various projects.

We have also been managing a Districtwide General Engineering Consultant Services Contract for FDOT District 6 since March 14, 2002. The purpose of the contract is to provide an extension of the District's staff. The scope of the contract includes providing support services and resources in all divisions throughout the District including professional services, planning, public transportation, project development and environmental (PD&E), design, production management, Right-of-Way services, surveying and mapping services, value engineering, construction engineering management (CEI), LAP services, etc.

GBA (Coastal Engineering): GBA provides an array of services, including hydrographic surveying, coastal engineering, channel design, dredged material handling, marina design, and construction management, in a distinctly different way. They bring over 25 years of hands-on experience in the dredging and dredged material placement industry to complement their technical expertise. This unique combination of technical expertise and practical knowledge sets them apart. Their hydrographic surveying experience and capabilities, dredging and dredged material management services, demonstrated beneficial use of dredge material and environmental restoration capability, environmental permitting, biological monitoring, and coastal engineering activities bring a special mix of a strong engineering background, environmental regulatory expertise, and practical knowledge to meet clients' needs.

The firm was established in 1975 by William G. Gahagan and J. Franklin Bryant, two engineers both of whom had compiled 20 years of field experience with major dredging firms operating throughout the United States, South America and the Middle East. GBA is the largest engineering firm in the United States specializing in dredging and marine related projects.

Section Two Qualifications on the Team

With over 40 years of experience, GBA is the only engineering firm in the United States that approaches the solution to a dredging need based on its extensive experience with the nation's major dredging contractors. Sound, time-tested engineering practices and extensive in-house technical skills are brought to any given task. From its inception, GBA has operated under the guiding principle of bringing its exceptional brand of specialized and practical experience to every project with uncompromising integrity and professionalism. Their unique background gives them the capability to offer services from concept to completion.

Geosyntec (Solid Waste Engineering): Geosyntec is a recognized leader in solid waste containment facility permitting and design. From concept to implementation, they assist clients in achieving efficient, safe, and secure containment of their regulated wastes that require land disposal. They assist clients in increasing commercial viability, achieving and maintaining compliance, and ensuring that short- and long-term needs are met for new and existing sites and projects. They are experienced in the permitting, design, and construction of expansions and closures of:

- Municipal solid waste (MSW) landfills
- Hazardous waste landfills
- Coal combustion residual landfills
- Construction and demolition waste landfills
- Radiological and mixed waste landfills
- Tailings impoundments
- Mine waste rock piles and dumps

Geosyntec's waste containment practice specializes in addressing the most complex and challenging projects through innovative technologies and designs. They assist clients with permitting greenfield sites and existing site expansions, maximizing disposal capacity, and solving complex site challenges. Geosyntec also provides investigation, design, permitting, and construction oversight for on-site disposal facilities for cost-effective, safe on-site disposal of soils, sludges, and miscellaneous debris with a broad range of contaminants, including mercury, PCBs, and volatile and semi-volatile organic compounds.

This team's background combines a broad base of local experience with exceptional technical skills to deliver the City's projects successfully. The remainder of this section introduces the Task Leaders selected for this General Engineering Services contract. Our organizational chart on the next page presents the areas of responsibility, reporting relationships, and project assignments for each team member.

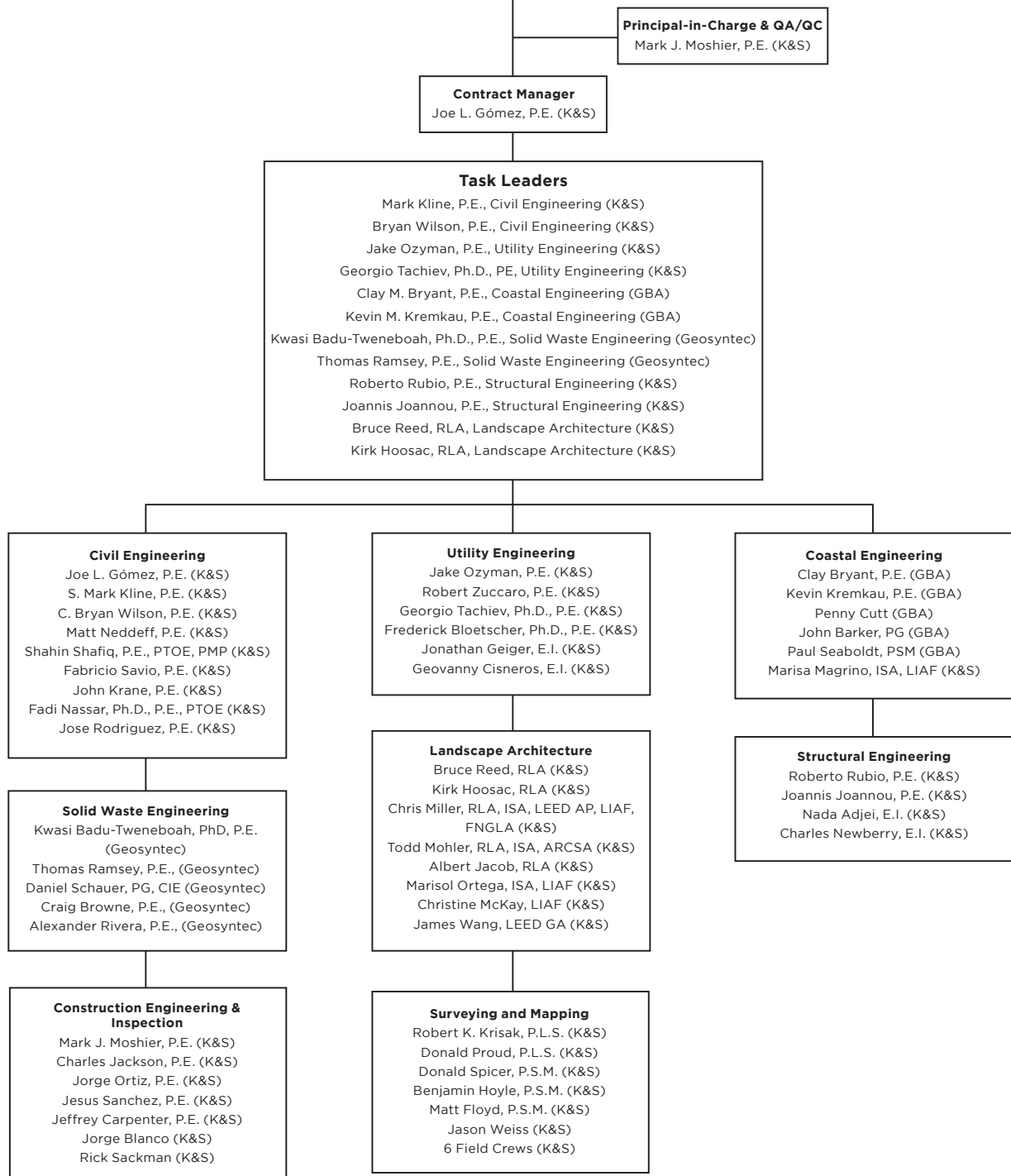


Section Two

Qualifications on the Team

ORGANIZATIONAL CHART

LEGEND	
K&S	Keith & Schnars
Geosyntec	Geosyntec Consultants, Inc.
GBA	Gahagan & Bryant Associates, Inc.



Section Two Qualifications on the Team

Joe L. Gómez, PE
Contract Manager

Education: B.S., Civil Engineering, Florida International University, 1981

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 39+

Mr. Gómez has over 39 years of diverse civil engineering, transportation planning and design and construction experience. He has managed and directed large-scale transportation studies including major multi-level interchanges, arterial corridors, and bridge replacements. Mr. Gómez is also a construction dispute resolution expert, having served on several Dispute Review Boards (DRBs) for FDOT and MDX. In addition, he has significant experience in the areas of public and community involvement, interagency coordination and traffic management systems. He is responsible for primary client contact, scope development, as well as contract negotiations and strategic planning.

Recent Projects:

- I-395/SR-836 (from Midtown Interchange/I-95 to US-41/SR-A1A MacArthur Causeway Bridge), Miami-Dade County, FL: Senior Advisor for the I-395 Corridor Improvements which included developing 30% plans, criteria package an aesthetics manual for the project. Assisted Project Manager in various duties including attending progress meetings and task assignments.
- SR-5/US-1 Overseas Highway (from MM 93 to MM 97), Tavernier, FL: Project Manager and Engineer of Record for 4-miles of US-1 in the FL Keys. The project included milling and resurfacing, improving shoulders, adding drainage and the addition of a new northbound 10-foot wide emergency shoulder. Included support during construction phase.
- SR-5/US-1 Overseas Highway (from MM 103 to MM 106), Key Largo, FL: Project Manager and Engineer of Record for 3-miles of US-1 in the FL Keys. The project included milling and resurfacing, improving shoulders, adding drainage and the addition of a new northbound 10-foot wide emergency shoulder. Mr. Gomez also provided support during the construction phase.
- Districtwide Traffic Operations and Safety Studies, Miami-Dade and Monroe Counties, FL: Project Manager and Engineer of Record for this three-year contract involved the development of various traffic operations studies for Miami-Dade and Monroe Counties, Florida. Some of his responsibilities included:
 - Signal Warrant Studies: Analysis of traffic operations, pedestrian and bicyclist needs, and at a large number of signalized and unsignalized locations. The goal was to determine viable solutions for the different problems that can be encountered within and intersection such as pedestrian safety. It consisted of field reviews of the study intersections, crash analysis, 72-hour approach counts, 4-hour turning movement counts, intersection delay studies, and signal warrant analysis.
 - Qualitative Assessments: Performed initial analysis to determine if improvements to the operation intersections are justified by providing an assessment of the intersection's operation. These assessments included traffic signal installation and traffic signal evaluation.
 - Composite Studies: Performed evaluation of intersection to identify specific operational problems and evaluation of pedestrian features such as ramps, crosswalks, and pedestrian assemblies.
 - Level of Service (LOS) Studies: Performed evaluation of the intersection's LOS to improve the capacity of the intersections. Such studies consider the use a Synchro and the analysis of crash data.

Mark J. Moshier, PE
QA/QC

Education: B.S., Civil Engineering, Clarkson University, 1977

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 39

Mr. Moshier has 39 years of experience in the design, construction engineering and inspection (CEI) and project management of roadway and bridge projects. For 8 years, he worked for the FDOT District 6 serving as the District Construction Engineer directing a multi-million-dollar construction program for Miami-Dade and Monroe Counties. He also served as a resident engineer responsible for the contract administration of all CEI projects in Miami-Dade and Monroe counties. Mr. Moshier is currently involved in the administration of several major complex highway, bridge, drainage and land development projects, including administration and management for FDOT District 6 General Engineering Consultant services contract.

Mr. Moshier is experienced in partnering principles and concepts.

Recent Projects:

- Key Deer Projects, Monroe County, FL: This grouping of 11 projects included 3 major and 8 minor construction contracts totaling in excess of \$26 million. The work included construction of 2 new bridges and roadway widening and roadway rehabilitation along the US-1 corridor. The scope also included use of Geo-wall construction, MSE wall construction, installation of new drainage, traffic signal and traffic counter installation, milling and resurfacing from Key West north to Key Largo. The majority of the projects entailed working in extremely environmentally sensitive and protected areas and the CEI portion of the fees totaled \$1.7 million.
- Contract Administration for FDOT District 6 General Engineering Services Contract. This contract services as an extension of the Department's resources and support for a wide range of engineering, architectural, surveying/mapping, technical, management and administrative services. This contract services to assist bringing to completion as expeditiously as possible production of numerous projects within the work program for District 6.

Section Two Qualifications on the Team

Mark Kline, PE

Task Leader – Civil Engineering

Education: B.S., Civil Engineering, Ohio University, 1983

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 34

Mr. Kline has over 34 years of engineering design and management experience with projects involving roadway design, transportation planning and land development. Mr. Kline has become proficient in the engineering design aspects of roadway geometrics, drainage, signing and pavement marking, signalization, lighting and work zone traffic control. He has expertise in the use AASHTO design guidelines and manuals, the FDOT Plans Preparation Manual, the FDOT Design Standards, the FDOT Standard Specifications, the Florida Greenbook, the Manual on Uniform Traffic Control Devices (MUTCD) and other important design standards and criteria.

Recent Projects:

- West Avenue Improvements, Miami Beach: Lead designer for this Design/Build project which consists of construction of the West Avenue Bridge over Collins Canal and extension of West Avenue from 17th Street to West Collins Canal; reconstruction of Dade Boulevard between Venetian Causeway and Alton Road; construction of pedestrian bridge over Collins Canal and associated side street reconstruction to tie in adjacent road construction that is being completed by others on Bay Road, West Avenue, and Sunset Harbor Drive. Design services includes developing construction documents for the proposed roadway improvements, which includes: Road construction for the extension of West Avenue from 17th Street to 150' north of Dade Boulevard, Centerline Alignment and profile of roadway and bridge elements, Analyzing existing and installed drainage system, Signing and marking plans for roadway and bridge elements, Analysis and design of new traffic signals, Analysis of existing lighting systems and proposed modifications, SR-5/US-1 Overseas Highway (from MM 93 to MM 97), Tavernier, FL: Project Manager and Engineer of Record for 4-miles of US-1 in the FL Keys. The project included milling and resurfacing, improving shoulders, adding drainage and the addition of a new northbound 10-foot wide emergency shoulder.
- El Rio Canal Shared Use Pathway - LWDD L-40 Canal to Congress Avenue, FDOT LAP, FPID #423812-1-58-01, Boca Raton, FL: Project Manager and Engineer of Record. Project scope included the design of a 12-foot wide concrete shared use pathway and coordination of permitting efforts to allow for construction the pathway within the boundaries of the Yamato Scrub Oak Preserve, a Section 4f property. Included in the project were the coordination of landscape and site amenities, and the design of a new signalized crossing at Congress Avenue.
- Palm Bay Parkway Design Build, FDOT LAP, FPID #428346-1-58-01, Palm Bay, FL: Design Project Manager and Engineer of Record responsible for the Palm Bay Parkway Design Build project. Project scope included the design for new construction of a 2.3-mile portion of Palm Bay Parkway (high speed rural arterial), reconstruction/widening intersection improvements at the Palm Bay Parkway connection to Malabar Road, new construction of a 0.532-mile extension of Pace Drive (low speed rural collector), and new construction of a 0.540-mile extension of Emerson Drive (low speed urban arterial). Project duties included engineering design and plans preparation of roadway, drainage, signing and pavement marking project components, project management of the survey, geotechnical, structural, utility coordination/relocation project components, and coordination of the plan approval and permitting process with FDOT, the City of Palm Bay, Brevard County, Melbourne Tillman Water Control District, Saint Johns River Water Management District, and ACOE.

Bryan Wilson, PE

Task Leader – Civil Engineering

Education: B.S., Civil Engineering, Auburn University, 1986

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 31

Mr. Wilson has 31 years of experience in the design and management of highway transportation projects in Florida and South Carolina. Mr. Wilson joined the consultant industry in 1994 after 9 years with the FDOT. His project experience encompasses all aspects of highway design from pavement rehabilitation to limited access interchanges and managed lanes facilities delivered in both bid-build and design-build formats.

Recent Projects:

- Andrews Avenue Extension - Segment 5, Broward County, FL: Project Manager for the design and permitting the construction of a 0.5-mile new 4-lane divided roadway from Racetrack Road to Atlantic Boulevard in Pompano Beach, Florida. Included the design and permitting of a new closed storm drainage system and retention pond system, two signalized intersections, signing and marking plans, landscape plans, and a new roadway lighting system.
- SR-823/Red Road Reconstruction Cost Savings Initiative , Miami-Dade County, FL: Project Manager responsible for the overseeing design and preparation of a cost savings initiative to modify the drainage system, traffic control plan and culvert extension for the reconstruction of SR-823/Red Road from a 5-lane undivided section to a 6-lane divided urban section. The project also includes cost savings initiatives for the modification of a proposed steel sheet pile bulkhead wall to a concrete post and panel wall and the modification of bridge widening design to incorporate pre-stressed flat slab units and fiber reinforced concrete.

Section Two Qualifications on the Team

Jake Ozyman, MSCM, PE, ENV SP Task Leader – Utility Engineering

Education: M.S. B.S., Civil Engineering, New York University, 1997

Licenses/Certifications: Professional Engineer: FL, MD & NY

Years' Experience: 20

Mr. Ozyman has a broad range of planning and design experience encompasses all facets of design and analysis for utility engineering, water and wastewater engineering, specifically for pipeline projects. The quality of his work in water and wastewater engineering field has allowed him to lead mega projects and forge solid relationships with key agencies whose approval is essential for the successful completion of the projects. In addition to engineering design expertise, Jake served as Engineer of Record on some of the most complex projects within the Metropolitan Area with specific experience in construction management of street infrastructure including water mains, sanitary and storm sewers with emphasis in project set-ups, management, record keeping, quality control, material testing, closeouts, problem solving, constructability reviews and estimating. Jake is one of the first Envision™ credentialed professional that is trained to use the Envision™ rating system for sustainable infrastructure, and he is a big advocate in promoting resiliency in our physical infrastructure across the full dimensions of sustainability.

Recent Projects:

- City of Sunny Isles Beach Utility Undergrounding and Conversion: Provided professional engineering and construction management services to The City of Sunny Isles Beach necessary for the undergrounding of all overhead electric, and low voltage utilities within the city limits of Sunny Isles Beach. The overall scope of the contract includes the coordination of design with all utility providers, utility design and negotiations; consolidated construction plans; required permitting (including FDOT Right-of-Way permits), providing design milestone cost estimates and budgets for approximately 4.1 miles of Collins Avenue (A1A) and 1 mile of Atlantic Boulevard.
- Norris Cut Sewer Outfall Tunnel, Miami-Dade County, FL: Engineer of Record responsible of providing engineering services, and coordinating with permitting agencies regarding all of the ongoing permits for the design-build project that will replace the existing 54-inch sewer force main for a 60-inch force main. The project scope consists of the installation of a one-mile precast concrete segmental tunnel from the Virginia Key Central District Wastewater under Biscayne Bay Norris Cut Channel to Fisher Island. Project elements include planning, engineering, design, permitting, procurement, construction/ installation testing and startup for the new 60-inch replacement force main. Construction Cost \$72 million.

Georgio Tachiev, PhD, PE Task Leader – Utility Engineering

Education: Ph.D., Water Resources and Environmental Engineering, Vanderbilt University, 1988

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 29

Dr. Tachiev has 29 years of experience in Water Resources, Hydrology and Water Quality, Civil and Environmental Engineering. Experience in management of Civil and Environmental Engineering Projects, development of complex numerical models for analysis of remediation strategies, environmental and water resources management, and risk analysis. Expertise in all phases of project management, technical reviews, quality control, and reporting. Expert level knowledge of state of the practice numerical software for water resources (MIKE SHE/11/21/FLOOD/ECOLAB, MODFLOW,XPSWWM), spatial analysis using GIS technologies, and statistical processing software (SAS, MATLAB), computer programming and scripting (FORTRAN, C, C++, MATLAB, SAS, PYTHON, UNIX SHELL, PERL, SQL) for automated processing, analysis and visualization of large hydrological and water quality datasets.

Recent Projects:

- Integrated Civil Engineering and Environmental Services, Urban Planning Project in Pirituba, Sao Paulo, Brazil: Dr. Tachiev analyzed the background information and participated in the planning charrette. He developed conceptual plans for green infrastructure to accomplish zero-stormwater discharge from the site (520 ha), which included maximizing storage of water on site to ensure that pre-development hydrology is preserved and to provide aquifer recharge and pollutant reduction and containment on-site. The proposed Green infrastructure components will provide sufficient storage for rainfall for 25 years' frequency. The plan included green infrastructure components including 3 lakes and several natural preserves which were calculated to retain the entire stormwater runoff on site.
- Integrated Surface and Subsurface Flow Model of the Everglades National Park (ENP), South Florida (NPS): Dr. Tachiev was the lead model developer for an integrated surface and subsurface model integrated with the drainage water management operations of the Everglades National Park (ENP) using MIKE SHE and MIKE 11 simulation platforms and included operation schedule of control structures. He analyzed, observed, and computed time series of canal discharges stages within the canals and domain. Dr. Tachiev determined the impact of operation scenarios on subsurface and overland flow across ENP; developed MATLAB code and a toolbox to provide stochastic analysis, pre- and post-processing, visualization, statistical analysis, and determine operating parameters. The model covers 1,250 sq. miles of the ENP.

Section Two Qualifications on the Team

Clay Bryant, PE Task Leader – Coastal Engineering	
Education:	B.S., Civil Engineering, Georgia Institute of Technology, 1981
Licenses/Certifications:	Professional Engineer: FL & NC
Years' Experience:	20
<p>Mr. Bryant has over 30 years of experience specializing in the design, engineering, and construction of navigation and beach restoration projects, as well as hydrographic and geotechnical surveys. Mr. Bryant has managed large-scale beach restoration projects and various inlet and deep draft channel projects across the country. His responsibilities include project management, topographic and hydrographic surveying of channels and beach profiles, permit procurement, channel design and layout, borings analysis and testing of borrow and fill materials, preparation of plans and specifications, construction inspection, tidal studies, and design of erosion control studies. Mr. Bryant has extensive experience in obtaining state and federal permits for beach restoration and navigation projects in the State of Florida, and is familiar with permitting requirements of the U.S Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), and U.S. Fish and Wildlife Service (USFWS). He has also provided Federal Emergency Management Agency (FEMA) coordination for Flood Insurance Rate Map (FIRM) revisions and obtained numerous FEMA Category B and G reimbursements in Florida, North Carolina, and Massachusetts.</p> <p>Recent Projects:</p> <ul style="list-style-type: none"> • St. Lucie Inlet Coastal Engineering Services, Stuart, FL (Martin County) – Program Manager – Since 1998, GBA has provided inlet-related engineering, surveying, and inspection services to Martin County. Projects have included several maintenance dredging and new work excavation of a sediment impoundment basin for improved dredging efficiency and jetty improvements. The basin excavation included 350,000 CY of limestone rock, which was disposed of 3 miles offshore, creating an artificial reef. Mr. Bryant performed a geotechnical investigation of rock substrate which resulted in modification of the USACE design and resultant project cost savings, and continues to provide Quality Control (QC) review of the USACE maintenance dredging plans and specifications. Continuing services include annual beach profile and inlet surveys to evaluate the littoral sediment budget and monitor shoaling rates. Mr. Bryant has assisted the County in federal project design and coordination with the USACE, served on the Inlet Technical Advisory Committee, obtained state permits and water quality certifications, obtained easements for pipeline corridors, and provided construction inspection and nearshore hardbottom monitoring services for beach disposal projects in the Hobe Sound National Wildlife Refuge. • Jupiter Island Beach Restoration Program, Town of Jupiter Island, FL (Town of Jupiter Island) – Program Manager – GBA has provided engineering, permitting, and consulting services for multiple beach nourishment projects and associated environmental monitoring for the Town during the past 40 years. GBA developed a comprehensive beach management program covering 6.5 miles of shoreline, and has designed, bid, and managed 12 beach nourishment projects placing 16.5 MCY of sand on the Town's critically eroded beaches. Mr. Bryant has been responsible for state and federal permit acquisition, project design, plans and specifications, and construction supervision. Sand searches associated with this project have resulted in a 12 MCY borrow site of compatible beach sediments. Other responsibilities have included annual borrow site and beach profile surveys, magnetometer surveys of borrow sites, sediment quality monitoring, and extensive reef and sea turtle monitoring. GBA has also performed post-storm documentation of hurricane damages resulting in over \$15 Million of FEMA public assistance grants. 	
Kevin Kremkau, PE Task Leader – Coastal Engineering	
Education:	B.S., Ocean Engineering, Florida Institute of Technology, 1996
Licenses/Certifications:	Professional Engineer: FL, MS, LS, TX, AL & SC
Years' Experience:	20
<p>Mr. Kremkau has over 20 years of experience in the design and management of navigation and shore protection projects around the country. He has provided coastal engineering services including beach nourishment design, dune restoration, geotechnical investigations, offshore sand search investigations, shore protection design, dredge material placement area design, hydrographic surveys, dredging production analysis, and dredge equipment specification. He has served as the engineer-of-record for projects including navigation channel improvements, dredged material placement areas, beneficial use of dredged materials, and marsh restoration.</p> <p>Recent Projects:</p> <ul style="list-style-type: none"> • St. Lucie Inlet Coastal Engineering Services, Stuart, FL (Martin County) – Project Engineer – Since 1998, GBA has provided inlet-related engineering, surveying, and inspection services to Martin County. Projects have included several maintenance dredging and new work excavation of a sediment impoundment basin for improved dredging efficiency and jetty improvements. Continuing services include annual beach profile and inlet surveys to evaluate the littoral sediment budget and monitor shoaling rates. As project engineer for the local sponsor, Mr. Kremkau provided agency coordination, engineering design, plans development, and obtained project permits. He also provided hydrographic and topographic surveys, geotechnical investigations, and construction management, scheduling, volume computations, and environmental compliance for multiple maintenance dredging projects with placement of material on downdrift beaches. Mr. Kremkau worked with Florida Division of Recreation and Parks and FDEP's Division of State Lands to obtain a long-term pipeline easement through a state park to the beach fill location. As part of the evaluation team for the St. Lucie Inlet Alternatives Analysis, Mr. Kremkau presented at multiple public outreach meetings and provided cost estimates, planning level design and constructability analysis, performance estimates, and assessment of public impacts for 10 inlet management alternatives in anticipation of a reduction in federal cost sharing. 	

Section Two Qualifications on the Team

Kwasi Badu-Tweneboah, PhD, PE Task Leader – Solid Waste Engineering

Education: PhD, Geotechnical Engineering, University of Florida 1987

Licenses/Certifications: Professional Engineer: FL & NC

Years' Experience: 35

Dr. Badu-Tweneboah specializes in landfill design and permitting, geotechnical investigations, containment system design, resident engineering, and construction management/quality assurance. Dr. Badu-Tweneboah has been involved in the design, permitting, and construction of over 50 solid waste management and waste containment system facilities in 15 states. He has served as the program manager and engineer-of-record for the design, permitting, and construction of more than 20 solid waste management facilities (landfills and transfer stations) in Florida. The Florida Department of Environmental Protection (FDEP) invited Dr. Badu-Tweneboah to serve on the agency's Task Force for rewriting solid waste rules and regulations. He has also served on the Technical Advisory Group (TAG) for a post-closure care research project sponsored by Florida's Hinkley Center for Solid & Hazardous Waste Management. Dr. Badu-Tweneboah has published more than 30 papers on landfill design and solid waste issues. He regularly speaks at technical conferences (including the Florida Chapter and National SWANA) on solid waste management and innovative containment system design.

Recent Projects:

- Program Manager for Numerous Design, Permitting, and Construction Support Projects at the Indian River County Landfill in Vero Beach, Florida – Indian River County Solid Waste Disposal District: Provided the following services: (i) Project Manager and Engineer-of-Record for the design and permitting of a partial closure together with an upgrade and expansion of the gas collection and control system (GCCS) for the Class I Landfill. Also provided construction drawings, procurement support, construction quality assurance (CQA) construction management and certification services. Construction took place from April 1 to October 16 of 2009, which spans the rainy season in Florida. (ii) Project Manager and Engineer-of-Record for the design and permitting of a vertical expansion over the closed top slopes of a Class I landfill; the vertical expansion extended the life of the facility for more than four years, worth about \$20 million, and provided the County additional airspace to replace the space that was filled up with debris from the active 2004-05 hurricane seasons; (iii) Project Manager and Engineer-of-Record for the design and permitting of a 34-acre lateral expansion for the Class I Landfill; this included preparing a landfill consolidation report on a feasibility study of, and recommendation for, co-disposal of C&D debris and MSW in a lined Class I landfill, eliminating construction and operation of unlined C&D disposal facilities; (iv) assisted the County in obtaining FDEP approval to use a cost-effective alternative sand material for completing the drainage layer on the remaining side slopes of the permitted liner system for the Class I landfill, which saved the County about \$200,000 compared to the cost of purchasing and delivery of the originally-specified material.

Thomas Ramsey, PE

Task Leader – Solid Waste Engineering

Education: M.S., Environmental Engineering, Duke University, 1991

Licenses/Certifications: Professional Engineer: FL, GA, MD, AL, WV, PA, SC, VA, NC, DE, NJ & KY

Years' Experience: 25

Mr. Ramsey has more than 25 years' experience in design, technical and operational aspects of the solid waste management industry. He has extensive professional experience in waste containment design, new facilities development, engineering project management, strategic planning and optimization of field operations, and construction management and engineering Support

Recent Projects:

- Closure of a 56-acre MSW Landfill, Anne Arundel County, Maryland. Project manager for closure of a 56-acre MSW landfill in Anne Arundel County (2013-present). Work includes feasibility review, schematic and detailed design, preparation of construction documents, and engineering support during construction. Project includes review of alternative capping materials, LFG system modifications, phasing of waste filling, and the identification of material sources required for construction.
- Expert Consulting Services, New Jersey Department of Environmental Protection (NJDEP), Roxbury Township, New Jersey. Expert consulting services regarding emergency abatement actions by NJDEP to address health and odor issues arising from uncontrolled hydrogen sulfide gas releases from the Fenimore Landfill in Roxbury Township, New Jersey (2013-2016). Work included identifying and reviewing short and long term abatement alternatives and supporting NJDEP in litigation with the former operator of the site.
- Overall Operational Review and Assessment, Solid Waste Authority of Central Ohio. (2014). Work included a high-level assessment of landfill operations, LFG management, capital budgeting, in-house engineering support, and staffing for two 600 ton per day (TPD) transfer stations and a 3,000 TPD operating landfill. Provided a prioritized assessment of recommendations to improve operations and reduce costs.
- Landfill Expansion, Wilmington, Delaware. Project Manager for \$90 million landfill expansion in Wilmington, Delaware. Work includes over 2 million yd³ of earthwork, construction of a 1.5 mile long, 60-ft high mechanically stabilized earth (MSE) berm over soft foundation soils, installation of wicks drains, geotechnical instrumentation, directional drilling, stormwater and force main piping, electrical work, 25 acres of base liner construction, transitioning an operating landfill gas (LFG) system to a new header system, and specialty trades (2006 to 2013). Responsibilities include change order review and dispute resolution between owner and contractor

Section Two Qualifications on the Team

Roberto Rubio, PE

Task Leader – Structural Engineering

Education: B.S., Civil Engineering, University of Missouri, 1984

Licenses/Certifications: Professional Engineer: FL

Years' Experience: 33

Mr. Rubio has 33 years of experience in the field of bridge engineering and miscellaneous infrastructure engineering including water resources and marine structures. He is thoroughly familiar with all facets of FDOT bridge design, rehabilitation, and reconstruction projects. His consulting experience includes project management support and technical design lead or supervisor positions, and he served for 2 years as Bridge Rehabilitation Design Engineer, 2 years as Bridge Load Capacity Rating Engineer, and 3 years as Consultant Project Manager/Administrator for FDOT District 4. He has extensive experience in the design of simple and complex concrete and steel bridges including composite post-tensioned concrete girder bridges and curved composite steel built-up girder bridges, as well as pile and drilled shaft foundations, seawalls, cofferdams, culverts, and roadway sign and signal structures.

Recent Projects:

- Palot Park Shoreline Protection Project, Miami, FL: Park is located on the east banks of Biscayne Bay. Design of bulkhead to replace existing natural rip-rap protection. Designed approximately 200ft of restressed concrete bulkhead in accordance with FDOT Standard 6040. Special design included openings to accommodate two existing concrete drain pipes going into the bay, allowance for a kayak launch, and tying to existing bulkhead on the south end and to a building on the north end.
- New I-595 Bridge over Slip Ramp, (FDOT "Fast Tracked" Project), Broward County, FL: This structure is a one span skewed multibeam type bridge with solid slab post-tensioned beams composite with a c.i.p. concrete slab top. The bridge was built within the existing ramp from Sawgrass Expressway to Northbound I-75 (Alligator Alley), to clear or to go over the new slip ramp from I-595 to Weston Road. The end pile bents are protected by MSE walls all around continuing along the approaches to the bridge. The bridge was contained within simultaneous vertical and horizontal curves. The design was done in accordance with AASHTO LRFD. Mr. Rubio was the Project Engineer and performed the design, and personally drafted about 75% of the drawings in order to bring the project to successful completion.

Joannis Joannou, PE

Task Leader – Structural Engineering

Education: B.S., Civil Engineering, University of Witwatersand, Johannesburg, South Africa, 1961

Licenses/Certifications: Professional Engineer: FL & CT

Years' Experience: 50+

Mr. Joannou has over 50 years of experience in the field of bridge engineering. He is thoroughly familiar with all facets of FDOT bridge design, rehabilitation, and reconstruction projects. His consulting experience includes administration, project management, and structural design positions, and he served as a Structural Design Engineer for FDOT (District 4) for over 10 years, earning several design awards and working to develop the Florida Pier design program. He has extensive experience in the design of simple and complex concrete and steel bridges including curved steel box girders as well as pile and drilled shaft foundations, seawalls, noise walls, and culverts. Mr. Joannou's bridge design experience includes decorative piers, integral pier caps, and ship impact considerations.

Recent Projects:

- Evans Crary Bridge, Martin County, FDOT District 4: Mr. Joannou was the Engineer of Record during the preliminary design phase and prepared the Bridge Development Report. This structure is a high-profile, 17-span post-tensioned segmental bridge with spans of 180 feet and vertical clearances of 65 feet. The bridge utilized decorative piers, tapered at the top to match the slope of the concrete segments for the purposes of aesthetics. The piers were founded on prestressed concrete piles designed to resist a ship impact load. The design was performed in accordance with AASHTO LFD. The bridge was awarded one of the 2001 "Top Ten Bridges" by Road and Bridge magazine.
- Sunrise Boulevard over SR-7, Broward County, FDOT District 4: Mr. Joannou was the Designer of Record for this project. This is a three-span continuous steel girder bridge with spans of 125', 259' and 125'. The unusual feature of this structure is that, due to vertical clearance restraints, the pier caps had to be made integral with the superstructure. Post-tensioned concrete pier caps were provided at each pier and a detailed construction sequence was specified in order to reduce the effects of differential movement between the steel girders and the newly-poured concrete. The design was done in accordance with AASHTO LFD.
- Frank A. Wacha Bridge over the Intracoastal Waterway in Jensen Beach, Martin County, FL: Mr. Joannou headed up a team of three Engineers that was responsible for the design of the substructure, and he completed the CADD drawings for the pier drawings. This structure is a 17-span 78-inch Florida Bulb-Tee beam bridge, with a cast-in-place deck continuous over 4 spans. The bridge has sixteen 148-foot spans and a main channel span of 161 feet. The piers are founded on 30-inch and 24-inch prestressed concrete piles, and the in-water piers were designed to resist a ship impact load. The design was completed in accordance with AASHTO LFD. The piers and piles were designed using the Florida Pier program.
- Palm City Bridge over the St. Lucie Waterway, Martin County, FL: Mr. Joannou designed both the superstructure and substructure and was the project's Engineer of Record. The structure is a 16-span AASHTO beam bridge with a cast-in-place concrete deck continuous over six spans. Fifteen 112-foot long approach spans lead up to the 129-foot long main channel span. The piers were founded on prestressed concrete piles and the structure was designed to resist a ship impact load. The design was conducted in accordance with AASHTO LFD.

Section Two Qualifications on the Team

Bruce Reed, RLA

Task Leader – Landscape Architecture

Education: B.S., Landscape Architecture, University of Florida, 1987

Licenses/Certifications: Registered Landscape Architect: FL

Years' Experience: 30

Mr. Reed has extensive experience in a wide variety of projects where he has provided a full range of services as a project Manager and landscape architectural of record. These services consist of the following land development activities: master planning, programming, plan review, site design and development, landscape and irrigation design, cost analysis, environmental mitigation design/permitting, site approval processing/permitting and public/client presentation. As an experienced project manager, Mr. Reed has competently prepared and administered construction and bid documents, QA/QC, contract negotiation, written reports and correspondence, review of project invoices and construction observation. Mr. Reed has developed a perceptive understanding of roadway, streetscapes, park and recreational facility design and has consistently established positive rapport with municipal and agency personnel. He has demonstrated responsible capabilities in team coordination and client/staff/public project comprehension and status awareness.

Recent Projects:

- Biscayne Boulevard, Miami-Dade County, FL: Landscape Architect - 1.4-miles of Biscayne Boulevard in the heart of old downtown Miami roadway improvements including drainage, sidewalk, ADA accessibility, utility and road-widening improvements. Landscape architectural services included the assessment of over 500 trees existing within the project limits, landscape plans, irrigation, and lighting enhancements. Through public involvement events, emphasis was placed on preserving the character and enhancing the pedestrian experience of the Boulevard.
- Beach Streetscape Las Olas Boulevard Phase, Fort Lauderdale, FL: Project Manager/Landscape Architect of Record - .5 roadway improvements that consisted of roadway realignment, hardscape treatments, ADA upgrades, landscaping, decorative lighting, signage and improved stormwater drainage for a tourist destination known around the world. Services provided: Streetscape, roadway, planting, hardscape, irrigation, landscape, pedestrian and street lighting design, tree relocation plans, bidding assistance, and construction management.

Kirk Hoosac, RLA

Task Leader – Landscape Architecture

Education: B.L.A., Landscape Architecture, University of Florida, 2006

Licenses/Certifications: Registered Landscape Architect: FL

Years' Experience: 11

As the previous FDOT District Landscape Architect in District 6, Mr. Hoosac offers a wide range of experience in all phases of landscape architecture including plan development, concept generation, cost estimating, site inventory, site and master planning, landscape and irrigation design, project specifications, construction observation, landscape inspection and quality control. He has participated in a variety of project types including planning and design for transportation, commercial, residential and municipal projects. Mr. Hoosac is confident and skilled in performing his responsibilities, from dynamic presentations to disciplined project management, he brings a positive and proactive approach to his projects.

Recent Projects:

- FDOT District 4 Landscape Continuing Services, Broward, Martin, and Palm Beach Counties, FL: Mr. Hoosac serves as a Project Manager for the FDOT District 4 office providing landscape architectural services including preparation of Bold landscape plans, irrigation plans and tree relocation plans.
- Districtwide Landscape Design Services, Miami-Dade County, FL: Worked on multiple projects with PD&E staff members, doing miscellaneous tasks such as; tree species identification, tree evaluations, tree mitigation costs and/or appraisals, and long range estimates (LRE's). Attended and created graphics for public meetings, including conceptual typical landscape beautification treatments when part of the PD&E scope. Reviewed multiple roadway typical sections for potential landscape impacts, or ways to soften impacts such as buffering of noise walls.
- SR-5/Overseas Highway PD&E, Monroe County, FL: Several roadway resurfacing projects with shoulder improvements from Tavernier to Key Largo. As the Florida Key only vehicular evacuation route, improved shoulders were needed to improve the hurricane evacuation volumes to decrease over all evacuation time. Landscape improvements were proposed and typical graphics were created for public meetings in order to sell the projects to the public and elected officials.
- SR-5/US-1/Key Largo MM97 to MM99, Monroe County, FL: Billboard coordination, tree inventory, landscape design, and field inspection - This project is a beautification of a 2.5-mile section of the upper Keys main business district through Key Largo.

Section Two Qualifications on the Team



Geosyntec Consultants, Inc.

Geosyntec is a specialized consulting and engineering firm that works with private and public sector clients to address new ventures and complex problems involving our environment, natural resources, and civil infrastructure with more than 1,100 engineers, scientists and related personnel in over 80 offices throughout the U.S. and international locations. Headquartered in the City of Boca Raton, it has 33 years of experience.

Since our founding in 1983, they have built top tier practices to meet their clients' needs in:

- Contaminated Site Assessment and Cleanup
- Environmental Planning and Management
- Air Quality Management and Air Pollution Control
- Water and Natural Resources Assessment, Management, and Restoration
- Water and Wastewater System Planning, Engineering, and Design
- Geotechnical and Geological Analysis, Modeling, and Engineering
- Waste Management Planning, Engineering, and Design
- Civil Site Engineering and Design
- Building Health Evaluations and Rehabilitation
- Structure and Fluid Analysis, Modeling, and Engineering
- Facility Hazard Definition and Risk Management



Gahagan & Bryant Associates, Inc.

GBA provides an array of services, including hydrographic surveying, coastal engineering, channel design, dredged material handling, marina design, and construction management, in a distinctly different way. They bring over 40 years of hands-on experience in the dredging and dredged material placement industry to complement our technical expertise. This unique combination of technical expertise and practical knowledge sets us

apart. Their hydrographic surveying experience and capabilities, dredging and dredged material management services, demonstrated beneficial use of dredge material and environmental restoration capability, environmental permitting, biological monitoring, and coastal engineering activities bring a special mix of a strong engineering background, environmental regulatory expertise, and practical knowledge to meet our clients' needs.

GBA is the largest engineering firm in the United States specializing in dredging and marine related projects. With offices in Ft. Lauderdale and Tampa, FL; Los Angeles and San Francisco, CA; Wilmington, DE; Baltimore, MD; Philadelphia, PA; Wilmington, NC; Houston, TX; and Portland, OR; GBA is strategically located to meet each client's needs.

GBA's professional staff consists of over 80 engineers, scientists, and support personnel, and includes engineers with hands-on experience in dredging engineering and in operating dredging equipment. Our personnel also have experience as contractors, surveyors, and engineers in all of the major ports of the United States.



Section Two Qualifications on the Team

Keith and Schnars Licenses

State of Florida
Board of Professional Engineers


Attests that
Keith & Schnars, P A




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: 228201904481 R

CA Lic. No:
1337




Florida Department of Agriculture and Consumer Services
Division of Consumer Services
Board of Professional Surveyors and Mappers
2005 Apalachee Pkwy Tallahassee, Florida 32399-6500

License No.: **LB1337**
Expiration Date February 28, 2019

Professional Surveyor and Mapper Business License
Under the provisions of Chapter 472, Florida Statutes

KEITH & SCHNARS P A
6500 N ANDREWS AVE
FT LAUDERDALE, FL 33309-2132




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.


STATE OF FLORIDA
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION
BOARD OF LANDSCAPE ARCHITECTURE

LICENSE NUMBER	
LCC000137	

The LANDSCAPE ARCHITECT BUSINESS
Named below HAS REGISTERED
Under the provisions of Chapter 481 FS.
Expiration date: NOV 30, 2017



KEITH AND SCHNARS, PA
6500 N ANDREWS AVE
FT LAUDERDALE FL 33309-2132



Section Two Qualifications on the Team

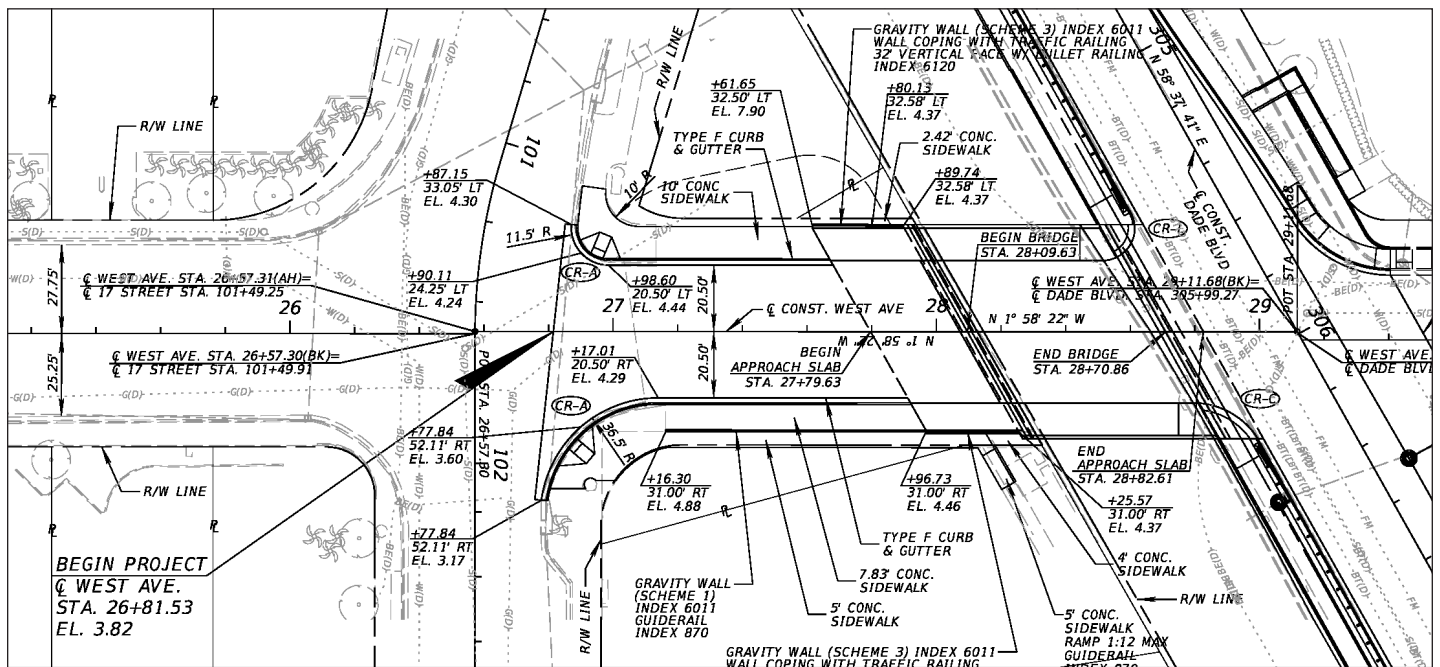
GeoSyntec Consultants, Inc. Licenses



Gahagan & Bryant Associates, Inc. Licenses



CIVIL ENGINEERING



Design/Build Services for West Avenue Improvements

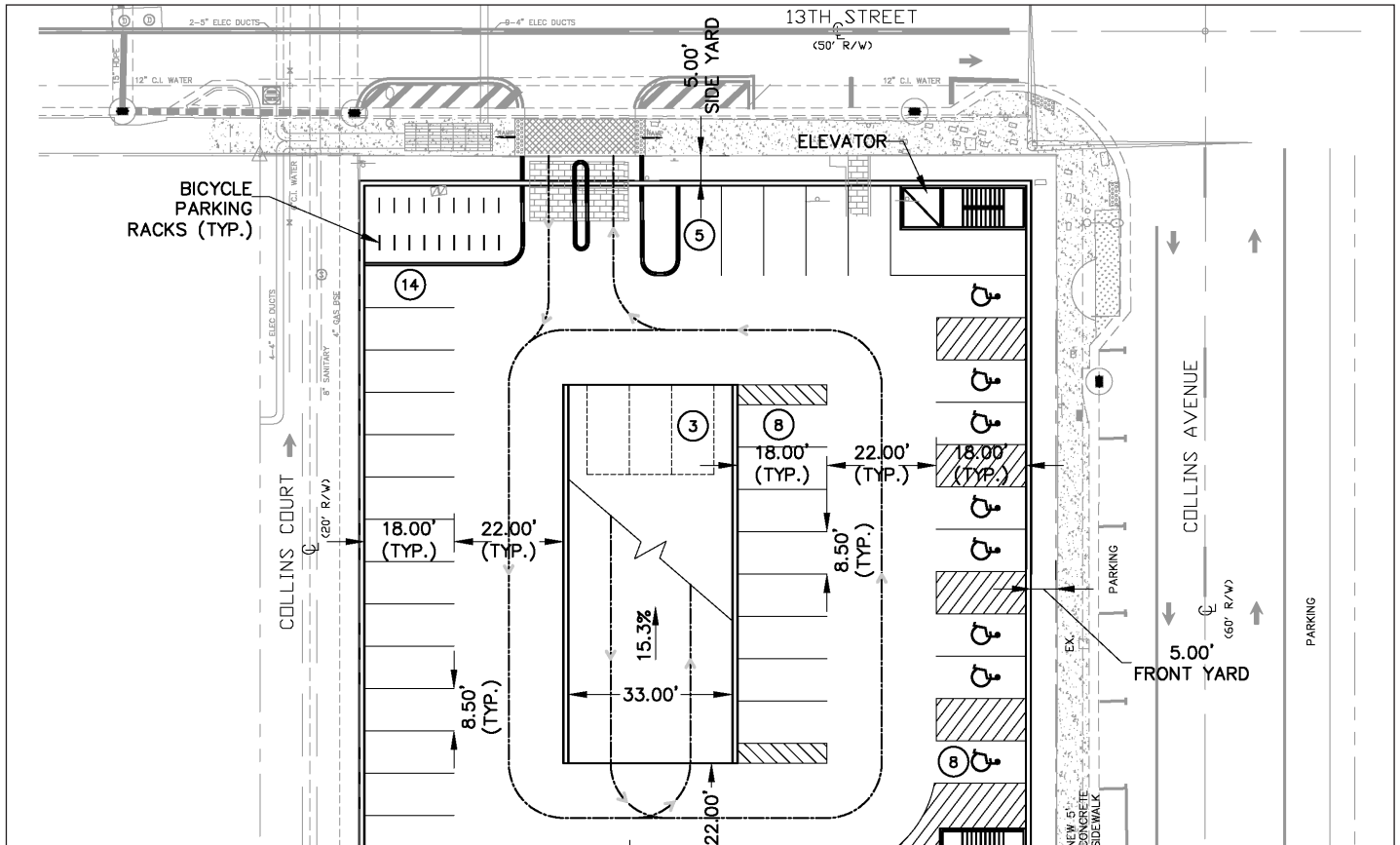
Miami Beach, FL

Description: Keith & Schnars is the lead designer for this Design/Build project which consists of construction of the West Avenue Bridge over Collins Canal and extension of West Avenue from 17th Street to West Collins Canal, reconstruction of Dade Boulevard between Venetian Causeway and Alton Road, construction of pedestrian bridge over Collins Canal and associated side street reconstruction to tie in adjacent road construction that is being completed by others on Bay Road, West Avenue, and Sunset Harbor Drive.

Lead Design services includes developing construction documents for the proposed roadway improvements, which includes: Road construction for the extension of West Avenue from 17th Street to 150' North of Dade Boulevard, centerline alignment and profile of roadway and bridge elements, analyzing existing and installed drainage system, signing and marking plans for roadway and bridge elements, analysis and design of new traffic signals, analysis of existing lighting systems and proposed modifications, post design services which includes shop drawing review, responses to RFIs. In addition, Keith & Schnars is providing lead designs services to include performing topographic survey and Right-of-Way survey, structural design analysis and construction plans for: vehicular bridge to carry West Avenue over Collins Canal that will accommodate both vehicular and pedestrian traffic, mast arm structures, retaining walls, pedestrian bridge over Collins Canal from Lincoln Court to Dade Boulevard. Post design services which includes shop drawing review, responses to RFIs and permitting.

- Client:** City of Miami Beach
- Contact:** Bruce Mowry, Ph.D., P.E., City Engineer
- Address:** 1700 Convention Center Drive Miami Beach, FL 33139
- Phone:** (786) 759-8941
- Email:** brucemowry@miamibeachfl.gov
- Completion Date:** Ongoing
- Awarded Contract Amount:** \$800,000

CIVIL ENGINEERING



Feasibility Study for the Construction of Municipal Parking Garages at Surface Parking Lots P13 & P16

Miami Beach, FL

Description: Keith & Schnars performed a feasibility study for the construction of municipal parking garages at existing surface parking lots P13 and P16. The analysis prepared considered three different alternatives to determine the optimal design for a parking structure on the proposed sites considering the different user groups and integration of the parking structure with the neighborhood. Analyses included existing infrastructure, pedestrian flows, zoning and code issues, parking design requirements, landscape architecture user groups, issues related to construction period, project delivery methods and schedule, conversion to affordable housing, and project and finance cost. Financial analyses was also performed and included in the feasibility study. Conceptual costs, operating expenses, parking income and expense projections, operating pro forma, and debt service coverage were addressed.

Client: City of Miami Beach

Contact: Diego M. Lopez Medina, P.E.

Address: 1700 Convention Center Drive Miami Beach, FL 33139

Phone: (305) 673-7071

Email: diegolopezmedina@miamibeachfl.gov

Completion Date: September 2016

Awarded Contract Amount: \$46,079

CIVIL ENGINEERING



University of Miami - Internal Roads (Phase 1)

Coral Gables, FL

Description: Keith & Schnars is currently providing design improvements to areas within the University of Miami's main campus in Coral Gables in Miami-Dade County. These improvements are being provided by the addition of an internal circulation roadway which will provide greater connectivity within the campus as well as alleviate the congestion on the surrounding City of Coral Gables streets as they are currently the main avenues for circulation to other parts of the campus. The design of the Internal Circulation Roadway has been split into two (2) separate phases. The limits of Phase I are from just south of the intersection of San Amaro and Miller Road to just east of the intersection of San Amaro and Robbia Avenue. Within the University, we are proposing the construction of about 0.50-miles of a two-lane new road that will connect the Music School, Law School, Physics Building, and the Arboretum. In addition, 18 on-campus parking lots will be redesigned to improve each lot's lighting, pedestrian connectivity and landscaping. As part of the design, the plans included paving and grading plans, utility coordination plans, signing and pavement and marking plans, and lighting plans.

The project design has involved extensive public outreach, also negotiations with city, county, and state officials. Additionally, the project also had to take into consideration factors such as the businesses that service the University, shuttle bus routes on campus, the University's landscaping preferences, pedestrian/bicycle accommodation, delivery truck routes, and the requirements of each of the departments along the route of the new roadway system.

Client: University of Miami

Contact: Christopher S. Blair

Address: University of Miami Real Estate & Facilities, 1535 Levante Avenue, Coral Gables, FL 33146

Phone: (305) 284-6951

Email: c.blairl@miami.edu

Completion Date: Ongoing

Awarded Contract Amount: \$421,972

CIVIL ENGINEERING



FDOT District 6 Districtwide General Engineering Consultant Services Miami-Dade and Monroe Counties, FL

Keith & Schnars has managed a Districtwide General Engineering Consultant Services Contract for FDOT District 6 since March 14, 2002. The purpose of the contract is to provide an extension of the District's staff. The scope of the contract includes providing support services and resources in all divisions throughout the District including professional services, planning, public transportation, project development and environmental (PD&E), design, production management, right-of-way services, surveying and mapping services, value engineering, construction engineering management (CEI), LAP services, etc. The following is a list and brief description of some of the Task Work Order assignments completed by Keith & Schnars:

- 1) SR-826 Widening and Reconstruction: Section 2 Design Build** - Provided design and review support services including writing the Request for Proposal (RFP) document and review of Design Build Team design submittals as well as performing post design services support (RFI response, shop drawing review, etc.) for the Design Build CEI team.
- 2) I-95 Managed Lanes Design Build:** Prepared conceptual design plans and developed the RFP package, advertisement and supported FDOT District staff throughout the design/build team selection process. Provided post design services to District for the project through the Plan submittal reviews, responses contractor request for information, shop drawing review and design alternative concept analysis.
- 3) I-95 Concrete Pavement Replacement Design Build:** Prepared conceptual design plans and developed the RFP package, advertisement and supported FDOT District staff throughout the design/build team selection process. Provided post design services to District for the project through the Plan submittal reviews, responses contractor request for information, shop drawing review and design alternative concept analysis.
- 4) I-95 Pavement Rehabilitation Study and Plans:** Performed analysis and final design for rigid pavement deficiencies along the I-95 corridor in Miami-Dade County.
- 5) NW 122nd Street and SR-826 (Palmetto Expressway):** Performed final design for safety deficiencies at the interchange at NW 122nd Street and SR-826 in Miami-Dade County.
- 6) SR-5/US-1/Biscayne Boulevard from NE 13th Street to NE 38th Street:** Performed preliminary engineering and final design services for approximately 2-miles along the Biscayne Boulevard corridor.

Client: FDOT District 6

Contact: Jason Chang, P.E.

Address: 1000 NW 111 Avenue, Miami, FL 33172

Phone: (305) 470-5331

Email: jason.chang@dot.state.fl.us

Start Date: March 2002

Completion Date: Ongoing

CIVIL ENGINEERING



Andrews Avenue Segment 5
Pompano Beach, FL

The scope of services for this project involved the design and permitting required to produce construction documents for the construction of a new 4-lane divided roadway between Racetrack Road/NW 3rd Street and Atlantic Boulevard/SR-814. The new Andrews Avenue segment 5 section will follow the preferred Alignment Alternative 1-B as proposed and approved in the Andrews Avenue Extension PD&E Report (September 1996) and requires Right-of-Way acquisition by FDOT per FHWA requirements. As with the previous Andrews Avenue projects, the roadway typical section will be developed as a 4-lane divided urban typical section in 110' of Right-of-Way. The design shall also accommodate possible future expansion to a 6-lane divided section as traffic volumes dictate. The proposed typical section will accommodate a 33' wide curbed median, four 12' through lanes with adjacent 4' bike lanes and 6' sidewalks. The project involved the design and permitting of a new closed drainage system incorporating wet detention ponds discharging to the Pompano Canal (C-14). The roadway design included roadway lighting, signalized intersection design and roadway signing and marking. The project required close coordination with Broward County and the City of Pompano Beach; all maintenance agreements for lighting and landscaping were between these two counties.

Client: FDOT District 4

Contact: Anson Sonnett, P.E., Project Manager

Address: 3400 West Commercial Boulevard, Fort Lauderdale, FL 33309

Phone: (954) 777-4474

Email: Anson.sonnett@dot.state.fl.us

Start Date: May 2011

Completion Date: January 2015

Fees: \$690,000

CIVIL ENGINEERING



Palm Bay Parkway

Palm Bay, FL

Under Design/Build format, Keith & Schnars (Prime Consultant) teamed with OHL/Community Asphalt (Prime Contractor) to design and construct Palm Bay Parkway in the City of Palm Bay. The primary focus of the project was the new design and construction of 2.5-miles of Palm Bay Parkway from Malabar Road to Emerson Drive as two (2) lanes of an ultimate four (4) lane divided High Speed Suburban typical section. Palm Bay Parkway included a 240' long, 49'-4" wide, 4 span bridge over the SJRWMD C-1 Canal designed utilizing 36" Florida I-Beams. There were many other significant elements of the project.

Malabar Road (Brevard County Road 514) was widened at the intersection with Palm Bay Parkway to include left and right turn lanes. Twin 96" diameter culverts within the MTWCD C-7 Canal were extended to accommodate the widening with special design mitered end section treatments.

The project included the new design and construction of 0.5-miles of Pace Drive as two (2) lane undivided urban typical section from Palm Bay Parkway to Gillmar Avenue.

The project included the new design and construction of 0.5-miles of Emerson Drive as two (2) lanes of an ultimate four (4) lane divided urban typical section from Palm Bay Parkway to Amador Avenue.

A 1.5-mile segment of the MTWCD C-59 Canal was excavated and widened from the MTWCD C-1 Canal extending to the north. C-59 Canal crossings at Pace Drive and Emerson Drive required the design and construction of twin (2) 10' x 12' box culverts at Pace Drive and an 84" diameter culvert at Emerson Drive.

Client: City of Palm Bay

Contact: Barney Weiss, CPM, Acting Public Works Director

Address: 120 Malabar Road, Palm Bay, FL 32907

Phone: (321) 953-8996, Ext. 6481

Email: Barney.weiss@palmbayflorida.com

Start Date: August 2012

Completion Date: August 2015

Fees: \$11,000,000 - Construction, \$700,000 - Design

UTILITY ENGINEERING



Utility Undergrounding and Conversion

Sunny Isles Beach, FL

Description: Keith & Schnars provided Professional Engineering and Construction Management services to the City of Sunny Isles Beach necessary for the undergrounding of all overhead electric, and low voltage utilities within the city limits of Sunny Isles Beach. The scope of the contract included the coordination of design with all utility providers, utility design and negotiations, consolidated construction plans, required permitting (including FDOT Right-of-Way permits), providing design milestone cost estimates and budgets for approximately 4.1-miles of Collins Avenue (A1A) and 1-mile of Atlantic Boulevard.

The project scope also included the preparation of request for proposals for installation contracting services, contract procurement and total project management of the work. Work also included: feasibility studies, construction administration, maintenance of traffic, neighborhood/resident information and status updates, utilization and implementation of the latest utility technology, coordination and management of all public information/out-reach meetings and notices.

Final design plans included coordination with FPL, AT&T, Hotwire, Atlantic BB, Comcast, Columbus Networks, FDOT and the City of Sunny Isles Beach. All in design plans included 5.1-miles of coordinated joint trench. The project is under construction and will be completed at night due to the intensity of pedestrian and vehicular traffic in the area.

Client: City of Sunny Isles Beach

Contact: Christopher J. Russo, City Manager

Address: 18070 Collins Avenue, Sunny Isles Beach, FL 33160

Phone: (305) 792-1701

Email: crusso@sibfl.net

Completion Date: April 2016

Awarded Contract Amount: \$1,100,00

UTILITY ENGINEERING



Water Works 2011

Fort Lauderdale, FL

Description: The Water Works 2011 program was a \$555 million water and sewer infrastructure upgrade program being implemented by the City of Fort Lauderdale. Completion of the program was intended to coincide with the City's 100 year Anniversary in 2011 and Keith & Schnars assisted the City in the successful implementation of this initiative.

As part of the Water Works 2011 Program, Keith & Schnars provided professional services in the areas of water/wastewater engineering, water resources engineering, transportation engineering, land surveying, utility engineering, construction administration, and construction engineering and inspection for various projects.

The work completed by Keith & Schnars included water and sewer improvements in approximately 20 neighborhood communities, totaling approximately 50-miles of new gravity sewer, 19 new lift stations, 19-miles of new water main and 5-miles of new force main. The designs included conventional open cut design and trenchless technologies such as jack and bore and directional drill. The Oakland Park Water Main project design included a directional drill of approximately 1000 LF of 30" water main across the Intracoastal Waterway and the Imperial Point Project included approximately 1000 LF of 16" water main across the FEC RR and South Fork Cypress Waterway Canal.

Client: City of Fort Lauderdale

Contact: Hal Barnes, P.E., Assistant City Manager

Address: 100 North Andrews Avenue, Fort Lauderdale, FL 33301

Phone: (954) 828-5065

Email: hbarnes@fortlauderdale.gov

Completion Date: 2015

Awarded Contract Amount: 6.2 million

UTILITY ENGINEERING



Fort Lauderdale - Undergrounding of Overhead Utilities

Fort Lauderdale, FL

The City of Fort Lauderdale retained the services of Keith & Schnars to facilitate efforts to place existing overhead utilities underground through special assessment within interested neighborhoods. Acting as an extension of City staff, Keith & Schnars is tasked with providing project coordination, design, construction documents, bid analysis, assessment methodology and appraisal, creation of assessment role, presentation to Commission, periodic construction observation, final certification and adjustment to assessment role.

The process identified under the current ordinance allows for progression of projects upon receipt of consent from 70% of the voting residents within each neighborhood. Under the current scenario, conceptual estimates are developed with information from FP&L and franchise utilities.

As the City's consultant, Keith & Schnars has played a significant role in discussions with utilities, drafting of ordinances, attending meetings with HOA's, and answering programmatic questions from Commissions. To date, four neighborhoods have signed-on: Idlewyld and Riviera Isles, which includes 3 pole miles of existing overhead utilities to underground, Las Olas Isles which includes 3.1 pole miles and Seven Isles which includes 2.8 miles. All three neighborhoods will involve close collaboration with FPL, Comcast, AT&T, City staff and Homeowners Associations. Idlewyld/Riviera Isles are currently in the design phase while the Las Olas Isles are in the early planning stage. Seven Isles will follow close behind.

One of many obstacles in completing these projects is the relatively narrow right-of-ways on these Isles. Because the residents do not wish to grant easements, FPL equipment will need to be placed in the Right-of-Way making clear zones and clearances around the equipment a critical challenge.

Client: City of Fort Lauderdale

Contact: Hal G. Barnes, P.E., Assistant City Manager

Address: 100 North Andrews Avenue, Fort Lauderdale, FL 33301

Phone: (954) 828-5065

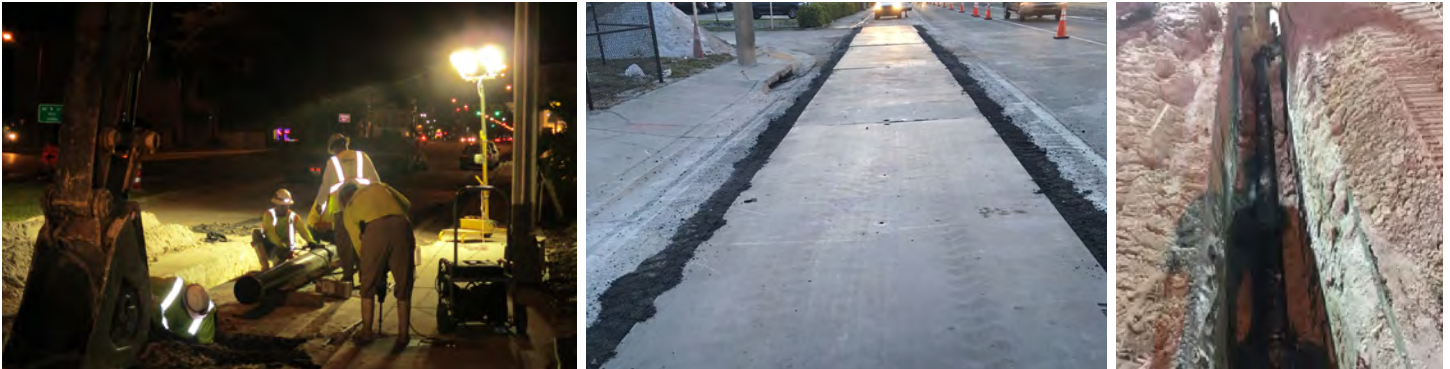
Email: HBarnes@fortlauderdale.gov

Start Date: February 2009

Completion Date: Ongoing

Construction Estimate: \$7.5 million

UTILITY ENGINEERING



Lake Ridge Sunrise Boulevard (US-1) Water Main Improvements

Fort Lauderdale, FL

Keith & Schnars was contracted to prepare design and construction documents for the installation of approximately 4,200 LF of 8" DIP water transmission pipeline along Sunrise Boulevard from NE 7th Avenue to NE 18th Avenue, as well as 6" water transmission pipeline tie ins to the side streets thereby completing the looped system servicing the adjacent Lake Ridge Neighborhood which was previously installed by City crews.

This new 8" water transmission pipeline is critical as it replaces an antiquated 2" water main presently serving the majority of the commercial properties on the north side of Sunrise Boulevard Right-of-Way. The life expectancy of the 2" main was suspect at best.

During the design process, the Keith & Schnars Team learned that there was an ongoing FDOT project along Sunrise Boulevard being constructed by Community Asphalt Contractors. The completion date of April, 2016 provided adequate time and made it feasible to add the City's water main project to their scope. The water main excavation would be resurfaced under the contractor's milling and resurfacing items included in their construction program (no need to tear up the roadway in the future).

The Keith & Schnars Team was instrumental in coordinating with the FDOT through our existing relationship to bring them on board and complete these projects concurrently. If this joint effort could not materialize, the City would have to put the project on hold for a minimum of 5 years due to FDOT's policies.

Keith & Schnars negotiated with Community Asphalt to arrive at a fair and reasonable cost to implement the water main project in conjunction with their current FDOT project.

(Brief Description: Design, permitting, and construction management of various sizes and types of water transmission pipelines.)

Client: City of Fort Lauderdale

Contact: Hal G. Barnes, P.E., Assistant City Manager

Address: 100 North Andrews Avenue, Fort Lauderdale, FL 33301

Phone: (954) 828-5065

Email: HBarnes@fortlauderdale.gov

Start Date: June 2015; Construction May 2016

Completion Date: March 2016; Construction August 2016

Fees: \$89,000; Construction \$989,717

STRUCTURAL ENGINEERING



Florida Keys Overseas Heritage Trail (FKOHT) Rehabilitation Cost Estimate Monroe County, FL

Keith & Schnars provided engineering services to develop a structural condition assessment and engineering cost estimate for the repairs and rehabilitation of all 23 of the historic Overseas Railroad bridges to determine their structural condition and potential reuse by FDEP as a pedestrian and bicycle path. A report was prepared to present inspection findings, recommended repairs and cost estimates for each bridge.

Keith & Schnars performed field inspections from the top of deck and from a boat for the 23 bridge structures. The bridges included 21 closed concrete spandrel arches; the Seven-Mile Bridge steel girder spans; and the Bahia Honda Bridge, comprised of steel girder spans and Pratt truss spans. Deficiencies were documented with notes, sketches and photographs.

Bridge Condition Assessment Reports were prepared for each bridge, including inspection findings, probable causes of deficiencies, and recommendations for rehabilitation, repair or removal. A concise summary of the reports was included for the decision-makers to determine prioritization and funding for the FKOHT bridges.

Limited maintenance and repairs has led to extreme corrosion and imminent failure of some areas of the bridges. An Emergency Removal Plan was also submitted to address and prioritize the areas that were found to be a concern to public safety.

Keith & Schnars also prepared presentations for upper-level FDOT staff to summarize the reports and to illustrate the severe deficiencies found.

Client: FDOT District 6

Contact: Dennis Fernandez

Address: 1000 NW 111th Avenue, Miami, FL 33172

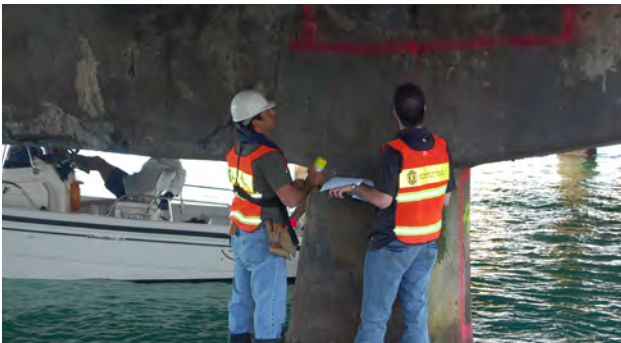
Phone: (305) 470-5182

Email: dennis.fernandez@dot.state.fl.us

Start Date: June 2013

Completion Date: 2014

STRUCTURAL ENGINEERING



East Rickenbacker Fishing Pier Repairs

Miami-Dade County, FL

Keith & Schnars prepared design plans for the repair of the original Rickenbacker bridge-turned-East Fishing Pier adjacent to Biscayne Bay in Miami-Dade County.

Structural engineering services involved in-depth inspection of the substructure, visual inspection of the superstructure, and non-destructive testing due to the lack of existing plan information. Spans were analyzed to support snooper loads during inspection as well as construction equipment (cement truck) loads. Repairs included full and partial depth spall repairs of the superstructure and the above-water portions of the pier substructure. Repair limits were delineated, quantified, and photographs of each repair were included in the plan set in tabular format to clarify the extent of the required repairs. Repairs were also prioritized by severity so that the County could optimize the project construction budget.

The project also included detailed quantity and cost estimates for each repair, permit applications. Engineering services also included pre-bid meetings and support, on-call post design EOR services during construction, and CEI services involving quality control.

Client: Miami-Dade County Public Works Department

Contact: Marcos Redondo, P.E., Section Head, Bridge Engineering

Address: 111 NW 1st Street, Miami, FL 33128

Phone: (305) 375-3848

Email: marcos@miamidade.gov

Start Date: 2009

Completion Date: 2012

Construction Fees: \$3.2 million

STRUCTURAL ENGINEERING



Arch Creek Pedestrian Bridges

North Miami, FL

Keith & Schnars was contracted to prepare plans and permit for two single-span shared-use bridges along the previously constructed Arch Creek Shared Use Path connecting NE 135th Street and the FIU Biscayne Bay Campus. Environmental and Civil Engineering services were also provided for the relocation of a City of North Miami water main supported by the existing structures.

Structural plans and specifications were prepared for two new 62-foot long prefabricated steel truss bridges. The new bridges were designed to meet width requirements for the Multi-use trail as dictated by FDOT, AASHTO and Miami- Dade County. Since the new bridges replace the existing offset bridges that support an existing deteriorating water main between the webs of the existing structure, the new bridges were designed to accommodate a relocated 16-inch water main along side the bridges. The substructure is cast in place concrete end bents on prestressed piles.

Environmental services included an ecological field inspection and processing permit applications through the South Florida Water Management District, the US Army Corps of Engineers, and Miami-Dade County Permitting.

Additionally, Keith & Schnars helped coordinate the LAP agreement between the City of North Miami and FDOT and also processed all permits required for the project on behalf of the City.

Client: City of North Miami

Contact: Tanya Wilson-Sejour, AICP, Project Manager

Address: 12400 NE 8th Avenue, North Miami, FL 33161

Phone: (305) 895-9826

Fax: (305) 895-4074

Email: tsejour@northernmiamifl.gov

Start Date: 2009

Completion Date: 2014

Fees: \$76,226

STRUCTURAL ENGINEERING



I-595 Express Corridor Improvements Project

Broward County, FL

I-595 is Broward County's major east-west thoroughfare used by residents and visitors to get to work, shops, entertainment venues, the airport, Port Everglades and the beaches. The FDOT signed a public-private partnership (P3) agreement with I-595 Express, LLC, to serve as the concessionaire to design, build, finance, operate and maintain (D/B/F/O/M) the I-595 corridor improvements project for a long-term commitment of 35 years. The improvements to the I-595 corridor will vastly improve driving conditions along I-595 and preserve the future vitality of the corridor. The project limits extend from the I-75/Sawgrass Expressway interchange to the I-595/I-95 interchange in Central Broward County.

The I-595 Express Corridor Improvements Project was divided into five construction segments, A through E, to expedite the work. Keith & Schnars was the structural engineer of record for two proposed ramp bridges on I-595 over Hiatus Road a part of Segment B. One of the ramp bridges was on the construction schedule critical path so the design was expedited in order to maintain the project schedule. The Ramp I bridge was three spans using 72" FIBs with a total length of 357'-8", and 43'-1" wide with an 8'-0" barrier mounted sound wall. The Ramp E-2 bridge was also three spans using 72" FIBs with a total length of 328'-2", and 30'-1" wide with utilities attached to the underside of the deck and drainage pipe imbedded in the piers. Both bridges were slightly skewed and had to be positioned to avoid conflicts with the roadway below. The middle span of both bridges was 160'-2" in length, the longest FIB used on the I-595 Express Project.

Client: Dragados USA

Contact: Jose Ballesta, Project Manager Engineering

Address: 595 Corporate Park of Commerce, 10368 SR-84 Suite 103, Davie, FL 33324

Phone: (954) 668-2015, (954) 476-5624 (fax)

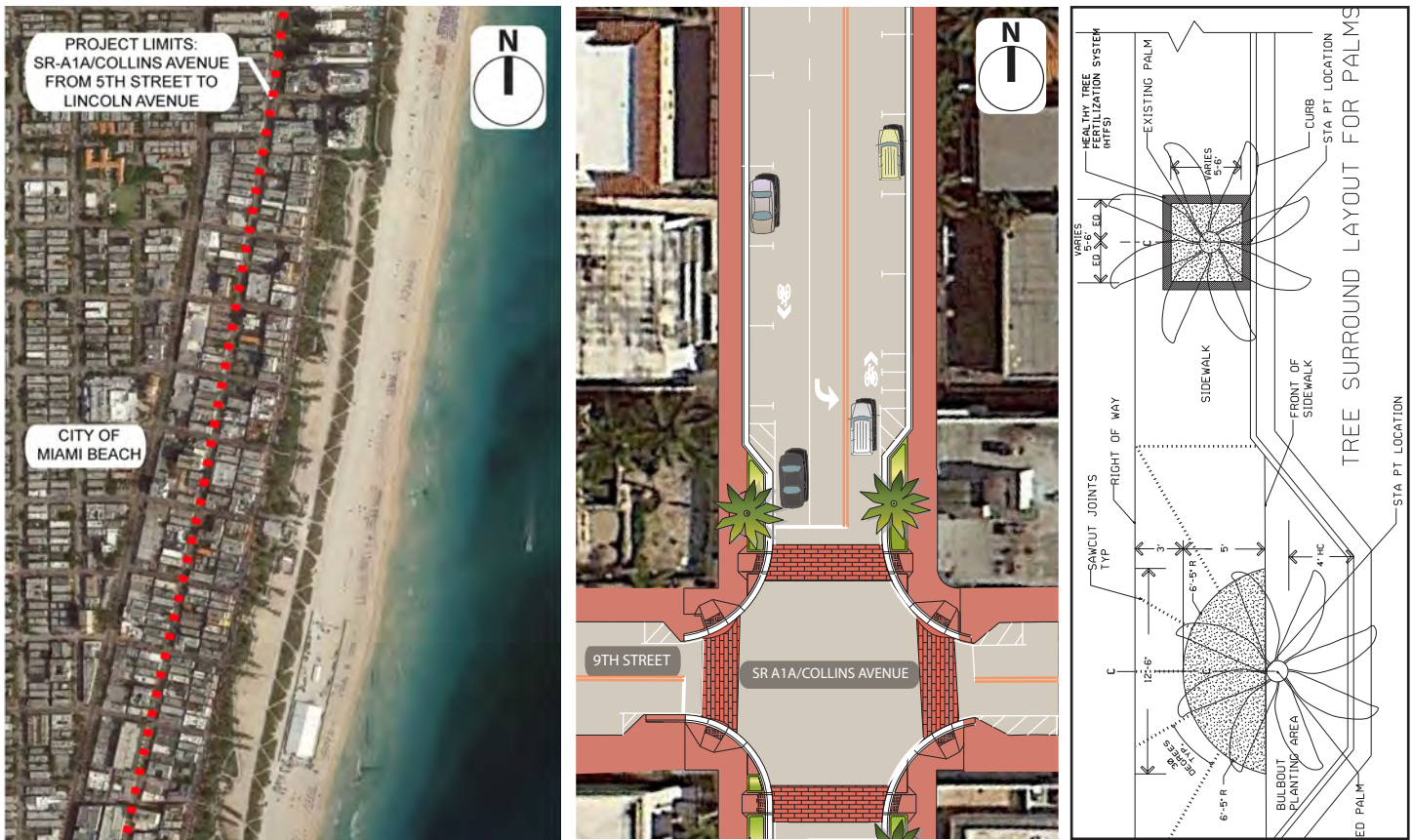
Email: jballesta@dragados-USA.com

Start Date: 2011

Completion Date: 2012

Fees: \$110,000

LANDSCAPE ARCHITECTURE



SR-A1A/Collins Avenue from 5th Street to Lincoln Road
Miami Beach, FL

The SR-A1A/Collins Avenue project is a complete reconstruction of the corridor from 5th Street to Lincoln Road. Keith & Schnars provided landscape architecture services to FDOT and coordinated closely with the City of Miami Beach to ensure that the design of the pedestrian space met the needs of this highly traveled corridor. Within the Historic Preservation District of Miami Beach and adjacent to the world famous Ocean Avenue, Collins Avenue sees a large volume of users. Our streetscape design addresses the needs of these users by balancing coastal appropriate plantings with safe hardscape treatments. In addition to the hardscape and planting plan, Keith & Schnars designed a water-wise drip irrigation system that will eliminate the overspray and water loss of a traditional spray irrigation system. The use of stately palms accenting the four corners of each cross streets sets the stage for display of the world-renowned style that Miami Beach is known for.

- Client:** FDOT District 6
- Contact:** Heidi Solaun-Dominguez, P.E., FDOT Project Manager
- Address:** 1000 NW 111th Avenue, Room 6101, Miami, FL 33172
- Phone:** (305) 470-5282
- Email:** heidi.solaun@dot.state.fl.us
- Start Date:** October 2010
- Completion Date:** 2015
- Design Fees:** \$45,000
- Construction Costs:** \$250,000

LANDSCAPE ARCHITECTURE



Biscayne Boulevard

Miami, FL

Keith & Schnars designed the reconstruction of 1.4-miles of Biscayne Boulevard in the heart of old downtown Miami. The project scope included the preparation of construction plans for Biscayne Boulevard from NE 15th Street to NE 35th Terrace. The plans detail the full reconstruction of Biscayne Boulevard along with a full replacement of the existing drainage system. The existing drainage system was replaced with a deep well system for a majority of the project. However, the southern portion of the project required the installation of a pump station, as an injection well drainage system, was necessary due to the low elevations in this section of the project. The project also included the installation of a new decorative lighting system; alternating decorative roadway lighting with decorative pedestrian lighting throughout the corridor. All eight (8) signalized intersections with span wire systems were replaced with standard Florida Department of Transportation (FDOT) mast arms and the existing overhead truss structure was replaced with a smaller cantilever sign structure. Sidewalk widths were increased to enhance pedestrian space, ADA ramps were installed and spacious transit areas were created.

Our landscape architects designed the Biscayne Boulevard streetscape to reflect the distinctive urban street character that included historic buildings and new mixed-use development. As desired by the City of Miami and FDOT District 6, the stately, existing Royal Palms were preserved and new palms filled in the gaps to renew the iconic, palm-lined corridor. Keith & Schnars' Transportation engineers performed a traffic analysis for the preparation of a FDOT Design Variation in order to keep as many existing Royal Palms in place. A new drip and spray irrigation system was installed to irrigate the palms and grass within the 12 foot landscape buffer. Additionally, conduit and junction boxes for future landscape lighting were installed. Post design services were provided by Keith & Schnars' Landscape staff to perform periodic reviews of the landscape and irrigation installation.

Client: FDOT District 6

Contact: Jose Barrera, P.E.

Phone: (305) 470-5560

Start Date: May 2004

Completion Date: April 2009

Fees: \$1.5 million

Construction Fees: \$15.8 million (estimated)

LANDSCAPE ARCHITECTURE



SR-907/Alton Road from 5th Street to N Michigan Avenue

Miami Beach, FL

This 1.5 mile section of Alton Road is an active commercial corridor in one of Florida's hottest destinations to visit, live, work or play - Miami Beach. The corridor is heavily traveled by locals and tourists either by foot, bicycle or automobile. In addition to being a complete roadway reconstruction project, FDOT's scope also includes highway beautification with landscape, hardscape, and irrigation plans. To soften the urban feeling of this metropolitan corridor, large shade trees were placed adjacent to on-street parking and in curbed bulb-outs; thus providing a shady walk for pedestrians, allowing them to linger along the corridor to enjoy the many shops and cafes that Miami Beach has to offer. Hardscape treatments were designed within the sidewalks to create ADA compliant walkways as well as provide root space for proposed street trees. Working with the City of Miami Beach, irrigation plans were tailored to the City's requests. Ultimately as a tree-lined street that will mature and grow, Alton Road will continue to develop as an asset for the community and its users to enjoy.

Client: FDOT District 6

Contact: Paul Moss, District Landscape Architect

Address: 1000 NW 111th Avenue, Room 6101, Miami, FL 33172

Phone: (305) 470-5384

Email: Paul.Moss@dot.state.fl.us

Start Date: October 2010

Completion Date: 2016

Design Fees: \$115,000

Construction Costs: \$1,000,000

LANDSCAPE ARCHITECTURE



FDOT - Miami Inter-Modal Center/Miami Rental Car Facility

Miami, FL

The Miami Intermodal Center (MIC), a \$2.25 billion project located just east of Miami International Airport (MIA), is envisioned as a consolidated transfer center for passengers using the airport, intercity and commuter trains, rapid transit, local and intercity buses, and cruise ships in PortMiami. The project was being developed by the Florida Department of Transportation (FDOT) and the Miami-Dade Aviation Department, with cooperation from the Miami-Dade Expressway Authority, Miami-Dade Transit, Amtrak, and various rental car agencies serving the airport. The MIC is the centerpiece of a series of projects, including a consolidated rental car facility (RCF) for MIA, a people-mover connection to the airport, and a number of road access improvements around the airport. The MIC “core” will include 1.45 million square feet of developable space. Keith & Schnars provided hardscape, planting, and irrigation design for the rental car facility and road access improvements around the airport for this highly visible transportation node. Services included production plans and specialty construction observation services.

Services included production plans, specialty construction observation services, planning, irrigation and landscape lighting design for this major Miami International Airport facility.

Client: FDOT District 6

Contact: Steven Craig James, RLA

Address: 1000 NW 111th Avenue, Miami, FL 33172

Phone: (305) 470-5221

Start Date: June 2005

Completion Date: November 2009

Construction Fees: \$3,500,000

Design Fees: \$221,000

St. Lucie Inlet Coastal Engineering Services Stuart, FL (Martin County)

Gahagan & Bryant Associates, Inc. (GBA) has proudly been part of a coastal engineering services contract, which has entailed numerous assignments in support of inlet management and navigation, with Martin County since 1998. Our services have included new work and maintenance dredging design, sand bypassing and beach nourishment, permitting, environmental and water quality monitoring, geotechnical investigations, independent technical review (ITR) and peer review of technical documents, analyses of coastal processes, sediment budget evaluation, determination of sediment transport rates, and construction management.

Client:
Martin County, FL
2401 S.E. Monterey Rd.
Stuart, FL 34996

Contact:
Don Donaldson, P.E.
(772) 288-5429
ddonaldson@martin.fl.us

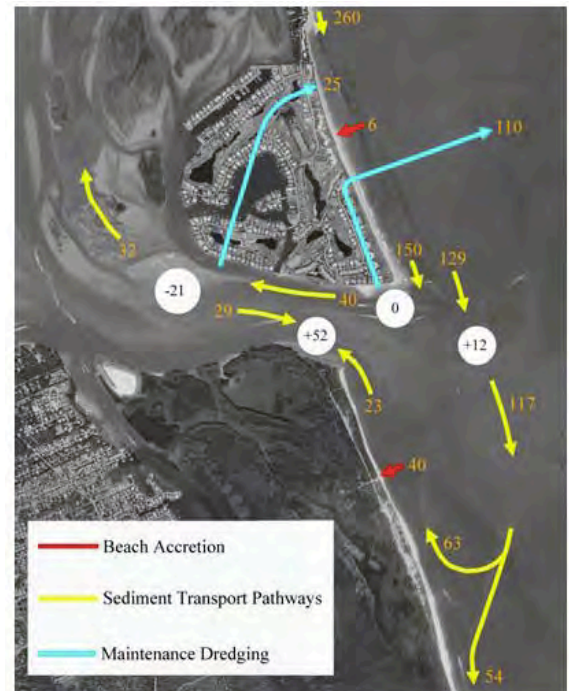
A few of our assignments are highlighted below.

St. Lucie Inlet Management Plan

Martin County and the Florida Department of Environmental Protection (FDEP) developed the first comprehensive inlet management plan in 1995. The plan, which assesses impacts of inlet stabilization structures on sedimentation in the St. Lucie Inlet navigation channel and impoundment basin and provides recommendations for dredging maintenance, sand bypassing on surrounding beaches, and structural improvements, is a “living” document subject to periodic updates. The plan was most recently updated following the enlargement of the inlet’s impoundment basin in 2002-2003, and was adopted in 2014.

Since 1998, GBA has provided annual, and as needed, coastal engineering and survey services for the continued re-evaluation of the management plan and implementation strategies. GBA’s services include:

- topographic and hydrographic surveys of the inlet and surrounding beaches
- biological monitoring surveys
- bathymetric change analyses and sedimentation calculations
- tidal studies including the installation and monitoring of tide gauges within the inlet
- current measurements using Acoustic Doppler Current Profile (ADCP) surveys
- geotechnical investigations
- dredge template calculations



St. Lucie Inlet Alternatives Analysis

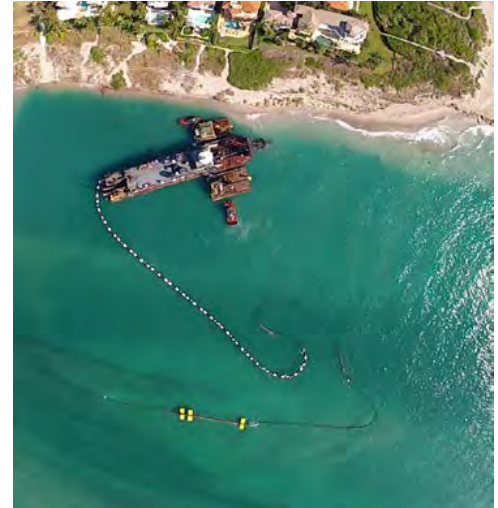
In 2012, GBA was tasked by the Martin County Board of County Commissioners (BOCC) and St. Lucie Inlet Technical Advisory Committee (TAC) to provide a feasibility study and alternatives analysis of management options to keep St. Lucie Inlet predictably and permanently navigable. This effort was initiated to address the anticipated reduction in federal commitment to the project.

GBA identified and evaluated 10 alternatives including construction of inlet stabilization structures; reconfiguration of the impoundment basin; and dredging, transport, and placement methodologies. As part of the evaluation, GBA participated in several community outreach meetings with Martin County to solicit

input and discuss the identified alternatives for inlet management. GBA provided the BOCC and TAC with cost estimates, planning level design, constructability analyses, performance estimates, and assessment of public impacts for the 10 alternatives considered.

Design, Construction, and Maintenance of the St. Lucie Inlet Sediment Impoundment Basin

As the project engineer for the local sponsor of the federal navigation project, GBA was tasked with assisting USACE with the project design, plans development and obtaining requisite FDEP permits for the construction of a littoral sediment basin and for subsequent maintenance dredging events. GBA conducted an extensive geotechnical investigation to accurately define the sand/rock interface within the proposed excavation area. Based upon the results of the geotechnical investigation, GBA recommended design modifications to the proposed construction template to minimize rock excavation by aligning the impoundment basin with the natural rock substratum topography, reducing construction costs, and improving the hydraulic characteristics and efficiency of the basin. Construction of the basin was completed in 2003.



Three maintenance dredging events have occurred since completion of the impoundment basin. As engineer to the local sponsor, GBA has provided engineering design, geotechnical, environmental, survey, construction management, permitting, and agency coordination services for all inlet maintenance dredging projects. During the first maintenance dredging event in 2007, GBA worked with the FDEP to obtain a long-term pipeline easement through the St. Lucie Inlet State Park to reach beach fill locations along the starved shoreline of Hobe Sound National Wildlife Refuge (HSNWR) and downdrift beaches. Additionally, GBA provided hydrographic and topographic surveys of the project areas, determined maintenance dredging volumes, and supervised geotechnical investigations. GBA used the geotechnical characteristics of the borrow material to calculate the expected equilibrium toe of fill, minimize any potential impacts to nearshore hardbottom communities, and provide beach compatibility analysis of inlet sediments for beach nourishment and permitting of inlet dredging and beach nourishment projects at the local, state, and federal levels.

GBA expedited our services for the 2012 and emergency post-storm 2013/2014 maintenance dredging events, which both found the impoundment basin at or above capacity. Surveys, engineering design, construction plans and specifications development, agency coordination, and funding procurement were completed in 4 months or less for both projects. The projects made use of the long-term easement, as well as pipeline access routes from the Intracoastal Waterway (ICWW), placing material on beaches further south of the inlet and HSNWR.

To date, approximately 1.5 MCY of beach compatible sand has been dredged from the basin and federal channel for nourishment on downdrift beaches.

St. Lucie Inlet North Jetty Rehabilitation

In accordance with the St. Lucie Inlet Management Plan, the outer 450 feet of the north jetty was raised to +8.0 feet Mean Low Water (MLW) to provide improved dredging and efficiency through attenuation of storm waves within the impoundment basin and increased control of sand movement through the weir. The project included the placement of 190 marine mattresses, 2,041 tons of limestone bedding, and 9,877 tons of armor stone during the 4-month construction period. On behalf of Martin County, the local sponsor, GBA provided project permitting, federal coordination, engineering design, topographic and hydrographic surveys, and construction inspection for the rehabilitation of the jetty.

Multiple Beach Nourishment Projects

As an engineer for Martin County, GBA has provided engineering and construction management support for all of Martin County’s beach restoration projects over the past 18 years. Beginning in 1998 with the first sand transfer event performed under the St. Lucie Inlet Management Plan (the Martin County Flood Shoal Removal Project), GBA conducted surveys of the ICWW and placement areas, determined beach template volumes, prepared ICWW dredging scenarios, developed construction plans and specifications, and inspected construction progress.

GBA has also conducted geotechnical investigations, sampling, analysis, and delineation of other potential borrow sources within the St. Lucie Inlet flood shoal to support numerous adjacent beach restoration projects. The 2008 Bathtub Beach Restoration Project was a testament to our schedule performance for geotechnical services. On April 25, 2008, GBA was tasked to locate a suitable beach compatible borrow site, obtain vibracore samples, and perform sediment analysis and modeling of various dredging scenarios to determine potential impacts on marine resources. The project was scheduled for completion on December 31, 2008, and GBA beat the schedule by 67 days, completing the project on October 25, 2008.

Two flood shoal borrow sites were sourced for the most recent Winter 2015/2016 Bathtub Beach Restoration Project. GBA provided daily construction inspection, hydrographic and topographic progress payment surveys, and dredged volume calculations.



Jupiter Island Beach Restoration Program

Jupiter Island, FL (Town of Jupiter Island)

GBA has been providing coastal planning, engineering, and consulting services to the Town of Jupiter Island since 1976. Twelve projects have successfully placed 16.5 MCY of sand along this 6.5-mile segment of critically eroded shoreline located between St. Lucie Inlet and Jupiter Inlet. These projects have successfully restored the shoreline, with the most recent placement of 1.7 MCY in 2016 protecting the shoreline from the damaging effects of Hurricane Matthew and the wind event that followed. GBA is currently conducting permit required biological and physical monitoring surveys in association with the 2016 beach nourishment project.

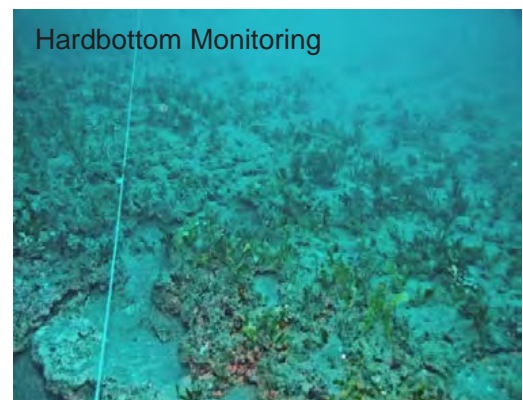
Client:
Town of Jupiter Island
P.O. Box 7
Hobe Sound, FL 33475

Contact:
John Duchock, P.E.
Beach District Manager
(772) 545-0100
jduchock@tji.martin.fl.us

Comprehensive services provided to the Town for shoreline management include coastal engineering design, dune restoration, sand source development, state and federal permitting, contracting assistance, construction administration, biological and physical monitoring, and FEMA consulting. In addition to shoreline management, GBA has also assisted the Town with development of a municipal GIS database, establishment of a waterfront construction setback line, seagrass restoration and monitoring, residential canal dredging, revetment design, and emergency storm response.

As the Town of Jupiter Island's engineer, GBA has

- developed a comprehensive beach restoration program covering 6.5 miles of shoreline
- designed, bid, and managed 12 beach nourishment projects over 40 years, placing 16.5 MCY of sand on the Town's critically eroded beaches
- obtained over \$15 Million in FEMA Category G and Category B funding (private project equivalent of PL 84-89 emergency funding) for beach restoration projects
- evaluated multiple potential sand sources from upland locations and located a source of beach compatible material meeting all FDEP guidelines
- conducted biological assessments in support of permit applications and to comply with permit required biological monitoring of nearshore hardbottom



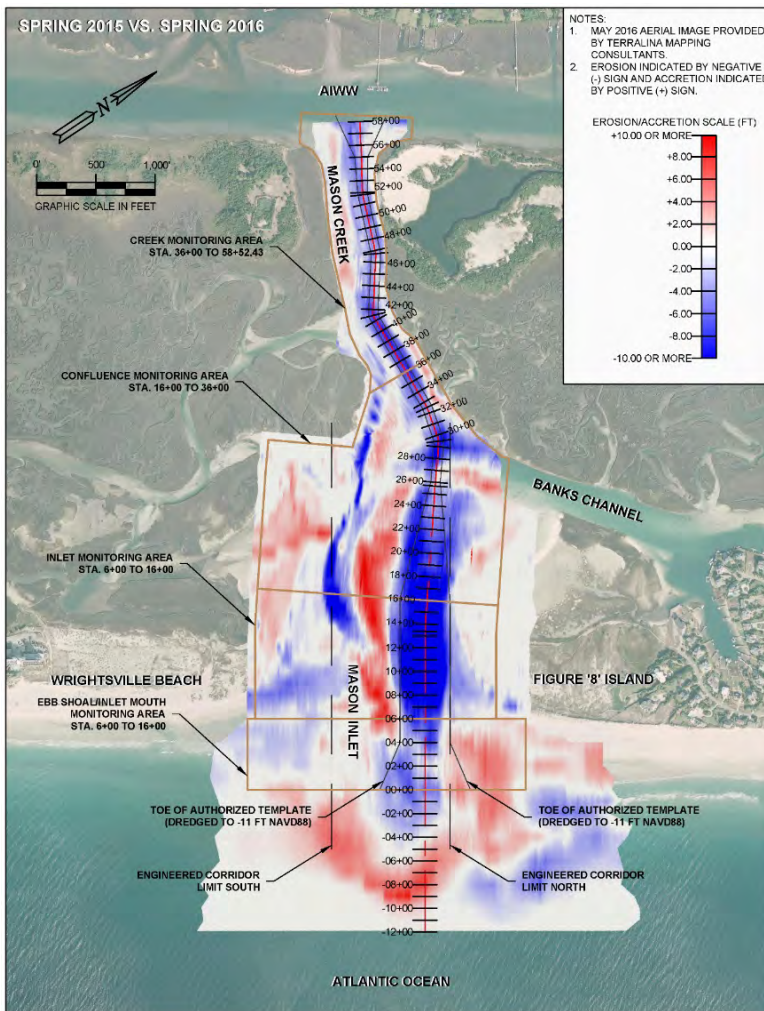
Mason Inlet Relocation Project and Long-Term Management Program New Hanover County, NC (New Hanover County)

New Hanover County undertook the relocation of Mason Inlet to protect vulnerable upland structures at the north end of Wrightsville Beach in 2002, moving the inlet 3,000 feet north of its original position. The project resulted in the closure of the old inlet and nourishment of nearly 2 miles of beachfront on Figure '8' Island.

GBA was retained as the coastal engineer for New Hanover County to monitor and manage the newly relocated Mason Inlet. GBA's responsibilities on this project include providing engineering and surveying services to implement the County's long-term inlet management plan. GBA is responsible for performing physical monitoring surveys of the inlet to evaluate the performance of the inlet, measure impacts to various estuarine habitats, and to determine when required maintenance events should occur. These annual monitoring surveys include hydrographic and topographic surveys, aerial photography, and surficial sand sampling and analysis.

Client:
New Hanover County
230 Government Center Dr.,
Suite 160
Wilmington, NC 28403

Contact:
Layton Bedsole, R.E.M.
Shore Protection Coordinator
(910) 798-7104
lbedsole@nhcgov.com



In addition to implementing the inlet management plan, GBA is responsible for design, contracting, and construction management for the County's 10.7-acre wetland mitigation site. This project excavated approximately 85,000 cubic yards of material from a retired USACE disposal site and graded the site to elevation suitable for intertidal marsh planting. Material excavated from the island was used for nourishment of approximately 1,400 feet of beach on Figure '8' Island.

GBA will be responsible for designing, permitting, contracting, and construction management for maintenance events. To date, there have been seven maintenance dredging events of the inlet channel with nourishment of Figure '8' Island. The most recent maintenance dredging event took place in winter 2015/2016. Approximately 500,000 CY of material was removed from the inlet and the Atlantic Intracoastal Waterway (AIWW).

**John F. Kennedy Space Center: Hydrographic Surveys, Dredged Material Maintenance Area Rehabilitation, and Maintenance Dredging
Cape Canaveral, FL (URS)**

Since 1997, Gahagan & Bryant Associates, Inc. (GBA) has provided consulting engineering services to the United Space Alliance and subsequently URS Federal Technical Services for the National Aeronautics and Space Administration (NASA) at the Kennedy Space Center. The project includes condition surveys and periodic maintenance dredging of the 17-mile Saturn Barge Canal, the Air Force Channel, and the Turning Basin, all located in the waters of the Banana River between Cape Canaveral and Merritt Island. Hydrographic surveys are performed and bathymetric plans are prepared on an annual basis to provide navigation assistance to the solid rocket booster retrieval ships and other barge traffic, and to monitor shoaling.

Client:
URS
 URS/ISC Engineering Services
 Branch
 M/C ISC 4100 -
 Fac K6-1096-2203P2
 Kennedy Space Center, FL 32899

Contact:
 Clint Hnatiuk
 (321) 861-4746
 clinton.e.hnatiuk@nasa.gov

Maintenance Dredging of Cuts 13-15 and Air Force Turning Basin

GBA performed pre-dredging surveys, and prepared plans and specifications for maintenance dredging of 6 miles of the Saturn Barge Canal, with upland disposal. Material was removed by means of a closed bucket clamshell dredge, transported in scows to a hydraulic unloader, and placed into an upland disposal site. GBA also negotiated the lease with the USACE for use of the federal disposal site, provided daily construction supervision and inspection, daily turbidity monitoring of surrounding waters, and performed contract surveys and volume calculations for pay quantities.

Spoil Sites 4 & 5 Rehabilitation

The project entailed the rehabilitation of spillways and levees to increase the storage capacity of two 60-acre upland disposal areas. GBA performed site investigations which included borings of the levee footprint and interior borrow areas, and prepared plans and specifications, cost estimates, and bid documents. Construction management included daily supervision of the clearing, grubbing, and burning of vegetation; the demucking of the levee footprint; the construction of the levees by conventional earthmoving equipment; compacting and density testing; seeding and mulching; and the installation of two flashboard risers with outfall pipes.

Placement Site 2B

GBA provided design modifications for the construction of 7,000 feet of levee to enclose an area of 76 acres for the future placement of maintenance material from the Saturn Barge Canal. The original government design called for the material to construct 10-foot high dikes to be trucked from an off-island borrow site. GBA analyzed soils within the proposed placement site, finding them equal to or better than those in the borrow area, and the plans were modified to use in-situ material resulting in a considerable cost reduction. GBA provided project design, preparation of plans and specifications, and construction management.



Levee at Placement Site2B

Air Force Turning Basin Maintenance Dredging

GBA was tasked with providing engineering services to dredge the USAF turning basin to alleviate shoaling that was hindering vessel operations. Material was excavated by means of a backhoe barge and trucked to an upland disposal area. GBA provided pre-dredging surveys, project design, material classification,

plans and specifications, cost estimates, construction management, and post dredging surveys for the emergency removal of shoaled material.

Saturn Barge Canal Maintenance Dredging

In support of space shuttle operations, GBA was contracted to design, bid, and manage the maintenance dredging of shoaled material from within the Saturn Barge Canal, which leads from the Banana River to the Vehicle Assembly Building at the Kennedy Space Center. GBA provided condition surveys, design, plans and specifications development, and construction management for the maintenance dredging of approximately 12 miles of the Saturn Canal. Work was performed between August and December 2000 using a hydraulic dredge to transport material to two existing placement sites on Merritt Island.

Saturn Barge Canal Aids to Navigation

To facilitate the safe transport of the space shuttle external fuel tank delivery barge through the Saturn Barge Canal, GBA provided engineering, permitting, and construction management for the installation of additional aids to navigation over 15 miles of channel. The project resulted in the installation of 25 new marine timber pile daymarkers, the replacement of 16 existing dayboards, and the relocation of one navigational buoy.

Great Lakes Dredge & Dock Co. Survey Services

Multiple Locations, FL (USACE)

GBA has served as the third-party surveyor to Great Lakes Dredge & Dock Co. (GLDD) for many USACE dredging projects along the east coast of the United States. Our more recent projects in Florida are highlighted below.

Miami Harbor Construction Dredging of the 50-foot Project

Miami-Dade County, FL

This Miami Harbor Phase 3 construction dredging project consisted of new and maintenance dredging in Cut 1, Cut 2, Cut 3, Fisher Island Turning Basin, Fisherman’s Channel, Lummus Island Turning Basin, and local sponsor berthing areas. Mitigation projects included artificial reef creation in several locations using limestone rock and dredge hole filling in the Julia Tuttle Mitigation Area for seagrass restoration. GBA was hired by GLDD to provide multibeam hydrographic surveys for the before-dredge, after-dredge, and interim construction conditions.

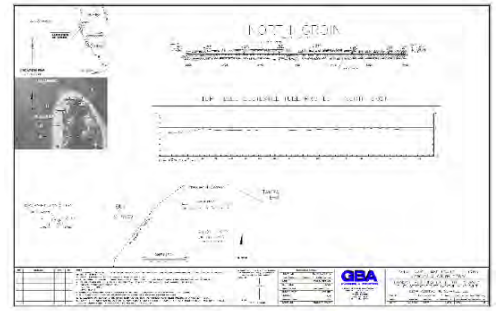
Client:
 GLDD
 2122 York Road
 Oak Brook, IL 60523

Contact:
 Lynn Nietfeld
 (630) 574-3000
 lnietfeld@gldd.com

Tampa Harbor Maintenance Dredging and Egmont Key Beach Nourishment

Hillsborough County, FL

GBA, a subcontractor of GLDD and its subsidiary Terra Contracting, LLC, was hired to perform the before-dredge, after-dredge, and interim construction hydrographic surveys using multibeam data collection technology. All surveys were conducted to USACE surveying standards for payment surveys in hard material. Equipment utilized to perform the surveys included a Reson 7101 multibeam echosounder, POS MV positioning system, and Trimble RTK GPS system. GBA also performed pre-construction topographic surveys and as-built and record surveys for two geotube installations on Egmont Key.



U.S. Naval Station Kings Bay, Maintenance Dredging, Entrance Channel, 46-foot Project

Camden County, GA and Nassau County, FL

This project was designed by the USACE Jacksonville District with initial estimated construction costs of \$5-\$10 million and consisted of maintenance dredging in the Kings Bay Entrance Channel from Station 170+00 to Station 305+00, to a required depth of 49 feet. Beach compatible material was placed in the North Beach Disposal Area located approximately 3.5 miles from the dredging area, and non-beach compatible material was placed in the Fernandina Beach Ocean Dredged Material Disposal Site located approximately 11 nautical miles southeast of the dredging areas. The project also included endangered species monitoring, sea turtle non-capture trawl sweep, turbidity monitoring, beach tilling, and vibration monitoring. The dredging contract was awarded to GLDD, and GBA was hired as the third-party surveyor to perform before-dredge, after-dredge, and interim construction surveys using multibeam data collection technology and USACE surveying standards.



Client: Republic Services, Inc.

Services Provided:

- ✓ Solid waste facility permitting
- ✓ Operations Plan development
- ✓ Closure Plan development
- ✓ Closure cost estimating

Project Objective

Timely and successful renewals of solid waste facility operating permit issued by County-lead agency under delegation from FDEP.

Geosyntec's Scope of Services

Geosyntec served as engineer-of-record responsible for providing technical direction and oversight for three cycles of permitting renewal of the solid waste operating permit for this material recovery facility in Fort Lauderdale. Under Geosyntec's direction, the facility's Operations Plan and layout drawings were reviewed and updated, alongside the associated Closure Plan and closure cost estimate.

Notable Accomplishments

The first two renewal applications were received by Broward County and renewed with no requests for further information; the 2017 renewal application has been submitted to Broward County and is currently pending permit issuance.



Client: Miami-Dade County

Services Provided:

- ✓ Landfill expansion design and permitting
- ✓ Closure design and permitting
- ✓ Landfill gas system services
- ✓ Construction management and construction quality assurance
- ✓ Financial Assurance/Rate Studies/Master Plans
- ✓ Recycling center design and permitting
- ✓ Closed landfill redevelopment

Project Objective

The Miami-Dade County Department of Solid Waste Management (DSWM) owns and operates several solid waste facilities, including the enhanced trash and recycling center in south Miami-Dade. Geosyntec has provided the County with solid waste engineering services since 1991.

Geosyntec’s Scope of Services

Geosyntec provided engineering design and permitting services to the Miami-Dade DSWM for expansion of an existing public use waste transfer station. Geosyntec prepared six different conceptual site plans and assisted the DSWM in evaluating design alternatives and customizing the selected alternative. The expansion was designed to accommodate 16 off-loading vehicles at once and allows customer vehicles to dump solid waste directly into transfer trailers and white goods into roll-off containers. The design also allowed the existing facility to remain operational while the expansion was constructed. Geosyntec coordinated the work of subconsultants who provided architectural, structural, mechanical, and electrical plans and details for two guard/restroom buildings and a site lighting system. Geosyntec finalized the design of the expansion and prepared the following construction drawings:

- demolition plan;
- site and landscaping plan;
- mechanically stabilized earth retaining wall plans profiles and details;
- sewer extension plan and profile;
- water supply plan;
- paving and grading plans and details; and
- drainage plan and details.

Upon building permit approval, Geosyntec was responsible for providing construction inspection services and worked closely with the DSWM Construction Manager.

Notable Accomplishments

The long duration of Geosyntec’s relationship to Miami-Dade County reflects the firm’s extensive history of technical expertise and excellent service. Below are some other projects we’ve assisted the DSWM in Miami-Dade County.



Geosyntec provided design, permitting and CQA services for a 50-acre lateral expansion at the South Dade Landfill.



Geosyntec designed and permitted redevelopment plans to convert the Ojus Landfill into an 83-acre sports park.



Geosyntec provided CQA services for an ash monofill liner system.

Representative Projects

Class I South Dade Landfill

- ✓ Cell 5 Design and Permitting for Lateral Expansion
- ✓ Cell 5 Construction Quality Assurance for Lateral Expansion
- ✓ Cell 4 Construction Quality Assurance for Lateral Expansion
- ✓ Cell 3 Construction Quality Assurance for Closure and Installation of GCCS System
- ✓ Cell 2 Construction Quality Assurance for Closure and Installation of GCCS System
- ✓ Cell 1 Construction Quality Assurance for Closure and Installation of GCCS System

Class II North Dade Landfill

- ✓ Construction Quality Assurance for Lateral Expansion
- ✓

Resource Recovery Facility

- ✓ Cell 19 Design and Permitting for Lateral Expansion
- ✓ Cell 19 Construction Quality Assurance for Lateral Expansion
- ✓ Cell 18 Design and Permitting for Lateral Expansion
- ✓ Cell 18 Construction Quality Assurance for Lateral Expansion
- ✓ Cell 17 Design and Permitting for Lateral Expansion
- ✓ Cell 17 Construction Quality Assurance for Lateral Expansion
- ✓ Design and Permitting for Cell Closure
- ✓ Construction Quality Assurance for Cell Closure
- ✓ Construction Quality Assurance for Stormwater Collection System at the Waste-to-Energy Plant

SW 107th Enhanced Trash and Recycling Center

- ✓ Design and Permitting for Waste Transfer Station Expansion

Ojus Landfill

- ✓ Design and Permitting for Redevelopment of a Closed Landfill



Photo Courtesy of the City of St. Augustine Website

Client: City of St. Augustine

Services Provided:

- ✓ Feasibility study
- ✓ Transfer station designs
- ✓ Cost/Benefit analysis
- ✓ Pro forma analysis

Project Objective

The City of St. Augustine (City), under the Solid Waste Division of the Department of Public Works, is responsible for collecting residential and commercial solid waste generated within the City limits for disposal. The City generates approximately 17,800 tons of solid waste per year from residential and commercial collection routes. The collected waste is transported by the City to one of the two transfer stations owned and operated by the St. Johns County, Florida (County) for disposal. The City currently pays the County a tipping (disposal) fee of \$44.18 per ton of waste delivered to the transfer station. However, the County intends to increase this fee to \$57.00 per ton of waste, which is an approximate 29 percent increase in the current tipping fee. The City is therefore interested in exploring other available solid waste disposal options and retained Geosyntec in 2011 to prepare a white paper on solid waste disposal options available for the City.

Geosyntec's Scope of Services

Geosyntec evaluated solid waste disposal options available for the City to manage the solid waste collected within the City limits. Landfills and transfer stations within a 120-mile radius of the City limits were contacted for their tipping fees and costs for hauling waste from the City to each facility were analyzed. A pro forma analysis was performed to determine the feasibility of constructing and operating a City-owned transfer station. Transfer station considerations including potential sites, permitting requirements, design considerations, capital and operational costs were also evaluated. The analysis also investigated the use of direct haul option to dispose the City's solid waste to a nearby landfill facility. In order for the City to operate its own transfer station it would have to obtain additional sources of solid waste primarily from commercial sources and other municipalities in close proximity to the City. Geosyntec is assisting the City in negotiating for the other sources of waste. Geosyntec also helped the City in starting negotiations with a nearby landfill facility for a lower tipping fee to allow disposal of the City's solid waste. Geosyntec also recommended that the City should initiate the process of zoning and other permits required as soon as possible to expedite all possible road blocks in the permitting process.

Section Four

Approach, Quality Control, Location and Availability

1. COORDINATING AND EXPEDITING PROJECT ELEMENTS...To Meet Schedules without Sacrificing Quality

K&S has served in the Florida Keys for over 20 years, and we have worked diligently to develop a strong understanding of how each City, and Monroe County needs, and wants, projects delivered.

With this knowledge, we can be depended upon to deliver high-quality products and provide exceptional cost-effective services within schedule.

Partnering with our clients: Partnering is a strong component of successful project delivery, and we will work with you to form a strong working relationship with the contractor, thereby taking a proactive approach to achieving project success.

Knowledge of our clients' processes and those elements that drive projects: Our team has a thorough knowledge of the various manuals, standards, and guidelines outlined in the local rules, regulations, and manuals. The elements that drive the City projects and schedules are critical in coordinating multi-discipline projects and meeting delivery goals, including:

- Construction Milestones
- Environmental Compliance
- Experience with Best Practices in Construction – “Lessons Learned” are effectively put into practice to ensure that both typical and unique construction issues are anticipated. Our deep experience enables us to head many issues off before they occur, thus saving potential delays, costs and claims. K&S Task leaders keep “Lessons Learned” folders to reference during the course of the project so as not to have a learning curve twice.

By having a complete understanding of the processes and associated timelines involved in the projects, activities are thoroughly scheduled from the onset, minimizing the potential for surprises. Combined with carefully controlling project activities using proven project management tools, such as Primavera scheduling, earned value analysis, and proactive communication, K&S nimbly coordinates the many moving parts of a project and deliver without compromising quality.

Flexibility and Approach to Making Adjustments to Schedules: Our approach to project management and coordination revolves around early and frequent communication with all project team members, including City staff, subconsultants, project stakeholders, and the construction contractor. We also emphasize attention to detail – making sure that issues and action items do not slip through the cracks. Integrating the entire team, we use the following approach:

- **Conduct weekly meetings with City staff** and the construction contractor to track construction progress, resolve outstanding action items, and to reinforce City objectives and expectations throughout construction. We produce thorough meeting minutes to accurately dictate discussions, to highlight decisions and resulting action items, and to prompt follow-through. Schedule progress, including milestones and deliverables, is discussed at every meeting.
- **Prepare a Construction Schedule** that addresses staffing and assignments, scope of work, and provides continuity with the Construction Contractor’s schedule and other resources. The Construction Schedule allows our team to identify critical, high risk construction activities; identify QCCS reviews; and to ensure appropriate staffing, oversight and attention.
- **Consistently use project tracking tools**, such as Issues Logs, Decision Logs, frequent Progress Reports, schedule updates, earned value graphs, and action plans. These documents are frequently maintained and submitted to all team members and discussed at team meetings.
- **Effective use of communication** mediums tailored to meet the project needs of the City PM and Contractor PM.

Section Four

Approach, Quality Control, Location and Availability

K&S understands that changes happen. If a change or external force beyond the control of our team members occurs and the project schedule is or could potentially be impacted, K&S will execute the following process:

- **Meet** with the City Construction Contractor, and other stakeholders to identify and quantify the schedule impediment.
- **Review** impacts to the construction milestone dates
- **Identify** project schedule areas that may be accelerated or re-sequenced for further discussion with the Construction Contractor.

This practical understanding of project development is a healthy advantage in any development approach. K&S is always looking for strategies to deal with “what if” scenarios so that when they happen they are non-events -The difference between a problem and a non-problem is the timing.

Flexibility and Approach - Staffing to Meet a Schedule

Collectively, the K&S Team brings together our area’s industry leaders in specialty construction engineering services. By having disciplines overlapped with resources from two or more firms, our team offers the City a deep bench and wide breadth of Task Leaders, technical experts, and production staff. We have a team accustomed to working on projects anywhere at any time, and if needed we will bring on additional expertise or staff resources at a moment’s notice. This contract will be managed primarily out of our Miami Office.

2. QUALITY CONTROL...Procedures and Policies

Quality Control is a performance issue. Delivery of quality product is the expectation of all owners hiring consulting firms. At K&S, we understand that process never replaces the actual performance of quality engineering and construction services. However, record-keeping and documentation of Quality Control is paramount for communication of this performance. In-house K&S staff and our subconsultants will provide Quality Assurance Management on our task assignments. These team members’ main function is quality assurance - to manage, track, and report on quality control tasks - which benefits the City by ensuring that the Quality Control Plan is followed, thereby eliminating potential conflicting priorities due to workload or otherwise.

Our Quality Control Plan establishes policies, procedures and protocols that are implemented independently of the Task Leader, as well as the design and construction staff, to ensure that the work is completed accurately; responds to the program requirements; and provides a means to verify and validate environmental compliance, design, and construction activities through final acceptance during construction. Our Plan emphasizes thorough and traceable documentation demonstrating our quality performance.

Quality Control - Design

Each work order will be provided with a tailored QA/QC plan that details requirements for the following:

- **Schedule** - Our schedules highlight the QC process and build design development timelines around those appropriately needed for internal and external reviews. This enables the Quality Manager and all checkers and reviewers to time to clearly understand the timing and duration of reviews.
- **Check and Review Staffing** - Appropriate levels of all checks and reviews are implemented. For each task order, a staffing plan, developed by the Task Leader in consultation with the Quality Manager, is assembled to identify checkers and senior reviewers who will conduct independent reviews of all documents to verify the facts and judgments presented in deliverables; the product’s adherence to guidelines and the Work Plan; and the maintenance of QC records.
- **Plans and Specifications Review Checklists** - We maintain design review checklists for each technical discipline and for each major phase of project development. The Quality Manager ensures that the process is implemented. Review checklists, marked-up check prints, and comment forms are kept on file for easy accessibility.

Section Four

Approach, Quality Control, Location and Availability

- **Cross-Discipline, Environmental Compliance, and Constructability Reviews** are performed prior to submittal of milestone deliverables to ensure compatibility between disciplines, and that designs are constructible and can be permitted. Checklists, certifications, and comment forms are also completed for these reviews as necessary.
- **Reports, Design Calculations, and Comment Review Forms** – All reports and design calculations are reviewed by senior staff. Reviewers initial the marked-up report and complete a comment review form. Comment forms are completed for all reviews and submitted to the designer and Quality Manager, who is responsible for tracking review comments, responses, and facilitating closure of unresolved issues. Design reviewer's back-check all revisions and note that all design comments have been resolved in an agreeable manner.
- **Progress Meetings** – Proactive and regular use of meeting minutes and action and decision logs resolve project issues that left unattended can hamper review processes. Focused Design Review meetings, attended by project staff, are also conducted to discuss resolution of comments.
- **Quality Assurance** – For each project, a team member will be assigned to assure the QC process was met. They will regularly check in with City to make sure our team is providing exactly what you need, meeting all contractual obligations, and exceeding your expectations for quality and responsiveness.

Quality Control - Construction

The role of the Construction Engineering & Inspection (CEI) Task Leader will include daily coordination with the Prime Contractor and specialty subcontractors, overseeing QC testing and inspection activities, maintaining and reviewing QC documentation, and resolving non-conformances. In addition, the CEI Task Leader will provide the City with reports and briefings as to the overall status of the project schedule, quantity and quality of the work. Activities in which our team has developed specific procedures and methods of documentation include:

- Daily Progress Reports
- Material Certifications
- Quantities Review
- Inspection and Testing
- Plans Monitoring and Maintenance
- Quality Assurance
- Contractor/Contract Oversight



Section Five In-house Staff Capabilities

ABILITY TO COMPLETE REQUIRED SERVICES WITH IN-HOUSE STAFF

A full-service roster of local staff located to serve the City. Our in-house staff is located in our corporate headquarters in Fort Lauderdale and our Miami office. What you see is what you get - the staff shown on the Organizational Chart are the people who will deliver the City's projects. Since we provide a full range of services in-house, with many staff in each technical discipline, we can quickly scale up or down to meet the City's needs.

We do it the "Key West" way. Our team members bring decades of experience delivering projects. We will make sure it's done the way the City expects, with no need for "hand-holding" on the City's part. We won't just sign a contract, we will proactively manage to protect the City's interests and provide the most value for the budget.

Safety is part of our corporate DNA. Impeccable safety standards are our practice - based on a corporate directive - to optimize safety on every project, with a goal of "zero incidents." We will apply that approach to every City project.

We are ahead of the curve on technology. We are one of the first firms in South Florida to provide 3D project delivery on construction projects. In addition, our surveying and mapping department is fully equipped to perform HD 3D Laser Scanning for all types of projects including digital terrain models, existing building as-builts, new construction as-builts, historic building documentation, and many others. Laser Scanning is much safer than traditional survey methods, keeping personnel out of traffic, or harm's way on construction sites. Laser scanning is the fastest way to as-built new, existing or historic features, and does not require physical access to the area being scanned. Laser scanning produces a highly accurate, true to scale as-built of everything it can see. These scans can then be turned into 2D and 3D CAD data that is compatible with just about every current cad and design software.

We are committed to delivering the most value for the City's budgets. With limited funds, the City needs a consultant who can deliver exceptional value for the budget. Our culture designed to be innovative, to save money, and optimize value, based in part with our experience on delivering projects, where innovation has bottom-line implications.




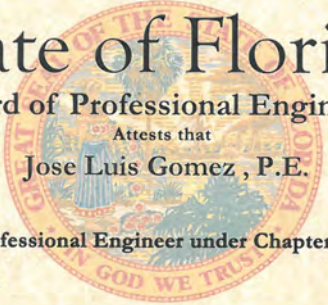
Section Six
Licenses and Certifications

Keith and Schnars Licenses

State of Florida
Board of Professional Engineers

Attests that
Jose Luis Gomez , P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201906173 R


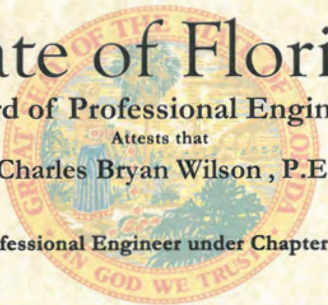


P.E. Lic. No:
35526

State of Florida
Board of Professional Engineers

Attests that
Charles Bryan Wilson , P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201922832 R


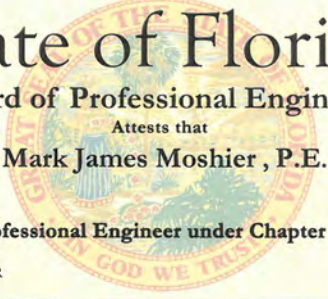


P.E. Lic. No:
43447

State of Florida
Board of Professional Engineers

Attests that
Mark James Moshier , P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201907486 R


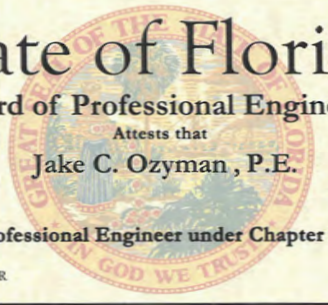


P.E. Lic. No:
32016

State of Florida
Board of Professional Engineers

Attests that
Jake C. Ozyman , P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes
Expiration: 2/28/2019
Audit No: 228201917894 R



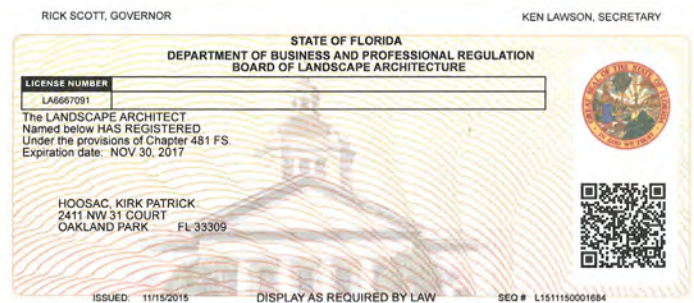
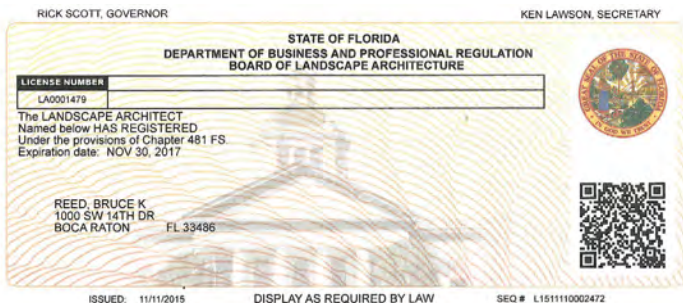
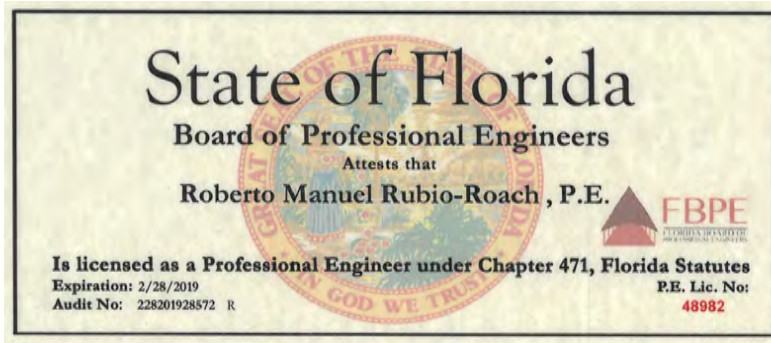
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Section Six

Licenses and Certifications



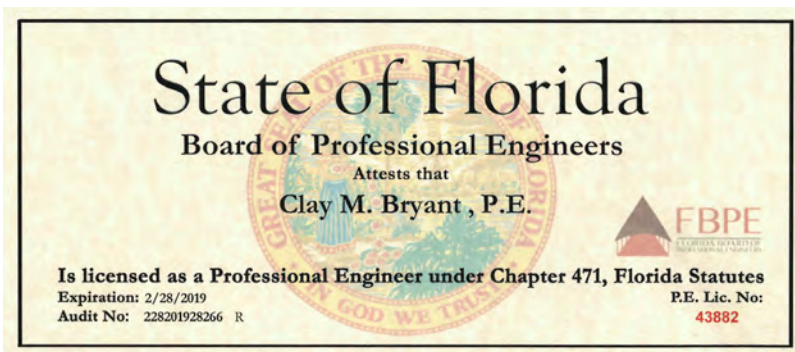
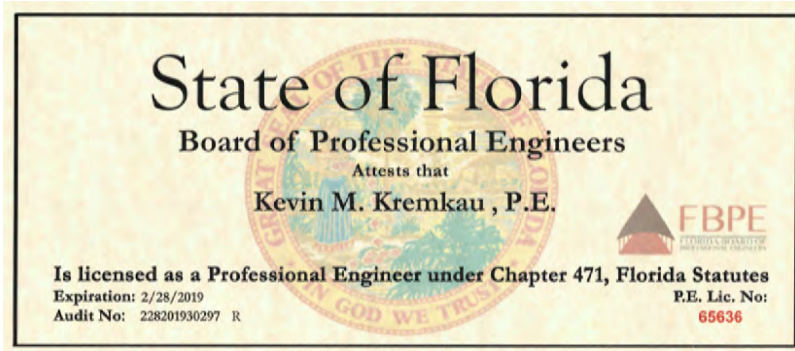
Licensee Details	
Licensee Information	
Name:	JOANNOU, JOANNIS (Primary Name)
Main Address:	4060 NE 15 TERRACE FT LAUDERDALE Florida 333340000
County:	BROWARD
License Mailing:	
LicenseLocation:	
License Information	
License Type:	Professional Engineer
Rank:	Prof Engineer
License Number:	42176
Status:	Current,Active
Licensure Date:	10/02/1989
Expires:	02/28/2019



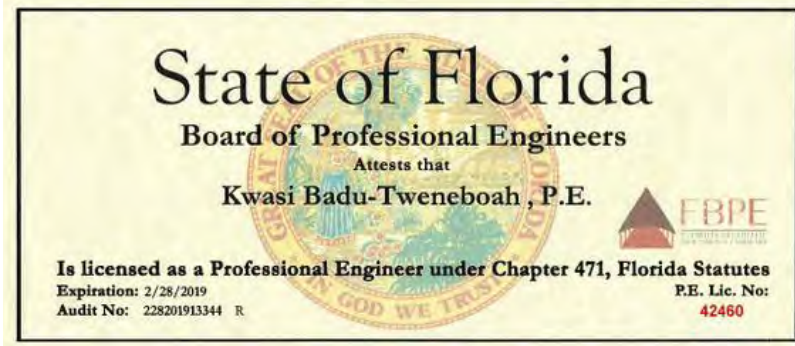
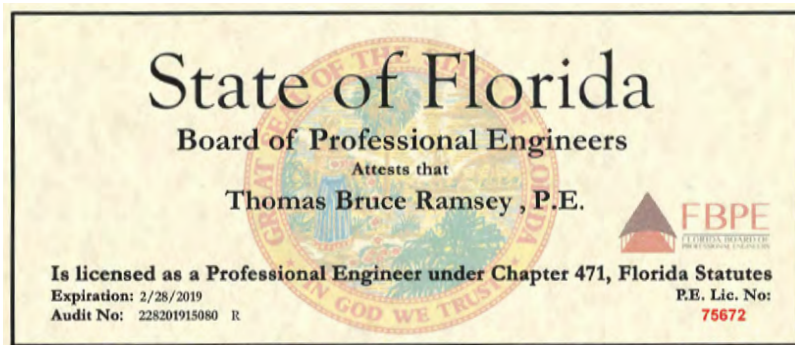
Section Six

Licenses and Certifications

Gahagan & Bryant Associates, Inc. Licenses




GeoSyntec Consultants, Inc. Licenses



ANTI-KICKBACK AFFIDAVIT

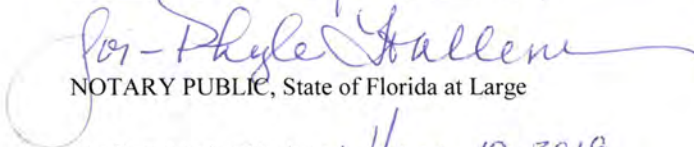
STATE OF FLORIDA)
 : SS
COUNTY OF MONROE)

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: 

Sworn and subscribed before me this

18 day of April, 20 17.


NOTARY PUBLIC, State of Florida at Large



JOE-PHYLE HALLEM
MY COMMISSION # FF 112669
EXPIRES: May 10, 2018
Bonded Thru Budget Notary Services

My Commission Expires: May 10, 2018

**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

2. This sworn statement is submitted by Keith & Schnars
(Name of entity submitting sworn statement)

whose business address is 5835 Blue Lagoon Drive, Suite 303, Miami, FL 33126
and (if applicable) its Federal
Employer Identification Number (FEIN) is 59-1406307 (If the entity has no FEIN,
include the Social Security Number of the individual signing this sworn statement.)

3. My name is Bruce Reed, RLA and my relationship to
(Please print name of individual signing)

the entity named above is Vice President of LA, Environmental, and Planning

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(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of 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 the 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

Section Seven Required Forms

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.)

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)

April, 18, 2017 (Date)

STATE OF Florida

COUNTY OF Broward

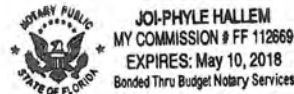
PERSONALLY APPEARED BEFORE ME, the undersigned authority,

 who, after first being sworn by me, affixed his/her signature in the
(Name of individual signing)

space provided above on this 18th day of April, 2017

My commission expires: May 10, 2018
NOTARY PUBLIC





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: Keith & Schnars

SEAL:

5835 Blue Lagoon Drive, Suite 303, Miami, FL 33126
Address



Signature

Bruce Reed, RLA
Print Name

Vice President of LA, Environmental, and Planning
Title

April 18, 2017
Date

City Ordinance Sec. 2-799

Requirements for City Contractors to Provide Equal Benefits for Domestic Partners

- (a) Definitions. For purposes of this section only, the following definitions shall apply:
- (1) **Benefits** means the following plan, program or policy provided or offered by a contractor to its employees as part of the employer's total compensation package: sick leave, bereavement leave, family medical leave, and health benefits.
 - (2) **Bid** shall mean a competitive bid procedure established by the city through the issuance of an invitation to bid, request for proposals, request for qualifications, or request for letters of interest.
 - (3) **Cash equivalent** means the amount of money paid to an employee with a domestic partner in lieu of providing benefits to the employee's domestic partner. The cash equivalent is equal to the employer's direct expense of providing benefits to an employee for his or her spouse.

The cash equivalents of the following benefits apply:

- a. For bereavement leave, cash payment for the number of days that would be allowed as paid time off for the death of a spouse. Cash payment would be in the form of the wages of the domestic partner employee for the number of days allowed.
 - b. For health benefits, the cost to the contractor of the contractor's share of the single monthly premiums that are being paid for the domestic partner employee, to be paid on a regular basis while the domestic partner employee maintains such insurance in force for himself or herself.
 - c. For family medical leave, cash payment for the number of days that would be allowed as time off for an employee to care for a spouse who has a serious health condition. Cash payment would be in the form of the wages of the domestic partner employee for the number of days allowed.
- (4) **Contract** means any written agreement, purchase order, standing order or similar instrument entered into pursuant to the award of a bid whereby the city is committed to expend or does expend funds in return for work, labor, professional services, consulting services, supplies, equipment, materials, construction, construction related services or any combination of the foregoing.
 - (5) **Contractor** means any person or persons, sole proprietorship, partnership, joint venture, corporation, or other form of doing business, that is awarded a bid and enters into a covered contract with the city, and which maintains five (5) or more full-time employees.
 - (6) **Covered contract** means a contract between the city and a contractor awarded subsequent to the date when this section becomes effective valued at over twenty thousand dollars (\$20,000).

- (7) **Domestic partner** shall mean any two adults of the same or different sex, who have registered as domestic partners with a governmental body pursuant to state or local law authorizing such registration, or with an internal registry maintained by the employer of at least one of the domestic partners. A contractor may institute an internal registry to allow for the provision of equal benefits to employees with domestic partner who do not register their partnerships pursuant to a governmental body authorizing such registration, or who are located in a jurisdiction where no such governmental domestic partnership registry exists. A contractor that institutes such registry shall not impose criteria for registration that are more stringent than those required for domestic partnership registration by the City of Key West pursuant to Chapter 38, Article V of the Key West Code of Ordinances.
 - (8) **Equal benefits** mean the equality of benefits between employees with spouses and employees with domestic partners, and/or between spouses of employees and domestic partners of employees.
- (b) Equal benefits requirements.
- (1) Except where otherwise exempt or prohibited by law, a Contractor awarded a covered contract pursuant to a bid process shall provide benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses.
 - (2) All bid requests for covered contracts which are issued on or after the effective date of this section shall include the requirement to provide equal benefits in the procurement specifications in accordance with this section.
 - (3) The city shall not enter into any covered contract unless the contractor certifies that such contractor does not discriminate in the provision of benefits between employees with domestic partners and employees with spouses and/or between the domestic partners and spouses of such employees.
 - (4) Such certification shall be in writing and shall be signed by an authorized officer of the contractor and delivered, along with a description of the contractor's employee benefits plan, to the city's procurement director prior to entering into such covered contract.
 - (5) The city manager or his/her designee shall reject a contractor's certification of compliance if he/she determines that such contractor discriminates in the provision of benefits or if the city manager or designee determines that the certification was created, or is being used for the purpose of evading the requirements of this section.
 - (6) The contractor shall provide the city manager or his/her designee, access to its records for the purpose of audits and/or investigations to ascertain compliance with the provisions of this section, and upon request shall provide evidence that the contractor is in compliance with the provisions of this section upon each new bid, contract renewal, or when the city manager has received a complaint or has reason to believe the contractor may not be in compliance with the provisions of this section. This shall include but not be limited to providing the city manager or

Section Seven Required Forms

- his/her designee with certified copies of all of the contractor's records pertaining to its benefits policies and its employment policies and practices.
- (7) The contractor may not set up or use its contracting entity for the purpose of evading the requirements imposed by this section.
- (c) Mandatory contract provisions pertaining to equal benefits. Unless otherwise exempt, every covered contract shall contain language that obligates the contractor to comply with the applicable provisions of this section. The language shall include provisions for the following:
- (1) During the performance of the covered contract, the contractor certifies and represents that it will comply with this section.
 - (2) The failure of the contractor to comply with this section will be deemed to be a material breach of the covered contract.
 - (3) If the contractor fails to comply with this section, the city may terminate the covered contract and all monies due or to become due under the covered contract may be retained by the city. The city may also pursue any and all other remedies at law or in equity for any breach.
 - (4) If the city manager or his designee determines that a contractor has set up or used its contracting entity for the purpose of evading the requirements of this section, the city may terminate the covered contract.
- (d) Enforcement. If the contractor fails to comply with the provisions of this section:
- (1) The failure to comply may be deemed to be a material breach of the covered contract; or
 - (2) The city may terminate the covered contract; or
 - (3) Monies due or to become due under the covered contract may be retained by the city until compliance is achieved; or
 - (4) The city may also pursue any and all other remedies at law or in equity for any breach;
 - (5) Failure to comply with this section may also subject contractor to the procedures set forth in Division 5 of this article, entitled "Debarment of contractors from city work."
- (e) Exceptions and waivers.

The provisions of this section shall not apply where:

- (1) The contractor does not provide benefits to employees' spouses.
- (2) The contractor is a religious organization, association, society or any non-profit charitable or educational institution or organization operated, supervised or controlled by or in conjunction with a religious organization, association or society.
- (3) The contractor is a governmental entity.


- (4) The sale or lease of city property.
- (5) The provision of this section would violate grant requirement, the laws, rules or regulations of federal or state law (for example, The acquisition services procured pursuant to Chapter 287.055, Florida Statutes known as the "Consultants' Competitive Negotiation Act").
- (6) Provided that the contractor does not discriminate in the provision of benefits, a contractor may also comply with this section by providing an employee with the cash equivalent of such benefits, if the city manager or his/her designee determines that either:
 - a. The contractor has made a reasonable yet unsuccessful effort to provide equal benefits. The contractor shall provide the city manager or his/her designee with sufficient proof of such inability to provide such benefit or benefits which shall include the measures taken to provide such benefits or benefits and the cash equivalent proposed, along with its certificate of compliance, as is required under this section.
- (7) The city commission waives compliance of this section in the best interest of the city, including but not limited to the following circumstances:
 - a. The covered contract is necessary to respond to an emergency. b. Where only one bid response is received.
 - c. Where more than one bid response is received, but the bids demonstrate that none of the bidders can comply with the requirements of this section.
- (f) City's authority to cancel contract. Nothing in this section shall be construed to limit the city's authority to cancel or terminate a contract, deny or withdraw approval to perform a subcontract or provide supplies, issue a non-responsibility finding, issue a non-responsiveness finding, deny a person or entity prequalification, or otherwise deny a person or entity city business.
- (g) Timing of application. This section shall be applicable only to covered contracts awarded pursuant to bids which are after the date when this section becomes effective.

Section Seven Required Forms

CONE OF SILENCE AFFIDAVIT

STATE OF Florida)
: SS
COUNTY OF Broward)

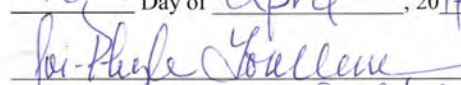
I the undersigned hereby duly sworn depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of Keith & Schnars have read and understand the limitations and procedures regarding communications concerning City of Key West issued competitive solicitations pursuant to City of Key West Ordinance Section 2-773 Cone of Silence (attached).



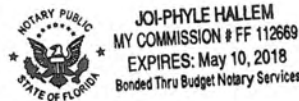
(signature)
April 18, 2017

(date)

Sworn and subscribed before me this

18th Day of April, 2017.


NOTARY PUBLIC, State of FLORIDA at Large



My Commission Expires: May 10, 2018

City Ordinance Sec. 2-773. - Cone of silence.

- (a) *Definitions.* For purposes of this section, reference to one gender shall include the other, use of the plural shall include the singular, and use of the singular shall include the plural. The following definitions apply unless the context in which the word or phrase is used requires a different definition:
- (1) *Competitive solicitation* means a formal process by the City of Key West relating to the acquisition of goods or services, which process is intended to provide an equal and open opportunity to qualified persons and entities to be selected to provide the goods or services. Competitive solicitation shall include request for proposals ("RFP"), request for qualifications ("RFQ"), request for letters of interest ("RFLI"), invitation to bid ("ITB") or any other advertised solicitation.
 - (2) *Cone of silence* means a period of time during which there is a prohibition on communication regarding a particular competitive solicitation.
 - (3) *Evaluation or selection committee* means a group of persons appointed or designated by the city to evaluate, rank, select, or make a recommendation regarding a vendor or the vendor's response to the competitive solicitation. A member of such a committee shall be deemed a city official for the purposes of subsection (c) below.
 - (4) *Vendor* means a person or entity that has entered into or that desires to enter into a contract with the City of Key West or that seeks an award from the city to provide goods, perform a service, render an opinion or advice, or make a recommendation related to a competitive solicitation for compensation or other consideration.
 - (5) *Vendor's representative* means an owner, individual, employee, partner, officer, or member of the board of directors of a vendor, or a consultant, lobbyist, or actual or potential subcontractor or sub-consultant who acts at the behest of a vendor in communicating regarding a competitive solicitation.
- (b) *Prohibited communications.* A cone of silence shall be in effect during the course of a competitive solicitation and prohibit:
- (1) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the city's administrative staff including, but not limited to, the city manager and his or her staff;
 - (2) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the mayor, city commissioners, or their respective staff;
 - (3) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and any member of a city evaluation and/or selection committee therefore; and
 - (4) Any communication regarding a particular competitive solicitation between the mayor, city commissioners, or their respective staff, and a member of a city evaluation and/or selection committee therefore.
- (c) *Permitted communications.* Notwithstanding the foregoing, nothing contained herein shall prohibit:
- (1) Communication between members of the public who are not vendors or a vendor's representative and any city employee, official or member of the city commission;
 - (2) Communications in writing at any time with any city employee, official or member of the city commission, unless specifically prohibited by the applicable competitive solicitation.
 - (A) However, any written communication must be filed with the city clerk. Any city employee, official or member of the city commission receiving or making any written communication must immediately file it with the city clerk.
 - (B) The city clerk shall include all written communication as part of the agenda item when publishing information related to a particular competitive solicitation;

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- (3) Oral communications at duly noticed pre-bid conferences;
 - (4) Oral presentations before publically noticed evaluation and/or selection committees;
 - (5) Contract discussions during any duly noticed public meeting;
 - (6) Public presentations made to the city commission or advisory body thereof during any duly noticed public meeting;
 - (7) Contract negotiations with city staff following the award of a competitive solicitation by the city commission; or
 - (8) Purchases exempt from the competitive process pursuant to section 2-797 of these Code of Ordinances;
- (d) *Procedure.*
- (1) The cone of silence shall be imposed upon each competitive solicitation at the time of public notice of such solicitation as provided by section 2-826 of this Code. Public notice of the cone of silence shall be included in the notice of the competitive solicitation. The city manager shall issue a written notice of the release of each competitive solicitation to the affected departments, with a copy thereof to each commission member, and shall include in any public solicitation for goods and services a statement disclosing the requirements of this ordinance.
 - (2) The cone of silence shall terminate at the time the city commission or other authorized body makes final award or gives final approval of a contract, rejects all bids or responses to the competitive solicitation, or takes other action which ends the competitive solicitation.
 - (3) Any city employee, official or member of the city commission that is approached concerning a competitive solicitation while the cone of silence is in effect shall notify such individual of the prohibitions contained in this section. While the cone of silence is in effect, any city employee, official or member of the city commission who is the recipient of any oral communication by a potential vendor or vendor's representative in violation of this section shall create a written record of the event. The record shall indicate the date of such communication, the persons with whom such communication occurred, and a general summation of the communication.
- (e) *Violations/penalties and procedures.*
- (1) A sworn complaint alleging a violation of this ordinance may be filed with the city attorney's office. In each such instance, an initial investigation shall be performed to determine the existence of a violation. If a violation is found to exist, the penalties and process shall be as provided in section 1-15 of this Code.
 - (2) In addition to the penalties described herein and otherwise provided by law, a violation of this ordinance shall render the competitive solicitation void at the discretion of the city commission.
 - (3) Any person who violates a provision of this section shall be prohibited from serving on a City of Key West advisory board, evaluation and/or selection committee.
 - (4) In addition to any other penalty provided by law, violation of any provision of this ordinance by a City of Key West employee shall subject said employee to disciplinary action up to and including dismissal.
 - (5) If a vendor is determined to have violated the provisions of this section on two more occasions it shall constitute evidence under City Code section 2-834 that the vendor is not properly qualified to carry out the obligations or to complete the work contemplated by any new competitive solicitation. The city's purchasing agent shall also commence any available debarment from city work proceeding that may be available upon a finding of two or more violations by a vendor of this section.

(Ord. No. 13-11, § 1, 6-18-2013)



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.

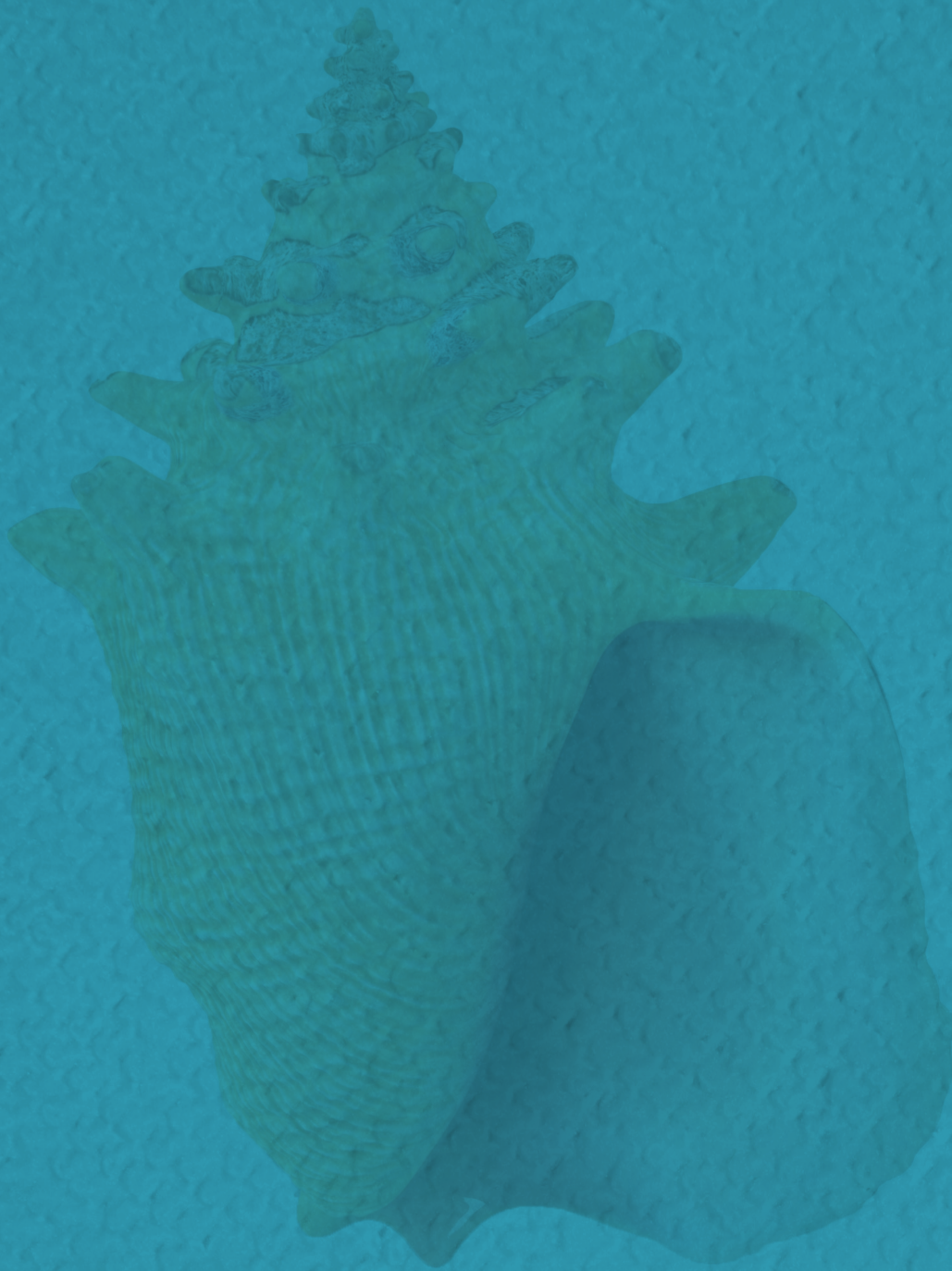
All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1 with Attachment by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

A handwritten signature in blue ink, appearing to read "Keith & Schnars".

Signature

Keith & Schnars

Name of Business



KS KEITH &
SCHNARS
ENGINEERS | PLANNERS | SURVEYORS

5835 Blue Lagoon Drive, Suite 303 | Miami, Florida 33126
Phone: (305) 477-7667 | Fax: (305) 477-4474 | Toll Free: (800) 488-1255 | www.ksfla.com