

Response to Request for Qualifications for Key West Bight Ferry Terminal Revitalization and Shoreline Stabilization/Harborwalk Extension



Prepared for



1300 White Street
Key West, FL 33040

Prepared by



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This proposal and all information contained herein is confidential, commercial information proprietary to Tetra Tech, Inc., and any subcontractors who have provided support for this proposal. The contents of this proposal shall not be disclosed, in whole or in part, for any purposes other than to evaluate this proposal.

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1. Cover Letter



February 20, 2023

Ms. Cheri Smith
City Clerk - City of Key West
1300 White Street
Key West, FL 33040

**RE: Statement of Qualifications – RFQ #23-002
Key West Ferry Terminal Revitalization and Shoreline Stabilization/Harborwalk Extension**

Dear Ms. Smith,

Tetra Tech is pleased to submit this Statement of Qualifications in response to the Request for Qualifications published by the City of Key West (City), for Civil Engineering, Structural Engineering, Environmental Engineering, Landscape Architecture, Environmental Permitting, Bidding Services, and Construction Oversight services on the subject project.

Tetra Tech understands that this RFQ is funded by the American Rescue Plan Act (ARPA) of 2021 from the U.S. Department of Treasury and as administered through the State of Florida Department of Transportation and/or other state agency. If awarded, our team will abide by all provisions of this grant agreement to provide a safe and successful project that realizes the vision of the City of Key West Caroline Street and Bahama Village Community Redevelopment Agency (CRA).

We have assembled a team with intimate familiarity not only with the City of Key West, but also the Key West Bight and the Ferry Terminal in particular. Our team has been responsible for the design, permitting, and construction inspection of the Ferry Terminal Pier Extension, mooring piles, fender piles, and upgrades to the Ferry Terminal's fuel and electrical systems. We have performed condition assessments of the Ferry Terminal structural elements and seawall, the basis for a portion of this RFQ. We have teamed with local subconsultants to provide cost-effective support to the project. These include architect ([William P. Horn](#)) and surveyor ([Florida Keys Land Surveying](#)), the latter of whom was responsible for surveying for the Ferry Terminal Extension and updating the most recent Submerged Lands Lease for the Key West Bight. Our Landscape Architect ([Landwise Design](#)) previously produced a landscape plan for the Ferry Terminal which may be amended as required for the project. The team's security system design firm ([Minuteman Security & Life Safety](#)) has also performed a number of successful projects for the City.

By selecting Tetra Tech for this project, you have our commitment that we will deliver outstanding, cost-effective, and on-time Architectural and Engineering Professional Services in support of the City's goals. We look forward to continuing our strong working relationship with the City of Key West. Should you have any questions, please feel free to contact us.

Respectfully submitted,

A handwritten signature in black ink that reads 'Brian Proctor'.

Brian Proctor, VP Southeast Operations

2. Information Page

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*Registered in Florida, Georgia, and South Carolina

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Company Representative:

Brian Proctor, VP of Southeast Operations

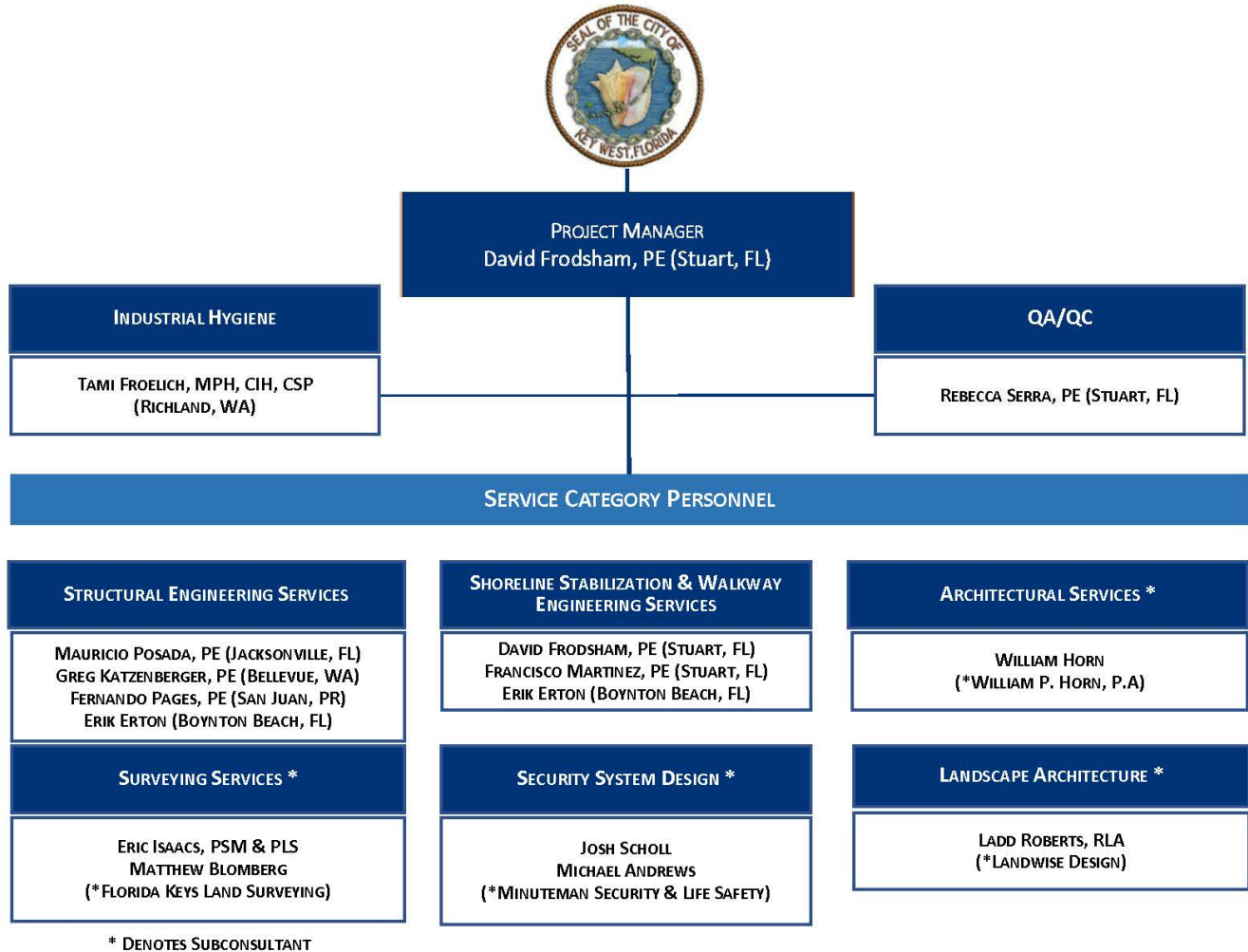
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3. Organization Chart



4. Company Information



Tetra Tech, Inc. (Tetra Tech) is a leading provider of consulting, engineering, and technical services. We are a diverse company, including individuals with expertise in science, engineering, construction, and research. Our strength is in collectively providing integrated services, delivering the best solutions to meet our clients' needs. Formed in 1966, Tetra Tech is respected for our excellent business practices and outstanding reputation in science and engineering. We are consistently ranked by *Engineering News-Record* (ENR) as among the leaders in our field. Tetra Tech's 2022 ENR national rankings include number 1 in Water for the 19th year in a row, as well as a number 1 ranking in Environmental Management.



Tetra Tech is a leading provider of consulting, engineering, program management, construction management, and technical services focusing on resource management, disaster recovery, infrastructure, and the environment. Since its inception, Tetra Tech has solved complex design and construction challenges for clients through innovative approaches to their projects.

For more than 50 years, Tetra Tech has provided turnkey engineering services to federal, state, and local government and commercial industries that contribute to managing and redeveloping lands. These engineering services have been provided to property owners, prospective buyers, investors, lenders, environmental insurers, municipalities, and other government agencies. Tetra Tech performs cost-effective and timely investigation, remediation, regulatory activities, and construction management necessary to achieve the goals of our clients on both small- and large-scale projects impacted from past use. Tetra Tech can work with you and your development plans to determine the best approach for planning, design, permitting, bidding, and managing the construction of a wide variety of projects.

Tetra Tech has provided engineering services to help our clients and the communities they serve improve and protect assets and resources for over half a century. Our engineering staff is versed in appropriate technologies, regulatory matters, and project management to address all forms of infrastructure projects that may occur in Key West. Our in-house scientific divers provide us with a distinct advantage for environmental permitting (including coral resource mapping, underwater infrastructure evaluation, and other project related tasks). Our expertise extends from the coastal zone to the deep ocean, where our researchers and engineers conduct biological field sampling, navigational assessments, geophysical surveys, and modeling analyses to safely manage operations at ports and offshore.

4.1 Past Performance for the City of Key West

For the past seven plus years, Tetra Tech has provided the City of Key West with environmental engineering and coastal engineering services for a multitude of projects within the City limits. The following image on depicts most of those efforts, the majority of the projects have been successfully completed with a few are currently on-going projects.



Tetra Tech staff has developed a solid working rapport with City staff and is committed to seeing the City through to its goals for general engineering initiatives. We understand the value of responsiveness and strive to be as communicative and accessible to the City as possible. Tetra Tech has a proven record of advocating for the City’s interests, obtaining timely jurisdictional authorizations for City projects, and of keeping our deliverables on schedule. We are also pleased to report that a substantial percentage of our projects have been delivered under budget.

5. Methodology and Approach

5.1 Unique Project Considerations and Opportunities

This project presents a variety of unique considerations and opportunities to the CRA for enhancements to the area:

1. Several documents previously prepared by our design team for the City of Key West will be invaluable in the development of the design of the Key West Ferry Terminal Revitalization and Shoreline Stabilization/Harborwalk Extension and should provide a measure of cost savings to the CRA. Our team will need to modify the existing Sovereign Submerged Lands Lease (performed by Tetra Tech and FKLS), amend the existing Landscaping Plan for the Ferry Terminal (developed by Landwise Design), and review all documentation available on the original construction of Key West Ferry Terminal Pier as well as structural assessments performed on it (Tetra Tech).
2. The Ferry Terminal supporting structures design will need to be mindful that repairs must be conducted such that they do not interrupt service to the Ferry Terminal patrons.
3. The project will need to be coordinated with the U.S. Navy for concurrence and acceptability for the portions that exist within their jurisdiction.
4. The existing boat ramp located at the center of Trumbo Road may be replaced or removed as part of this project, at the discretion of the City.
5. The alignment of the boardwalk will have to consider the location of existing mangroves within the project limits.
6. The boardwalk itself may have opportunities for extension over water via fixed or floating dock. It may also be placed above the riprap shoreline stabilization, depending on the City's preference.
7. The extension of the boardwalk along with landscaping and hardscaping enhancements to the area will provide safe pedestrian access to, and likely enhance the value of properties that adjoin the area, owned by the City of Key West, Monroe County, the U.S. Navy, and the Monroe County School Board.
8. Incorporation of this boardwalk may help to attract business and development to the Bight.
9. Parking along Trumbo Road may be enhanced as part of the project.

Our team will be glad to discuss alternatives with the City Staff to realize the vision and fulfill the expectations of the Bight Board.

5.2 Approach to Ferry Terminal Pier and Seawall Structural Repairs

Tetra Tech conducted a structural assessment of the existing Ferry Terminal which revealed the presence of spalling and preliminary degradation of supporting structural elements. This report also recommended repairs to the concrete and steel reinforcement to curtail further degradation. The design team will start developing the design basis for the Ferry Terminal Pier repairs. This consists of calculating the existing loads that are imposed to the terminal, including live loads, mooring loads, berthing loads and environmental loads (wind, wave, and current loads per latest ASCE 7 code and latest recommendations for sea level rise). Tetra Tech will perform an analysis of the structure to determine the required stiffness of the structural elements to sustain the existing load combinations within the allowable factor of safety. The

required stiffness will be compared with the actual existing conditions of the structural elements of the Pier. This will help us determine how much additional reinforcement is needed for the repairs. Reinforcement may consist of a combination of jacketing, supplemental concrete structure, fascia concrete, concrete restoration, and cathodic protection, depending upon the degree of degradation.

Tetra Tech evaluated the existing condition of the seawall within the limits of the Ferry Terminal property and provided recommendations for its repair. The seawall may be repaired by way of fascia pour with fiber-reinforced polymer reinforcement, similar to the repair performed on the Half Shell Raw Bar seawall. For a cost savings alternative, the damaged portions of the wall may also be strengthened via concrete toe-wall footer as in the case of the Boathouse Restaurant, formerly the Turtle Kraals restaurant. A methodology to repair the concrete will be developed. Depending on the size of the deficiency it will be determined if a standard spalling repair is sufficient or an encasing is required.

5.3 Approach to Harborwalk Extension and Shoreline Stabilization along Trumbo Road

Our engineering team has extensive experience on shore stabilization and will design the proper rip-rap system along the Trumbo shoreline. Rip-rap analysis will determine the appropriate relation between stone size and weight. The rip-rap gradation will be determined from a quarry test and an in-place field test. Layer thickness will be specified following recommendations from the U.S. Army Corps of Engineers (USACE) EM 1110-2-1601 engineering manual.

The harborwalk will be designed with Ipe wood as requested in the scope. The Ipe wood decking will help to provide continuity to the visual appearance of the overall Key West Bight Harborwalk. Ipe hardwood is the best selection since it is extremely resistant to fungi, decay, and termites. Pedestrian loads and environmental loads will be determined in order to design the walkway appropriately based on the formulas and parameters established in the American Wood Council manuals. The design will follow the LRFD Manual for Engineering Wood Construction developed by AFPA and the American Wood Council.

The walkway may be developed as a fixed dock placed over the proposed riprap or as a floating dock extending from the existing Trumbo Floating Docks, or a combination of both at the City's discretion. Careful attention will need to be placed on the location of mangroves within the proposed walkway. By extending the walkway over riprap or water, there is also an opportunity to enhance the parking amenities via hardscape along Trumbo Road and incorporate (or demolish) the existing dilapidated boat ramp located at the center of Trumbo Road.

5.4 Approach to Architectural Improvements

The initial method and approach is an important part of each project. William P. Horn Architect, P.A., implements numerous reviews for each phase of each project to assure a quality project. We have developed a reputation of providing complete, accurate and detailed submittals for each phase of a project, such as Historic Board submittals, Variance and Planning Board submittals, and construction documents and specifications. The City staff in the planning and building department have complimented us on our submittals numerous times.

5.4.1 Project Start

An important part of any project is listening to the clients' needs and understanding the full scope of the project. During the initial meetings with the client William Horn, the principal architect on this team, attends the meetings to make sure he understands the full scope of the project and all the needs of the client. He maintains personal communication with the client throughout the entire project to ensure consistency and quality.

Once the program for the project is understood and design work is started, the team uses their vast experience with zoning and building codes and applies the knowledge to the project. It is important at this early stage, to ensure that the project can be realized within the codes and find conflicts early. Preliminary construction costs are developed and discussed to clarify budget limitations. Sustainability goals are discussed and set for the project.

5.4.2 Schematic Design Phase

After the projects program, initial code review and preliminary budget is set, we move into the schematic design of the project. We explore numerous design options to assure that we have found the best quality design for the project. The quality of the design is important to the team. For new buildings or larger renovation projects we have been initiating our design in 3-D (Revit). A 3-D model is created on the computer that allows the design team and the client clearly understand the design, thus eliminating any misunderstanding of the design, this 3-D presentation is also used for submission to HARC and The Planning Board if required.

The design is reviewed by the project architect, the principal architect and the other team members to assure land use, handicap code, FEMA and building code compliance. Sustainability goals are reviewed and integrated into the design. Costs estimates are reviewed. The project then gets submitted to the DRC, Tree Commission, Planning Board, HARC Board, City Commission and the State for review and approvals.

5.4.3 Design Development Phase

Once the schematic design is developed and reviewed and all initial approvals are received from the Tree Commission, DRC, Planning Board, HARC Board, City Commission and State, the team moves into design development. The design is developed by all team members to assure that all systems coordinate properly. The project architect meets with each consultant to review the projects development and resolve any conflicts. The client is made aware of all aspects of the development of the project to assure that there are no surprises or misunderstanding. The principal architect, William P. Horn, reviews the project and then meets again with the client to finalize this part of the project. The construction cost estimate is updated again.

5.4.4 Construction Documents Phase

When the project is developed enough so that all systems of the building and site are coordinated and the client's needs have been met, the team proceeds to develop the construction documents and specifications. The project architect conducts extensive coordination with all of the team members (structural, civil, MEP engineers, etc.) to assure that everyone is working with the latest information and that everything is coordinated. The client has the opportunity to review the drawings at the 50% and 90% level of completion. The principal architect meets weekly with the team and reviews the project for completeness and clarity.

When the construction documents are 100% complete, the client and the team review the project once more to ensure the completeness and quality of the project. A final construction cost estimate is completed.

5.4.5 Bidding Phase

William P. Horn Architect, P. A. and the team assist the client with the bidding process to ensure the contractors clearly understand the project so that they can provide a quality bid. Many contractors have complemented our construction documents and specification as being complete and clear. We work hard to be available and answer any questions from the bidders or provide more clarification on any issue. The bids are reviewed and compared for consistency so that the client has accurate bids.

5.4.6 Construction Phase

During construction the team can provide the client complete construction supervision to make sure the contractor completes the project as per plans and specifications. Inspections during construction are provided only by the teams registered architects or engineers. Since most of our team members are in Key West, we can quickly go out to the site to review the construction.

We have found that in order to maintain the quality of the project through the construction phase the architects, engineers and owner, must review the construction on a consistent basis. This consistent review is one of the most important parts of obtaining a quality project.

5.5 Approach to Landscape Architecture

Landwise Design, Inc. will ensure the landscape design integrates and enhances the overall site design efforts associated with the project and will provide a landscape solution that augments or supersedes previous design efforts associated with the Ferry Terminal parking / site area while integrating landscaping along Trumbo Road. Careful attention shall be given to material selections so they do not interfere with existing / proposed utilities and to allow for safety surveillance of the parking area and shoreline.

5.6 Approach to Security Enhancements

Minuteman Security & Life Safety will work with the City and KWPD to determine their needs for security for the Ferry Terminal upgrades. Minuteman will walk the site and make recommendations to the customer based on our professional knowledge and coordinate with the Landscape plan accordingly. Minuteman will then develop the design of the security system to fit the City's needs.

5.7 Coastal Engineering

Our full-scale coastal engineering services include design and engineering of marinas, piers, seawalls, groins, revetments, shoreline stabilization, bridges, coastal processes modeling, beach design, and beach renourishment. Tetra Tech was originally founded as a coastal engineering firm in 1966 and has retained the value and importance of this specialty engineering service ever since. Our coastal engineering professionals, coupled with our other service disciplines that are necessary for the successful execution of projects constructed in or near the marine environment, have provided exemplary service to numerous local, state, and federal government clients throughout the past 50-plus years. Our skilled staff, from entry

level engineers and scientists to our senior engineers, understand the complexities of working in the coastal setting, and yet adhere to the principles and practice necessary to result in a successful end product. Tetra Tech maintains a roster of professional scientific divers to efficiently service needs, such as coral mapping, relocation, infrastructure assessment, structural engineering design, permitting, and construction management.

Tetra Tech's local engineering and science staff, located in our Miami, Boynton Beach, and Stuart offices, have extensive experience working in Florida's unique marine ecosystems. This staff provides a full range of engineering and environmental design services in support of tasks to be assigned under this contract. Our local staff possesses the necessary task leadership experience described in the RFQ.

We have blended outstanding basic core competencies of engineering, planning, and permitting with some unique and specialized service offerings. Our team brings expertise and services in the following areas:

5.8 Full-Scale Engineering Design

Tetra Tech offers specialized civil, structural, and geotechnical engineering to address navigational and shoreline protection needs. Often the projects involve large-scale construction work, such as creation of breakwaters and sheltered harbors, navigable waterways or floodwalls, and levees. Other times the need may be to resolve large loads and movements associated with berthing of ships or restraining offshore platforms.

Engineering

- Coastal and Marine Engineering
- Shoreline Stabilization Projects
- Waterway and Canal Dredging
- Coastal and Shoreline Protection Design
- Structural Engineering
- Land Development Planning and Permitting
- Geotechnical Engineering
- Parks Planning, Engineering and Permitting
- PE Diving Services
- Terrestrial and Hydrographic Surveys
- Outreach
- Active Public Outreach
- Passive Educational Programs

Permitting

- Florida DEP Permitting (ERP and JCP)
- FFWCC and U.S. Coast Guard Waterway Marker Permitting
- U.S. Army Corps of Engineers Permitting
- FKNMS/NOAA Permitting
- State and Federal Government Liaison
- Local Government Permitting

Biological

- Estuarine Ecology
- Benthic Surveys
- Wetland Delineations
- Mitigation Planning and UMAM Assessments
- Seagrass and Aquatic Habitat Restoration
- Water Quality Sampling and Analysis
- Electronic Data Collection and Instruments

Tetra Tech merges its marine structures design capability with coastal and hydraulic engineering knowledge to design:

- Flood gates and navigation locks
- Piers/bulkheads
- Wharf/quays
- Dolphins and mooring cells
- Fendering and bollards
- Pile anchorage
- Mooring line systems
- Dockside infrastructure
- Rail and bridge structures

From master planning to assistance with obtaining project permitting, Tetra Tech offers a full range of planning and regulatory support to port and industrial clients around the world. Tetra Tech's planners,

scientists, public involvement facilitators, engineers, and operation specialists work together as a team to provide a comprehensive and innovative approach to the master planning process. These professionals bring both international and domestic experience to planning projects. We are experienced in development of greenfields and brownfields sites and expansion of existing port facilities and waterways. Tetra Tech has a thorough understanding of the importance of integrating the requirements of marine facilities, structures, environmental standards, and mitigation requirements with community-driven concerns that are often a part of the planning process. Our expertise in all areas of work required in port, cargo terminal, and waterway development makes us well qualified to assist public and private sector clients with their master planning and related facility development needs such as the following:

- Strategic Port Plans
- Feasibility Studies and Market Analysis
- Port Master Plans
- Site and Facility Plans
- Terminal Development Projects
- Environmental Impact Studies
- Permitting Support
- Security Planning
- Uranium Detection

5.9 Permit Preparation

Tetra Tech will lead the overall effort and coordination in permitting with open and regular communication by the team with the City, Florida Department of Environmental Protection (FDEP), USACE, NOAA/FKNMS and federal/state commenting agencies. Our permitting leads have decades of experience in preparing and processing environmental resource permits. As previous key employees of FDEP, these individuals were responsible for implementing the very programs that the City of Key West will need to navigate to achieve their redevelopment goals. This past experience with the rules and regulations is imperative to be able to navigate those nuanced elements where subject judgment dominates. Tetra Tech's permit leads have successfully utilized their skills and past experiences to receive permits from both the FDEP and the USACE for similar projects. The keys to successfully permit any coastal project is to understand the processes for permit review and approval and rules that guide those processes and to have positive working relationships with agency permit application reviewers. Tetra Tech has the unique privilege of having these with their current in-house staff.

The following permits and consultations are typically required for construction waterward of mean high water, or the restoration of dune systems and replenishment of beach land mass seaward of the current mean high water line (MHWL) or established Erosion Control Line (ECL):

A Joint Coastal Permit (JCP) filed with the FDEP Bureau of Beaches and Coastal Systems (BBCS). This permit allows the placement of sand seaward of the current MHWL as will be required for any beach nourishment activities regardless of sand source or method of delivery. Dune restoration will not require a JCP for the deposition of sand unless dredged from a navigable waterway. Additionally, any source of marine sand material will require to be permitted under the JCP. In the event that dune restoration

material is acquired from an upland source, it is likely that a separate Coastal Construction Control Line (CCCL) permit will be required for those activities. A sample list of permits that may be required is as follows:

- a. An Individual or Nationwide Permit request filed with USACE: The issuance of this federal permit typically follows successful authorization of the JCP. Under the current regulatory process, the USACE recognizes and accepts the JCP application as a unified mechanism for review and approval of an Individual Permit. Coordination with the appropriate USACE regulatory branch, located in Miami, will be essential to timely processing of the proposed project application and initiation of consultation with the various Federal agencies including but not limited to the U.S. Fish and Wildlife Service, National Marine Fisheries Service, and U.S. Environmental Protection Agency.
- b. Coastal Zone Management Act (CZMA) Consistency Determination, U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Section 7 Consultations, and NMFS Essential Fish Habitat Assessments: These consultations will be required in order for commencement of planned land restoration activities that might impact the habitat of any state or federally protected marine or terrestrial species. Based on the team's experience with similar projects, one aspect of the JCP process is a Coastal Zone Management Act consistency determination that will be issued before FDEP authorization for project implementation will be issued. This process is integrated into the review process operating independently of, through the Florida State Clearinghouse, the technical and environmental review and coordination conducted by the FDEP. The team will also coordinate with the appropriate federal resource protection agencies (NMFS – Miami, West Palm Beach, and St. Petersburg, and USFWS – Vero Beach) responsible for listed species protection.
- c. State Historic Preservation Office (SHPO) Consultation: This consultation is required to identify the potential impacts to known or suspected areas of cultural resources of significance. Cultural resource evaluations and SHPO coordination will not likely be required for the beach and dune restoration aspects of the project. However, because of the unique nature of offshore borrow source development, it is expected that the magnetometer and related remote sensing techniques customarily undertaken as part of the SHPO project review and impact assessment process of offshore borrow sources will be undertaken by SDI.

5.10 Bidding Services

Tetra Tech's professionals will coordinate with the City in the preparation of the construction documents, incorporating the final approved plans and specifications, the standard and special conditions of regulatory permits and the City's contract documents. The team will also assist the City by participating in pre-bid meetings and addressing questions on the plans and specifications that may arise during the contractor bid process. The team will review contractor bid packages and provide selection recommendations to the City based on qualifications, cost, and value. The entire process will be designed to acquire the best qualified contractor at the most economical price. Additionally, when choosing from subconsultants to service the City's projects, Tetra Tech seeks multiple quotes to ensure the best value to the City.

5.11 Construction Administration

During the construction phase, Tetra Tech will serve as the engineer-of-record and provide the expertise for specialized construction administration services including:

- **General Administration of Construction Contract:** In general, Tetra Tech shall consult with and advise the City, act as the City's representative, and issue all the City's instructions to the contractor.
- **Visits to Site and Observation of Construction:** Tetra Tech, using qualified personnel, will conduct regular visits to the project site to observe and document the progress of construction and document contractor compliance with the project permit conditions, plans and specifications.
- **Defective Work:** During such visits and on the basis of such observations, Tetra Tech may disapprove of or reject contractor work while it is in progress if we believe that such work will not produce a completed project that conforms to the contract documents or that it will prejudice the integrity of the design concept of the Project as reflected in the contract documents.
- **Engineering Interpretations and Clarifications:** Tetra Tech shall issue necessary interpretations and clarifications of the contract documents and in connection therewith prepare work directive changes and change orders as required.
- **Applications for Payment:** Tetra Tech will review, assess, and make recommendations relative to applications for payment from the contractor.
- **Contractor's Completion Documents:** Tetra Tech shall receive and review reports by the Contractor to fulfill permit conditions and the contract documents.
- **Project Certification:** As the engineer-of-record, Tetra Tech shall prepare and submit the final project certification required by the various regulatory agencies.

5.12 Proposed Management Approach

Tetra Tech's organization for this contract, which is presented in the above sections, is designed to be flexible to allow the integration of project-specific needs. The Project Manager, Dave Frodsham, PE, will have ultimate responsibility for communication with the City, while individual task managers will be responsible for technical content, quality, and adherence to schedules and cost performance for Tetra Tech and its subcontractors. Mr. Frodsham is the single point of contact between Tetra Tech and the City of Key West. He will be supported by technical leads assigned to a specific expertise that will support him as needed.

Technical leads will report directly to Mr. Frodsham and are responsible for the day-to-day management of staff resources in the execution of the deliverables. Mr. Frodsham has specialized experience in managing projects of similar size and scope to those anticipated under this contract. In addition to the personnel noted, Tetra Tech has a resource pool of more than 390 experienced project managers in Florida from which to draw upon.

Tetra Tech's experienced Quality Control (QC) Manager (Becky Serra), Health & Safety Officer (Tami Froelich), and Contract Administrator, will provide QC, Health & Safety, and contracting support, respectively, to project managers and key technical support staff, as required for each project. The QC Manager will ensure that corporate and program quality assurance procedures for laboratory analysis and

design are followed in all assignments. The Health & Safety Officer will provide the technical expertise necessary to ensure that all activities are conducted in a responsible manner with respect to health and safety and all of the requisite infrastructure (management/technical policies and procedures, management information systems, contract administration policies and procedures, health and safety program, and training) necessary to ensure staff proficiency are in place.

Tetra Tech recognizes that this is a unique project requiring a variety of skills and manpower. To support this contract, Tetra Tech brings key staff that have direct or comparable experience committed to helping the City succeed. This group is further supported by an extensive staff of nearly 1,000 employees in Florida, and support staff company-wide. The availability of key personnel will be balanced with the City's requirements and has the capacity to fluctuate (increase or decrease) over time as project load changes. Tetra Tech is committed to providing project managers, discipline leads and other required support staff to meet any assignment and workload requirements.

5.13 QA/QC for Small, Medium and Large Projects

Tetra Tech will integrate quality management vertically throughout the project team by a systematic, multi-tiered process that permeates both the attitude of team members and the management of the processes used to execute the project.

5.14 Coordination with City Staff and Other Governmental and Private Stakeholders

The City operates in an arena of continual evolution with respect to issues and challenges, public policy and regulation, funding constraints and opportunities, and stakeholder interests. This includes constant pressure to achieve its growing mission with fewer resources. Tetra Tech will support the City's objectives by making the following partnering commitments:

- Close and continuous communication with City staff to identify and adjust to priorities.
- On-site, informal technical exchanges to discuss lessons learned, new ideas and technology transfer opportunities.
- Participation in City Council meetings, public meetings and workshops to stay informed regarding the City's priorities and challenges.
- Proactive integration of stakeholder involvement to identify, alleviate and remove potential roadblocks, and to find synergies and win-win opportunities.
- Once direction is received by Tetra Tech, the partnering efforts continue via involvement of our Project Manager, David Frodsham, PE, who will serve to ensure close and informed coordination among all project stakeholders. This will include providing the project team with historical background for the assignment, and leading refinements to meet City's needs.
- During project implementation, Mr. Frodsham will maintain weekly contact on project status with the City for feedback and to ensure overall satisfaction. This partnering approach will continue through closeout of the project to foster continuous improvement.

6. Personnel

While our firm counts 27,000 professional staff worldwide, the key staff members that will be assigned to support the City for this RFQ are described below. Others may be assigned as needs arise.

David Frodsham, PE		<i>Project Manager/Civil Engineering Lead</i>	
Education	MS, Engineering Management, University of Louisville, 2009 • BS, Civil Engineering, Penn State University, 2005		
Registrations/Affiliations	Professional Engineer, Florida (#75507); Georgia (#43580); South Carolina (#35771) • FDEP & NPDES Certified Stormwater Inspector • QC Manager; FDOT • PADI Certified Advanced Nitrox Diver		
Areas of Expertise	Coastal engineering • Municipal engineering • Civil site design • Environmental permitting • Construction management		
Office	Stuart, FL	Years of Experience	16

EXPERIENCE SUMMARY

Mr. Frodsham is a Licensed Professional Engineer at Tetra Tech with more than 16 years of experience in civil engineering, coastal engineering, municipal engineering, civil site design, environmental permitting, and construction management. David has been responsible for coordinating design and permitting efforts on a variety of infrastructure projects within the City of Key West. David has served as Engineer-of-Record for the Key West Bight Seawall, Aquarium Seawall, and portions of the work for the College Rd Affordable Housing project with lesser roles on several other projects in Key West. He has managed projects from preliminary design through construction close-out. In addition to design services, his experience with Construction Engineering and Inspection has allowed him to develop a keen understanding of construction-focused design solutions. David currently fulfills the role of Project Manager and point of contact for Tetra Tech’s current contract with the City of Key West. Tetra Tech has completed over 68 task orders for the City of Key West, including seawall repairs/replacements; phase I/II ESAs, remediation services; waterfront planning, environmental permitting; structural and waterfront assessments, civil, structural and utility engineering design; bid oversight, construction management, project management; Florida Department of Transportation (FDOT) cultural assessments; landfill services; and Submerged Lands Lease permitting, among others

RELEVANT EXPERIENCE

Environmental, Coastal, and Remediation Engineering MSA, Key West, FL. Primary Contact and Overall Project Manager for Tetra Tech’s current Environmental, Coastal, & Remediation Engineering MSA with the City of Key West. Tetra Tech has completed over 68 task orders for the City of Key West, including seawall repairs/replacements; phase I/II ESAs, remediation services; waterfront planning, environmental permitting; structural and waterfront assessments, civil, structural and utility engineering design; bid oversight, construction management, project management; Florida Department of Transportation (FDOT) cultural assessments; landfill services; and Submerged Lands Lease permitting, among others.

Harbour Ridge Yacht & Country Club, Shoreline Stabilization, Palm City, FL. Engineer-of-Record for a 1.9-mile shoreline hardening and nature trail restoration project following Hurricane Irma related damage.

Project was located along the North Fork of the St. Lucie River and included soil retention, slope stabilization, NPDES compliance as well as flood and erosion control to protect the community against future storm-related damages.

City of Key West, Aquarium Basin Seawall, Key West, FL. Engineer-of-Record for seawall replacement to the hurricane Irma damaged portions of the Key West Aquarium basin seawall. Project scope included providing an assessment of hurricane damage, design of a replacement to the marina basin seawall and pilings, securing permits through FDEP, USACE & NOAA/FKNMS. Raised existing seawall cap elevation to address sea level rise. Preparation of plans and specifications, bid support, construction administration and inspection. Coordination with adjacent property lessees and local stakeholders to minimize construction impacts to their facilities.

City of Key West, Schooner Wharf to Conch Republic Seawall, Key West, FL. Engineer-of-Record for assessment of steel sheet piling seawall and proposed rehabilitation/replacement along 1,000-lf of waterfront property. Oversaw field activities to catalog benthic resources for assistance in permitting. Obtained permits through FDEP, USACE & NOAA/FKNMS for full seawall replacement. Produced plans and specifications and provided bid support.

City of Key West, Half Shell Raw Bar Seawall, Key West, FL. Project engineer for concrete fascia pour enhancements to 100+ year old seawall abutting the Key West bight. Administered construction and conducted periodic site inspections for general conformance with engineering plans and specifications. Developed and inspected SWPPP for NPDES permit compliance to protect against erosion within OFWs.

City of Riviera Beach CRA Marine District South Improvements, Riviera Beach, FL. Designed drainage system and seawall modifications for a 40-acre CRA redevelopment in Riviera Beach. Performed drainage calculations and established grading parameters for conformance with drainage design criteria for SFWMD and the City of Riviera Beach. Designed exfiltration trench for water quality treatment. Obtained federal, state, and local permits, as well as LEED credits.

Middle Beach Recreational Corridor, Phase II, Miami Beach, FL. Engineer-of-Record for a 2-mile pedestrian paver walkway located east of the ECL and west of the coastal dune in northern Miami Beach. Pedestrian and bicycle enhancements were incorporated along with landscaping, removal of exotic vegetation, and dune restoration. Project included extensive permitting through FDEP and FDOT, minimization of excavation, and ADA compliance.

North Bay Road Bridge, Sunny Isles Beach, FL. Drainage Engineer-of-Record. Performed design of drainage system and assisted with traffic design for a pedestrian and emergency vehicle bridge in Sunny Isles Beach. Coordinated with structural engineers for alignment and other structural considerations, as well as tie-ins to adjacent project. Obtained permitting approvals through state and local environmental authorities.

Mauricio Posada, PE		Structural Engineering Lead	
Education	MS Civil Engineering (Structural), The University of Texas at Austin (2001) BS Civil Engineering, Universidad de los Andes (1998)		
Registrations/Affiliations	Structural Engineer, Florida (#69521); Licensed Professional Engineer in 11 States and Puerto Rico		
Areas of Expertise	Structural Analysis • Concrete Design • Steel Design • Foundations Design • Waterfront Structures • Ports, Marinas, Bulkheads, Piers		
Office	Jacksonville, FL	Years of Experience	22

EXPERIENCE SUMMARY

Mr. Mauricio Posada is a Senior Structural Engineer with 20 years of experience providing civil, structural, and marine engineering solutions for the industrial, commercial, oil/gas, and maritime industries. Mauricio has worked in analysis, design, rehabilitation, and detailed engineering for many structural projects, including ports, water-front structures, flood control, foundations, piers, dolphins,

bulkheads, and platforms. Mauricio is proficient in the design of steel, aluminum, and concrete structures. Experience also includes seismic engineering and lifting/rigging analysis/solutions.

RELEVANT EXPERIENCE

Fort Myers Yacht Basin and Marina Hurricane Damage Inspections, City of Fort Myers, Fort Myers, FL (11/2022-Ongoing). Engineer of Record and Structural Engineer for the project. Directed the underwater/above water inspection for the Ft. Myers Yacht Basin and nearby facilities. The structures sustained heavy damage due to high winds, waves, and storm surge due to hurricane Ian on September 29, 2022. Supervised diving inspection, determine damages to the marina members, assessed damage, proposed repairs, and prepared cost estimate for the repairs.

Dashields Lock and Dam Slope Stabilization, USACE Pittsburgh District, Pennsylvania (2022). Project Manager. Responsible for the management and coordination of the tasks of all the disciplines in the project: geotechnical, structural; civil and environmental. In charge of receiving and evaluating the government furnished information. Responsible for time entries, schedule, meetings, deliverables management and communications with the USACE.

ADM Breasting Dolphin Replacement, Archer Daniels Midland Co., Puerto Rico (2022). Structural Engineer. Responsible for analysis and design of new breasting dolphin structures in Puerto Rico to replace damaged timber pile clusters. The new dolphins are five-legged structures (steel piles with concrete cap). Mooring and berthing analysis. Fender selection. Analyses for seismic, storm and breasting scenarios.

Red Hook Coastal Resiliency Project (RHCR), New York City Department of Design and Construction, Borough of Brooklyn, NY (2022). Structural Engineer. Responsible for the design of foundation system to support flood barriers: flip-up flood gates (also called “passive or deployable”) and roller gates that will be installed in to aim at reducing flood risks due to coastal storm surge and sea level rise along Red Hook’s waterfront and improving the long-term resiliency of the neighborhood. The foundation analysis includes reinforced concrete slabs and micropiles. Responsible also for the structural design of the wiper walls (reinforced concrete walls) that go on the sides of the flip-up deployable flood gates.

Broward County Water Detention Facility, USACE Jacksonville District, Broward County, FL (2020 – 2022). Deputy Project Manager. Responsible for the coordination of the tasks of all the disciplines in the project (40-men team comprising engineers, scientists, and designers). In charge of receiving and evaluating the government furnished information. Responsible for time entries, schedule, and deliverables management. The project comprises design of different hydraulic structures, a pump station, mitigation and permitting. The impoundment will provide above ground storage for 1,032 acres.

Caribe Tuna Pier Damage Assessment, Municipality of Ponce, Puerto Rico (2019 – 2020). Structural Engineer. Responsible for preliminary analyses to determine the feasibility of a pier replacement with a new structure that attenuates the waves to protect a proposed marina. Responsible for preparation of report that includes the condition of the damaged pier, replacement alternatives (fixed pier, floating structure) and suggestions for a new marina inboard of the new pier including aluminum float docks and concrete float docks. Served as the structural engineering design lead of one of the hydraulic structures (gated box culvert). Responsible for the coordination of the drafting needs between the different disciplines for the different Bentley CADD products.

Floating Breakwater Replacement, USACE Alaska District, Bar Point Harbor, Ketchikan, AK (2020 – 2021). Structural Engineer. Responsible for the evaluation of different floating structure types to replace the existing concrete floating breakwater. Performed engineering calculations to determine the adequate geometry of the floating structure to sustain 5.6 ft. waves with a target wave transmission coefficient of 0.18. Responsible to contact float manufacturers. Analysis of different mooring systems (chains, concrete blocks, flexible anchors). Analysis and design the mooring system (anchor blocks and chains). Responsible for preparation of drawings, specifications, and report.

Greg Katzenberger, PE, SE		Senior Structural Engineer	
Education	MS Civil Engineering, Virginia Polytechnic Institute and State University (1983) BS Building Construction, Summa Cum Laude, Virginia Polytechnic Institute and State University (1982)		
Registrations/Affiliations	Structural Engineer, 4 States; National Society of Professional Engineers; Deep Foundations Institute; American Concrete Institute		
Areas of Expertise	Bulkheads • Cofferdams • Filling/Emptying Systems • Float-in and Submerged Concrete Marine Structures • Lateral Water Saving Basin Designs • Prestressed and Post-tensioned Concrete • Sliding, Roller and Miter Gates • Spillways and Still Basins		
Office	Bellevue, WA	Years of Experience	37

EXPERIENCE SUMMARY

Mr. Katzenberger has professional experience in structural design and project management for various project types, including transportation, navigation, fisheries, dams, heavy civil, governmental, institutional, industrial, and commercial facilities. Responsibilities include working with clients to determine their needs and their constraints, structural design and analysis from the very schematic stages of projects through project completion, development of cost estimates and time schedules, production of contract drawings and specifications, review and approval of shop drawings and submittals, job site inspections and construction administration. Greg has significant construction inspection experience. His professional experience encompasses many project types using a wide variety of construction materials.

RELEVANT EXPERIENCE

Panama Canal Third Set of Locks Design-Build Project, Panama Canal Authority, Cocolí and Gatún, Panama (2009- 2016) Design Engineer/Project Manager for the Tetra Tech Bellevue Design Center. Led the Bellevue design team efforts on the Panama Third Set of Locks Project for the design and construction services for the approach structures, the water saving basins, conduits, trifurcations and valve structures, and the wing walls (inlet and outlet monoliths), and for the valves for both the Atlantic and Pacific Lock Complexes. The high quality of the Bellevue Design Center submittals consistently have been recognized by the other design centers and by the Design Integration Office in Panama as the best practices model for how to do the submittals right. Greg also assisted with refining the design criteria for the Panama Third Set of Locks Project 100-year design life features. In October 2010, we had an excellent Quality Audit from the Panama Canal Authority, where they gave the Tetra Tech office a high score on our quality work and no noncompliances were observed. This international project’s many designs, construction services, and coordination challenges have been successfully met by the Bellevue Design Center under Greg’s project management leadership and structural engineering expertise. Construction was completed in 2016.

Lake Washington Ship Canal Emergency Closure System, USACE Seattle District, Seattle, WA (2019-2020). Senior Structural Review Engineer. Provided Structural ITR Reviews of the final phases of the project. Participated in meetings with the design team to resolve the structural design review comments. The design includes a new steel penstock pipe, concrete intake structure and debris screening system, concrete energy dissipation basin, pipe support foundations and soil anchors, and concrete thrust blocks.

Tacoma Pier 23 Renovation Design, US Army Reserve, Tacoma, WA (2005-2006). Project Manager. Responsible for the construction contract documents and estimate for the Repair of Pier 23 in Tacoma, WA.

The purpose of this construction project was to make repairs to an existing pier to produce a completely operational and useable pier for 10 years, within the FY2005 available authorized MCAR funding limit. This renovation of Pier 23 consisted primarily of repair "in-kind" work on an existing timber pier. Tetra Tech also offered engineering during construction services for the successful construction of the project during 2006 and 2007. In 2007, the client, the Corps of Engineers, provided a very good commendation letter to Tetra Tech, that included: "I want to take a moment and congratulate you and your staff on the outstanding effort associated with the timely design and successful award of the above referenced project.," and "You and your firm, especially Greg, dealt extremely well with the high demands made upon your staff."

P&L Railroad Bridge Relocation, USACE Nashville District, Tennessee River, KY (1998-2001). As Structural Engineer and Review Engineer, Greg was the main specification preparer for the design and plans and specifications of the substructure for a railroad bridge crossing the river at the Kentucky Lock. Each typical bridge pier consisted of four 7-foot diameter drilled shafts installed through shallow overburden soil and socketed into limestone rock. The shafts were connected with a massive shaft cap that is also connected to the pier columns. Challenges included the Karst limestone deposits supporting the shafts had solution voids and thermal stresses developed by the massive shaft caps. During construction, RFIs, submittals, and shop drawings were reviewed.

Bonneville First Powerhouse Juvenile Bypass System Flume Bridge, USACE Portland District, Cascade Locks, OR (1999- 2001). Project Engineer for a portion of the feature design memorandum that fully covered the design of the transportation flume bridge river crossing structure. Tetra Tech completed structural engineering designs, contract drawings, plans and specifications, itemized quantity takeoffs, and estimated construction schedule for the flume bridge sub and superstructure, bridge pier scour protection, quantity calculations, independent technical review, parametric structural analysis study, pier sensitivity study, concrete superstructure alternative study, pedestrian crossing alternative study and public access plans and specifications.

Olmsted Lock Access Bridges, USACE Louisville District, Ohio River, IL (1994-1994) Design Engineer and Review Engineer during construction for two service bridges that span the locks near the control building elevation. The access bridge is a multiple span bridge connecting the shore with the first monolith of the lock at near the control building elevation. All three bridges support AASHTO HS20 loads. Greg was responsible for much of the design of these three prestressed concrete girder bridges, including the seismic restraint systems. He designed the seismic restraint system for the access bridge to accommodate large differential pier displacements 15-inch traverse and 19-inches longitudinal. Several Requests for Information RFIs during construction, and construction submittals on these bridges were also reviewed.

Fernando Pagés, PE, DCE		Coastal & Environmental Engineer	
Education	ME, Ocean/Coastal Engineering, Texas A&M University (1987) BS, Ocean/Coastal Engineering, Texas A&M University (1985) BS, Mathematics/Physics, Beaver College (1984)		
Registrations/Affiliations	Professional Engineer, Florida (#68874); Licensed Professional Engineer in 2 States and Puerto Rico		
Areas of Expertise	Climate Change Vulnerability Assessment and Adaptation • Erosion Control • Coastal Infrastructure Design • Permitting • Implementation & Monitoring • Waterways Suitability Assessments • Port Assets Assessments		
Office	San Juan, PR	Years of Experience	33

EXPERIENCE SUMMARY

Mr. Pagés is a professional coastal, environmental engineer with 33 years of professional experience, of which 30 have been with Tetra Tech, specializing in project management, engineering analysis and design of environmentally sensitive coastal and impacted port areas. He has been involved in the conceptualization and development of ports and waterfront projects, from permitting through construction support and has been responsible for the planning, engineering analysis, feasibility studies, design and preparation of plans and specifications for the assessment and restoration of marinas, wharves, seawalls, breakwaters, dikes, piers, shorelines, lagoons, and estuaries. As part of these projects, he has developed a thorough understanding of the regulatory requirements and design guidelines of the International Building Code, US Army Corps of Engineers under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403), Section 404 of the Clean Water Act (33 U.S.C. 1344) and Section 103 of the Marine Protection Research and Sanctuaries Act of 1972 (33 U.S.C. 1413). Mr. Pagés has also been involved in supporting regional programs for marine spatial planning and developing sea level rise adaptation tools. Mr. Pagés is currently managing several programs for municipalities, federal government and private clients, which involve the assessment, development and implementation of coastal infrastructure affected by sea level rise and coastal flooding. These projects involve multi-disciplinary technical coordination as well as public participation and negotiations with regulatory agencies. Mr. Pagés was Tetra Tech’s Diving Officer for 15 years and is current on environmental 40 CFR 1910.120 certifications for managers.

RELEVANT EXPERIENCE

Caribe Tuna Pier Post Hurricane Damage Assessment and Engineering Support, Municipality of Ponce, Ponce, PR. Project Manager and Principal Engineer. Responsible for conducting third party Damage Descriptions and Dimensions, scopes of work to repair, replace, or reconstruct items identified in the FEMA Damage Descriptions and Dimensions (DDD) (i.e. eligible damages), cost estimates for the scope of work, and potential mitigation measures to reduce risks for future disasters (406 FEMA Mitigation Program).

Pier 15 Post-Hurricane Damage Assessment and Engineering Support, McAllister Towing and Transportation Co., San Juan, PR. Project Manager/Principal Engineer. Responsible for conducting a damage assessment after Hurricanes Irma and Maria along the shoreline and wharf at Port of San Juan. Oversaw the necessary baseline studies. The project includes approximately 100 lineal feet of shoreline

protection revetment and the replacement of 220 linear feet of bulkhead. The design team prepared engineering plans, cost estimates, and quantity take-offs.

Emergency Shoreline Stabilization at Palmas del Mar, Plaza del Mar HOA, Palmas del Mar, Humacao, PR. Principal Engineer and Project Manager. Responsible for developing and implementing an emergency shoreline stabilization solution along 450 feet of eroding shoreline. Two alternative sections were designed taking into consideration local wave climate to mitigate environmental impacts and expedite permitting process in accordance with DNERs Rule 4860. The project was constructed within the prescribed period and completed within the expected budget.

Coastal Engineering Guideline for Puerto Rico, Puerto Rico Department of Natural and Environmental Resources, Puerto Rico. Principal Engineer and Project Manager. Assisted in the development of a coastal engineering guideline document for Puerto Rico. The document describes the general principles of coastal engineering, and how to analyze and design coastal stabilization projects. The guideline will be used by planners, regulators and engineers to systematically address the coastal erosion and shoreline stabilization issues currently experienced in Puerto Rico.

Community Based Climate Change Vulnerability Assessment and Adaptation Plan for Rincon Municipality, PR Department of Natural and Environmental Resources, Rincon, PR. Project Manager. Oversaw a climate change and sea level rise vulnerability assessment and adaptation plan for the coastal community of Rincon, PR. The work involved community involvement, coastal infrastructure assessments, and short-term and long-term plans acceptable to the community and the municipality to adapt to the phenomenon of climate change and sea level rise. Tetra Tech assessed climate change hazards under two time horizons, including drought, sea level risk, coastal and riverine storm surge, and public health risks associated with rising temperatures and coastal erosion.

Marina Sea Lovers Reconstruction, MPC Partners LLC, Fajardo, PR. Principal Engineer and Project Manager. Responsible for the planning, permitting, engineering analysis, design and plans and specifications for the reconstruction of a 98-slip marina with approximately 3,600 lineal feet of berthing capacity. The newly designed marina will be essentially the first marina in PR with floating docks. Conducted a bathymetric survey, a benthic characterization survey, obtained USACE permits, prepared bid documents, supported client in the evaluation of contractors bids.

Erik Erton, PE, DCE		Coastal & Environmental Engineer	
Education	MS Ocean Engineering, Florida Atlantic University (2017) BS Ocean Engineering (Business Administration Minor), Florida Atlantic University (2016)		
Registrations/Affiliations	Society of Naval Architects and Marine Engineers (SNAME) student member 2015-17 National Association of Corrosion Engineers (NACE) student member 2016		
Areas of Expertise	Coastal Structure Design • Floating Dock Planning & Design • Gangway Strength & Design • Seawall & Piling Attachment Methods/Accessories • Cruise Line Efficiency & Monitoring of Fouling, Energy Consumption & Exhaust Gas • AutoCAD Civil 3D		
Office	Boynton Beach, FL	Years of Experience	6

EXPERIENCE SUMMARY

Mr. Erik Erton is a Coastal Engineering Analyst with more than two years of specialized experience in the floating dock industry, and approximately four years of work experience in the marine industry altogether, including time spent in the cruise industry and his own patent submission. His professional background has given him proficiencies in AutoCAD Civil3D, MicroStation, OpenRoads Designer, SolidWorks, MATLAB, Mathcad (various engineering calculations for offshore structures and gangways), and financial reporting. His engineering coursework has provided him with solid background in ocean/coastal engineering including programming in C, using and collecting data with AUVs, and data analysis. Erik has designed and coordinated the construction of docks and gangways for numerous large-scale floating marinas, rowing facilities, and boat ramps.

RELEVANT EXPERIENCE

Fort Myers Yacht Basin and Marina Hurricane Damage Inspections, City of Fort Myers, Fort Myers, FL (11/2022-Ongoing). Lead and supervised damage inspection dive crew and assessed damages sustained by Ft. Myers Yacht Basin and nearby facilities due to Hurricane Ian. Categorized damages and gave professional opinion on status of marina and its assets in order to help quantify the expected cost to repair and potential to safely operate at partial capacity for residents of the marina.

Brickell Bay Design Criteria Package, City of Miami, FL (3/2021-Ongoing) Coastal Engineering and CAD design support. The City of Miami is revitalizing, renewing and enhancing its waterfront along Brickell Bay Drive. The City will be implementing its vision to adapt Brickell Bay Drive and protect it from future storm surge and SLR while encouraging waterfront connectivity, creating open space, and improving the natural environment and local ecosystem. Under contract with the City of Miami, Tetra Tech is developing a 30 percent design solution for the reconstruction of the seawall and roads, including pedestrian, recreational and vehicular waterfront access. Erik has detailed a design criteria guideline report for the existing and expected site conditions and is modeling 1,500-foot-seawall design alternatives in AutoCAD that include considerations for green and grey infrastructure.

Glass City Riverwalk, Metropolitan Park District of the Toledo Area, Toledo, OH (2022-Ongoing). Coastal Engineering and CAD design support. The city of Toledo is revitalizing their riverside area with brand multiple new floating docks, gangways and vessel mooring. Erik is using his expertise and knowledge in floating docks and gangways to assess the condition of the current floating docks used for

the riverwalk and assist in the redesign and CAD drawings of four new seasonal floating dock assemblies including one with marine vessel mooring, shore power and water.

Bar Point Harbor Breakwater, USACE Alaska District, Ketchikan, AK (2020-2021). Coastal Engineering analysis support. Developed the design of wind, wave, storm surge, and tsunami conditions and analysis of loading conditions on the breakwater and its mooring system.

Dinner Key Marina Floating Docks, Gangway, and Floating Boat Ramp, Ebsary, Miami, FL (2019). Manufacturer engineering lead. Designed, created shop drawings and permit drawings for floating dock system, gangway, and novel floating boat ramp, using SolidWorks. All docks delivered and installed in timely manner with innovative boat ramp functioning as intended.

Heavy Duty Floating Docks and Gangways with Full Electric and Water Systems, Marina Bay, Fort Lauderdale, FL (2019). Manufacturer engineering lead. Designed and created shop drawings and permit drawings for floating dock systems, gangways, and corresponding dock amenities for sizeable marina. All docks designed to withstand hurricane force winds with large vessels moored to them. Novel anchor chain attachment methods used. Oversaw manufacturing of dock systems. Project has been completed and all docks have maintained their integrity despite frequent usage and ship traffic.



I

RESUME

Joe Scarpelli, RA



REGISTRATION

State of New York: No. 041198
 State of Florida No. AR101614
 NCARB Certified

EDUCATION

New York Institute of Technology
 Bachelor of Science, Architectural Technology

Revit, AutoCAD, Photoshop, Sketch-Up
 Revit Architecture Intermediate Autodesk training course
 PSMJ Project Management Bootcamp

ASSOCIATIONS

Monroe County Planning Commission - Chairman
 USGBC – South Florida Chapter, Keys Branch.
 AIA

EXPERIENCE

2017– PRESENT

WILLIAM P. HORN ARCHITECT, P.A.

Project Manager
 Key West, Florida
 Residential, Commercial, Hospitality
 and Governmental projects

2015-2017

K2M Design

Key West, Florida 33040
 Designer
 Residential, Commercial,
 Hospitality and Governmental
 projects

2012-2015

D'Asign Source

Architectural Project Manager/
 Construction Project Manager
 Marathon, Florida.
 Design, coordinate and produce 3D
 renderings for Architectural and
 Interior Design projects.

2011-2012

Deck Remodelers

Project Manager
 Sparta, NJ
 Manage, coordinate and budget the
 cost of construction of projects across
 Northern New Jersey

■ **Mosquito Control Facility**
 New Office Building, Maintenance
 Building and Sitework
 Big Coppit Key, FL.
 Client: Mosquito Control Board

■ **Juvenile Justice Building
 Renovations**
 Key West, FL.
 Client: Monroe County

■ **Henderson Building**
 Mixed use building with office use and 6
 workforce housing units.
 Big Pine, Florida
 Client: Ginger Henderson

■ **Garden View Affordable Housing**
 Stock Island, FL.
 New 103 Unit Affordable Housing
 Project
 Client: City of Key West & Housing
 Authority of the City of Key West

■ **Big Pine Academy**
 Classroom and Office Renovations
 Big Pine Key, FL.
 Client: Monroe County School District

■ **Historic Seaport Common Area
 Enhancements**
 Key West, FL.
 Client: City of Key West

■ **St. Bede's Village**
 Key West, FL.
 37 unit affordable housing complex with on
 site parking and landscape design. All units
 will be FGBC Certified.
 Client: Catholic Charities

■ **725 Duval Street**
 New residential units in existing commercial
 building
 Key West, FL.
 Client: Joseph Cohen

■ **Kosloske Residence**
 New 5,000 S.F. Residence
 Key Haven, FL.
 Client: Kosloske Family

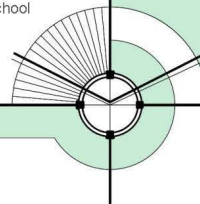
■ **Enchanted Island**
 New 6,000 S.F. Residence
 Raccoon Key, FL.
 Client: Sam Sappala

■ **The Basilica High School Project**
 Renovation of existing auditorium for new
 high school
 Key West, FL.
 Client: St. Mary's Basilica School

WILLIAM P. HORN ARCHITECT, PA.

915 EATON ST., KEY WEST, FL. 33040 TEL. 305-296-8302

WPHORNARCHITECT.COM





Ladd Roberts, RLA
LA6666692
Jacksonville, FL



education

University of North Florida
Bachelors of History, 1991

University of Florida
Masters of Landscape Architecture, 1997

profile

Over 26 years experience delivering

- Recreation Planning
- Landscape Architecture
- Public Facilitation and Consensus Building
- Project Management (Sub-Consultant Coordination)
- Excellent Client-Consultant Coordination
- Alert Attention to Detail

experience

Landwise Design, Inc. [2004-Present]

Landwise Design is currently marketing in Northeast Florida, the Florida Keys, Coastal Florida and the Caribbean. Mr. Roberts's vast design experience, leadership coordinating various design disciplines, attention to detail and overarching understanding of the design and construction process empower him to make Landwise Design, Inc. the right company for your project challenges.

HDR Engineering [2002-2004]

HDR Engineering purchased Landers-Atkins Planners to establish a planning and landscape architecture division within their Jacksonville office. Building upon an already extensive client base, this merger provided a broader scope of work to our planning department; including FDOT, the Better Jacksonville Plan and parks and recreation work throughout multiple counties.

Responsibilities included the project management of six hundred thousand dollars worth [design fees] of annual parks and recreation projects, plus FDOT, commercial and private projects.

Landers-Atkins Planners [1997-2002]

Landers-Atkins Planners was a medium sized land planning and landscape architecture firm in northeast, Florida. Mr. Roberts was hired in 1997 and brought with him a backlog of established clients and projects to the firm. He quickly rose to project manager, facilitating residential, commercial, private and municipal projects.

projects

Project references available upon request.



FLORIDA KEYS LAND SURVEYING

19960 OVERSEAS HIGHWAY, SUGARLOAF KEY, FL 33042

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EMAIL : FKLSemail@gmail.com

www.floridakeyslandsurveying.net

KEY PERSONELL PROFESSIONAL QUALIFICATIONS

ERIC ISAACS, PSM & PLS

24760 Park Drive, Summerland Key, Fl 33042 | H: 305 394-2363 | FKLSemail@gmail.com

Professional Summary

Ambitious, licensed land surveyor who is key on details. I have managed multiple crews of various sizes. I love being outdoors and retracing previous land surveyor's footsteps. I am well versed in all aspects of land surveying including, construction staking, primary control networks, boundary resolution and drafting with Autodesk AutoCAD products.

Skill Highlights

- Project management
- Due diligence
- Client interaction
- Deed research
- Total Stations
- Robotic Total Stations
- GPS/GNSS
- AutoCAD Civil 3D
- Trimble Geomatics Office
- Trimble Access
- Tripod Data Systems- Survey PRO
- Digital level loops
- Multi-crew management

Professional Experience

President Florida Keys Land Surveying, LLC	11/2010 to Present Sugarloaf Key, Florida
<ul style="list-style-type: none">• Responsible in charge Professional Surveyor and Mapper• Control and oversee all survey operations for this company• Manage and oversee all employees	
Survey Manager Charley Toppino and Sons	01/2009 to 11/2011 Key West, Florida
<ul style="list-style-type: none">• Controlled all survey operations for this company.• Reported directly to the owners of the company on all surveying projects	
Party Chief O'lynn Surveying	05/2007 to 01/2009 Key West, Florida
<ul style="list-style-type: none">• Controlled all field operations• Drafted field line work utilizing AutoCad• Calculated and prepared coordinates for field staking• Consulted with clients regarding our services.	
Survey Manager Isaacs Surveying	06/1998 to 05/2007 Sand Springs, Oklahoma
<ul style="list-style-type: none">• Controlled 1-4 man field crews• Produced design survey AutoCAD files• Researched deeds and wrote legal descriptions• Worked in the field with GPS, Robotics, Total Stations, Digital Levels, etc.• Worked on projects from the federal to the private level.• Traveled across the United States providing surveying services.	



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MATTHEW BLOMBERG

2827 Staples Ave • Key West, FL 33040 • 706-363-2448 • mblomberg@windstream.net

SUMMARY: I have an extensive background in all aspects of the land surveying. I Excel in problem solving with innovative solutions. I have a thorough knowledge of boundary surveys, topographic surveys, construction layouts, house stakeouts, subdivision stakeouts ALTA surveys and general construction practices. As a project manager and field chief I have the ability to complete a work order from start to finish. I have experience with Autocad , Land Desktop, and Autocad 2012 Civil 3D. I am not afraid to get my hands dirty & do whatever it takes to get the job done.

Key Skills

- Project Management
- Extensive surveying experience
- Highly skilled with computer programs including MS Office, Autocad, Photo Programs & Email.
- Goal Oriented, Able to Multitask
- Able to properly report on & document the project from start to finish.
- Able to effectively manage
- Able to focus on specific tasks until completion while dealing with day to day interruptions.
- Excellent communication skills
- Boundary Surveying
- Topographic Surveys
- Construction layouts and projects.
- ALTA Surveys

Experience

Florida Keys Land Surveying

2013 to Present

Operations Manager, 2013 to present

- Project management of survey and construction projects, including calculations and drafting.
- Review job requests, project scope of work, construction plans and create proposals and job schedule timelines.
- Conference with key decision people to secure proposals and continually market the company.
- Work directly with the firm President / Professional Surveyor and Mapper to coordinate the day to day operations of the business and ongoing projects.
- Prepare design survey, final survey and asbuilt surveys utilizing AutoCad Civil 3D

Carter Land Surveyors and Planners, Atlanta, Ga,

2012 to 2013

Operations / Production Manager, 2012 to 2013

- Oversight and management of the production operation.
- Worked directly with the licensed surveyor to manage office personnel.
- Oversight and management of project draftsman and 12 field crews in 4 states (Ga, SC, NC & TX)
- In charge of daily distribution of work to both field crews and draftsman.
- Worked with customer service personnel to manage clients, projects and customer satisfaction.
- In charge of hiring, termination and training of field crews, including travel to other office locations.

Future Plannings, LLC, Commerce, Ga

2009 to 2012

Project Manager, 2009 to 2012

- Future Plannings is in the business of rehabbing residential properties for resale, the property conditions range from full rehabs to light touch up and clean up.
- Managed projects establishing schedules and budgets.
- Worked with subcontractors to secure bids and prioritize work required to stay on time and budget.
- Responsible for creating elevation drawings, layout change drawings, and kitchen and bath remodel drawings for subcontractors and permitting as necessary.
- Met and conferenced with the principals involved with the projects to ensure that the work being done was the best use of the budget and that the final product was market ready on time.

- 1 -

Josh Scholl

5910 Benjamin Center Drive
Tampa, FL 33634
(207) 252-0957 jscholl@minutemanst.com

Professional Experience

MINUTEMAN SECURITY TECHNOLOGIES, NATIONAL

Vice President Applications/Engineering

Sep 2020 – Present

- Responsible for high-level software applications throughout the US.
- Supporting customers along with other partners throughout the US.
- Keeping relationships with clients and vendors to ensure projects are delivered on time and on budget.
- Establishing new customers in the region.
- Working alongside sales to ensure projects are bid properly with the correct equipment and time.
- Engineering high level projects throughout the US.

MINUTEMAN SECURITY TECHNOLOGIES, FLORIDA

General Manager

July 2018 – Sep 2020

- Opening new offices in the Florida Region.
- Responsible for high-level software applications throughout the US.
- Establishing new relationships with clients and vendors to ensure projects are delivered on time and on budget.
- Procuring new business for the Florida Region.
- Managing a team of Technicians and Sales staff.
- Responsible for Budgets for the region.

MINUTEMAN SECURITY TECHNOLOGIES, ANDOVER, MA

Senior Application Engineer

Oct 2013 – July 2018

- Responsible for high-level software applications New England Region.
- Vetting new systems.
- Establish relationships with clients and vendors to ensure projects are delivered on time and on budget.

SURVEILLANCE SPECIALTIES (SURV), BOSTON, MA

Project Manager/Sr. Programmer, Nov 2008 – Oct 2013

- Responsible for leading a team of Technicians.
- High Level Programming needs.
- Lead Project Manager for accounts such as EMC, Harvard, UMASS, Tyson Foods, Maine Medical Center, General Dynamics and more.

ADVANCED TECHNOLOGIE INC, PORTLAND, ME

Technician, Sept 1997 – May 2001

Project Manager, May 2001 – Nov 2008

- Installing Access Control and CCTV.
- Responsible for managing new and existing projects.
- Leading a team of Technicians to bring projects in on time and budget.



7. Qualifications/Representative Experience and Client References

Key West Ferry Terminal Extension – Surveys, Coordination with U.S. Navy, Permitting, Pre construction oversight of the pile driving, concrete structural work, mechanical and fuel systems installation and electrical systems installation

Design Service Fee: \$200,000 **Period of Performance:** Professional Services, 2016 • Construction, 2019

Construction: \$1.1M

Project Details

Name of Client:	City of Key West
Client’s Representative:	Karen Olsen
Address:	201 William St. Key West, FL 33040
Phone	305-809-3803
Key Personnel:	Stuart McGahee, PE; Francisco Martinez, PE; Dave Frodsham, PE; Jason Seignoret Michael Sutherland, PE; Jason Burkett, PE

The City of Key West and the Port and Marine Services department worked with the FDEP, the Florida Keys National Marine Sanctuary, the U.S. Navy, the FDOT, and the ACOE to permit and construct an 80 foot by 20 foot concrete dock extension to service the existing two ferry boats inside the historic Key West Bight Seaport. This project involved resource surveys, modifications to the submerged land lease, and coordination with U.S. Navy security issues. The work on this project was all completed from the water side using a barge and crane. Test piles were driven so a driving plan could be established and a total of fifteen concrete piles were installed. Five concrete bents were cast in place and precast deck panels installed. Finally, and deck pour was made and lighting, mechanical and fuel supply systems were installed along with access ramps and railings. In addition, eight new steel mooring piles were designed to support the support the ferry boats and eliminate the need for them to be tied directly to the pier.

- Tetra Tech provided construction oversight of the pile driving, concrete structural work, mechanical and fuel systems installation and electrical systems installation.
- Tetra Tech served as the engineer of record for the electrical systems design as well as the back-up portable generator design systems needed to power the fuel supply to service the ferry boats.
- The new concrete deck included the installation of 15 concrete piles, five concrete bents and precast concrete bridge deck panels and a concrete deck pour.

Key West Half Shell Bar – Upland, Bathymetric and Submerged Resource Surveys, Construction Oversight

Design Service Fee: \$70k **Period of Performance:** Professional Services, 2016 • Construction, 2017

Construction: \$600k

Project Details

Name of Client:	City of Key West
Client’s Representative:	Karen Olsen
Address:	201 William St. Key West, FL 33040
Phone	305-809-3803
Key Personnel:	Stuart McGahee, PE; Francisco Martinez, PE; Dave Frodsham

Tetra Tech worked with the City of Key West to perform upland, bathymetric and submerged resource surveys of the existing seawall adjacent to the Half Shell Bar in the Key West Bight. Tetra Tech provided diving services to relocated corals threatened by the proposed construction.

The construction itself was performed by a contractor from the water and involved the use of fiber reinforced reinforcement (instead of steel) and the forming and pouring of concrete using the tremie method. The installation of the seawall required the contractor to disconnect and reconnect the facilities to the existing boardwalk and marina and install upgraded support pilings to support the restaurant deck and overhang.

- Existing concrete gravity seawall is close to 100-years old and was seriously corroded. Portions of the seawall and toe-line (grouper) holes that extended well inland requiring the contract or pump additional concrete to fill these voids.
- Seawall was over 220 feet long with water depths ranging from five feet to over 12 feet deep. The work required the contractor to commercial divers to drill and set the reinforcing and use temporary piles to support H-beam braced formwork.
- The project also involved structural improvement to the existing restaurant deck and overhang and some of the utilities serving the marina.

Key West Bight Seawall & Piling Replacements – Assessments, Design, Permitting, Bid Support & Construction Administration Services

Design Service Fee: ~\$300,000 **Period of Performance:** Professional Services, 2015-Ongoing • Construction, 2016-Ongoing
Construction: ~\$3M

Project Details

Name of Client:	City of Key West
Client’s Representative:	Karen Olsen
Address:	201 William St. Key West, FL 33040
Phone	305-809-3803
Key Personnel:	David Frodsham, PE; Stuart McGahee, PE; Francisco Martinez, PE; Richard Czlapinski, PE; Pat Zuloaga; Georgia Vince

Tetra Tech has provided a series of assessments, engineering design, permitting and construction administration services for several segments of seawall and each of the mooring piles within the Key West Bight from the Conch Republic Restaurant Seawall to the Half Shell Raw Bar Restaurant, both pre- and post-Hurricane Irma. Tetra Tech has provided a team of marine biologist divers to map and catalog the location of corals for relocation and mitigation. We have assisted in relocating corals, when necessary. Our assessments have provided video evidence of deterioration where present along the infrastructure and helped to make managerial decisions about prioritizing which portions of the Bight required work sooner than others. We have developed engineering design plans and obtained all necessary permits on behalf of the City for work within the Bight. Tetra Tech has also assisted with bid preparation, evaluation of responsive bids, and inspection services to ensure conformance with project requirements.

Fort Myers Yacht Basin Inspection & Repairs – Assessments, Design, Permitting, Bid Support & Construction Administration Services

Design Service Fee: ~\$300,000 **Period of Performance:** Professional Services, 2015-Ongoing • Construction, 2016-Ongoing
Construction: ~\$3M

Project Details

Name of Client: City of Fort Myers – Emergency Manager
 Client’s Representative: Kristy Mathews
 Address: 2033 Jackson Street, Fort Myers, FL 33901
 Phone: 239-222-8870
 Key Personnel: Mauricio Posada, PE; Erik Erton

- Under/above water inspection (post hurricane Ian).
- Assessment of structural elements such as: concrete piles, concrete beams, concrete pile-caps, concrete deck, timber piles, mooring piles, cleats, bollards, and fenders.
- Damage rating.
- Definition of corresponding repairs for the different deficiencies.
- Cost estimation for repairs.

City of Fort Myers Yacht Basin is a Marina located along the South Bank of the Caloosahatchee River. Although the Marina is located somewhat inland from the beaches and Gulf Coast of Florida, the marina sustained heavy damage due to high winds, waves, and storm surge due to hurricane Ian on September 29, 2022.

The structures were inspected above the water and also underwater by a “hard-hat diver” in order to determine the level of damage.

Deficiencies such as: Severe spalling, exposed rebar, section loss, member cracking, hardware damage, deck deflection and corrosion among others were detected and addressed.

Tetra Tech suggested the appropriate repair detail for each one of the deficiencies and developed the cost estimate.

Miami Design Professional for Brickell Bay Drive Improvements – Engineering Design, Surveying, Geotechnical Services, Landscape Architecture, Transportation Analysis, Drainage Analysis, Permitting, and Public Engagement

Design Service Fee: \$2,865,753 **Period of Performance:** Professional Services, 2015-Ongoing • Construction, 2021-Ongoing
Construction: ~\$20M

Project Details

Name of Client: City of Miami
 Client’s Representative: Jose Lago, PE
 Address: 444 SW 2nd Ave., Miami, FL 33130
 Phone: 305-416-1252
 Key Personnel: Diana Santander, PE; Shari Ramirez, PE



Tetra Tech is working with the City of Miami to provide interdisciplinary services. Services include reconstruction of the seawall and roads, development, and coordination of architectural standards for pedestrian, recreational, and vehicular waterfront access and passive contemplative areas, an enhanced bay walk/green space, and bicycle path(s), and/or implementing other innovative urban, architectural, and/or engineering measures to mitigate the effects of natural hazards through green, blue, and gray infrastructure.

The project includes drainage improvements, evaluation of stormwater modeling, roadway reconstruction, milling and resurfacing, sidewalks, Americans with Disabilities Act (ADA) roadway compliant ramps, curb and/or gutters, pavement markings and striping, roadway signage, lighting, utility coordination, traffic engineering, landscaping, irrigation services, related permitting, and preparation of environmental mitigation plans, or any ancillary infrastructure requirements, as applicable.

The urban, engineering, and architectural design alternatives designed for the project will have inherent environmental consequences. Therefore, factors relating to tidal and storm surge, drainage, the ecosystem of Biscayne Bay, transportation, cultural resources, urban design/visual aspects, open space and recreation, and topography are being considered.

The project includes the area of Brickell Bay Drive from Southeast 14th Street to Southeast 15th Road. This project affords us the opportunity to deliver a demonstration project for protection from storm surge and sea level rise (SLR) while also providing waterfront connectivity, public open space, and natural ecosystems for a long-term and resilient public asset. While climate change and SLR are long-term issues, we face the threat of a hurricane every year potentially bringing destructive wind and rain and storm surge. We are prepared to face these challenges immediately as part of this project. Tetra Tech is incorporating a holistic approach with an emphasis on protecting Brickell Bay Drive from storm surge and SLR as well as encourage waterfront connectivity and mobility, enhance open spaces, and improve the ecosystems.

City of Miami Legion Park Flood Mitigation, Baywalk and Floating Dock Design

Design Service Fee: \$2,865,753 **Period of Performance:** Professional Services, 2015-Ongoing • Construction, 2021-Ongoing
Construction: ~\$20M

Project Details

Name of Client:	City of Miami
Client's Representative:	Keith Ng, CFM
Address:	444 SW 2 nd Ave., Miami, FL 33130
Phone	305-416-1298
Key Personnel:	Rob Baron, Mauricio Posada, Diana Santander, PE

Legion Park is a popular destination for kayaking and boating access, pick-up sports games, occasional weddings, and neighborhood residents seeking greenspace and views of Biscayne Bay. The park experiences king tide flooding which threatens the community center building, and the marina / boat dock area was impacted by recent storm events. The City of Miami engaged Tetra Tech to evaluate the park for improved flood mitigation and shoreline protection for approximately 600 feet of shoreline, including updates for the park infrastructure and dockage. Tetra Tech's team surveyed marine and archaeological resources, and existing tree canopy to develop ecologically enhanced park updates while avoiding cultural resources. The schematic design options of a berm or seat wall are designed to meet the Miami 21 plan for the community center. Proposed ADA-

accessible paths blend with the existing playing field and lead to new accessible kayak and floating boat dock locations. A proposed baywalk frames views to Biscayne Bay and supports shoreline stability by directing foot traffic around water’s edge vegetation while protecting existing mangroves and native vegetation. Public input assists the City of Miami in determining a path forward for flood mitigation, baywalk, and floating dock design. Tetra Tech will support the City with construction document development, permitting, and construction support services in 2023.

- Site assessment: topography, bathymetric survey, geotechnical, cultural resources, arborist services
- Public engagement and community meeting facilitation
- Public park design with ADA-accessible kayak launch, floating boat dock, pathways, and baywalk boardwalk
- Schematic design through construction documents
- Permitting, bid, and construction support services

Metroparks Toledo, Ohio - Glass City Riverwalk – Phase 1

Design Service Fee: \$1,040,000 **Period of Performance:** Professional Services, 2015-Ongoing • Construction, 2023-Ongoing
Construction: ~\$200M

Project Details

Name of Client:	City of Miami
Client’s Representative:	Jon Zvanovec, PLA
Address:	6101 Fallen Timbers Lane, Maumee, Ohio 43537
Phone	419-407-9732
Key Personnel:	Andy Langenderfer, PE; Saied Saiedi, PE; Alan Flak, PE; Rob Slovak, PE

Tetra Tech was part of the design team on the first phase of the Glass City Riverwalk (GCR) project. This project is a Construction Manager At Risk (CMAR) delivery method. Kokosing is the selected contractor, and Stanton is the selected Independent Cost Estimator (ICE). The design team was led by Bergmann, with Tetra Tech providing a significant role on the project. This first phase of the riverwalk is \$50M. The full build of the project is expected to be over \$200M – which will be a six mile loop in Downtown Toledo along the Maumee River – connecting the Downtown and central business district to the east side, defined districts, residential communities, marinas, and metroparks along the river. The project was designed from 2021 and into August of 2022. Construction will be from 2023 to 2025. Tetra Tech’s role in this project included the following:

1. Design of new public and private floating docks and kayak launches
2. Design of roadway, paths, sidewalks, drainage, water mains, earth work and shoreline protection for the International Park area
3. Structural design of elevated paths and boardwalks
4. Seawall design and geotechnical engineering analysis
5. Construction engineering support

The project value includes \$1,045,000 (Tetra Tech design) and \$50,000,000 (construction). Tetra Tech key staff included Andy Langenderfer (PE) as the project manager, Saied Saiedi (PhD, PEng) as the coastal/hydraulic

engineering design lead, Alan Flak (PE) as the structural design lead, and Rob Slovak (PE) as the road and civil design lead.

McAllister Shoreline Stabilization Project

Design Service Fee: \$125,878 **Period of Performance:** Professional Services, 2019 • Construction, 2023-
Construction: ~\$1M Ongoing

Project Details

Name of Client:	McAllister Towing & Transportation Company
Client's Representative:	Jaime Santiago
Address:	Puerto Rico Ports Authority, Pier 15 San Juan, PR 00902
Phone	787-406-9424
Key Personnel:	Fernando Pages, PE; Kevin Sanabria, PE

This project encompasses civil engineering project coordination, site inspection, 3D modeling, and permitting of the Shoreline Stabilization Project for McAllister TTC.

Tetra Tech was responsible for the design development in Civil 3D for the proposed revetment. Grading analysis was performed to calculate rock/material volumes and determine the extension of the breakwater. Computer Aided Design (CAD) was used to model oceanographic conditions of the site and determine rock sizes, stable slopes, dimensions, and the best design alternative.

The model was then used to evaluate erosion and scouring of the proposed revetment due to regular and critical conditions. Geotextiles are proposed as part of the revetment and instructions for construction/configuration were provided in the plans.

As part of the project, a long-term bulkhead replacement was designed proposing geotechnical investigations, a structural design using sheet pile wall, and the structural design of a berthing facility.

Tetra Tech performed site visits to meet with the client and assess the site's conditions. Tetra Tech also prepared cost estimates and bidding documents for the PR Ports Authority.



TRANSIENT RESTROOMS / DOCKMASTER OFFICES

Dockmaster Offices Transient Restrooms and Site Revisions

City Marina
 Garrison Bight
 1801 N. Roosevelt Blvd.
 Key West, FL 33040



Project Scope

New 3,300 S.F. One story office & restroom facility.
 Work includes revising main parking lot, new road
 entryway.

Scope of Services:

Complete architectural/Engineering
 (Design, Construction Documents,
 Bidding and Construction
 Supervision).

Client

City of Key West

Contact

Karen Olsen
 Deputy Director of Ports and Marina Services
 201 William St.
 Key West, FL 33040
 (305) 809-3803

Construction Cost: \$ 1,939,649.93

Final Completion Date: July 2019

Contractor: Pedro Falcon Contractors, Inc.

Key Personnel

Principal Architect:
 William P. Horn, R.A.
 Intern Architect:
 Evelia Medina
 Civil Engineer:
 Allen Perez, P.E.
 Structural Engineer:
 Serge Mashtakov, P.E.
 MEP Engineer:
 Sudhir Gupta, P.E.
 Planner:
 Owen Trepanier
 Sustainability Consultant:
 Jennifer Languell, Ph. D

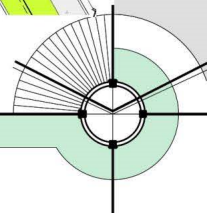


PROPOSED FLOOR PLAN
 SCALE: 1/8" = 1'-0"

WILLIAM P. HORN ARCHITECT, PA.

915 EATON ST., KEY WEST, FL. 33040 TEL. 305-296-8302

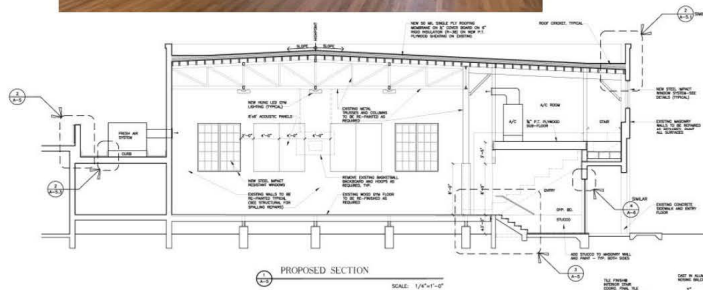
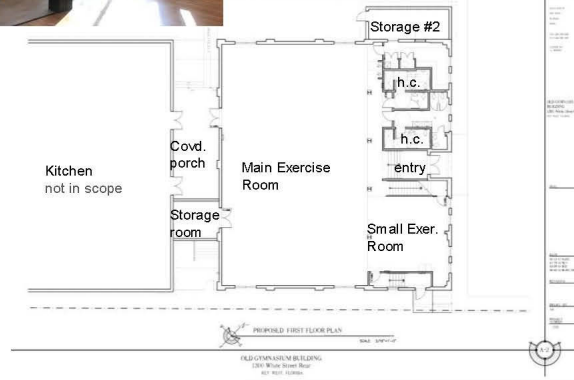
WPHORNARCHITECT.COM





Project Scope:

Exterior and interior renovations to a historic Gym Building behind Key West City Hall. Work includes re-roofing, new windows and doors, concrete spalling repair, new floors, mezzanine, new restroom and showers, new a/c, electric and plumbing.



WILLIAM P. HORN ARCHITECT, PA.

915 EATON ST., KEY WEST, FL. 33040 TEL. 305-296-8302

WPHORNARCHITECT.COM

**Glenn Archer Gym
 Renovations**

1300 White Street
 Key West, FL.

Client:
 The City of Key West

Contact:
 Steven McAlearney
 Port and Marina Services Director
 201 William Street
 Key West, FL 33041
 (305) 809-3792

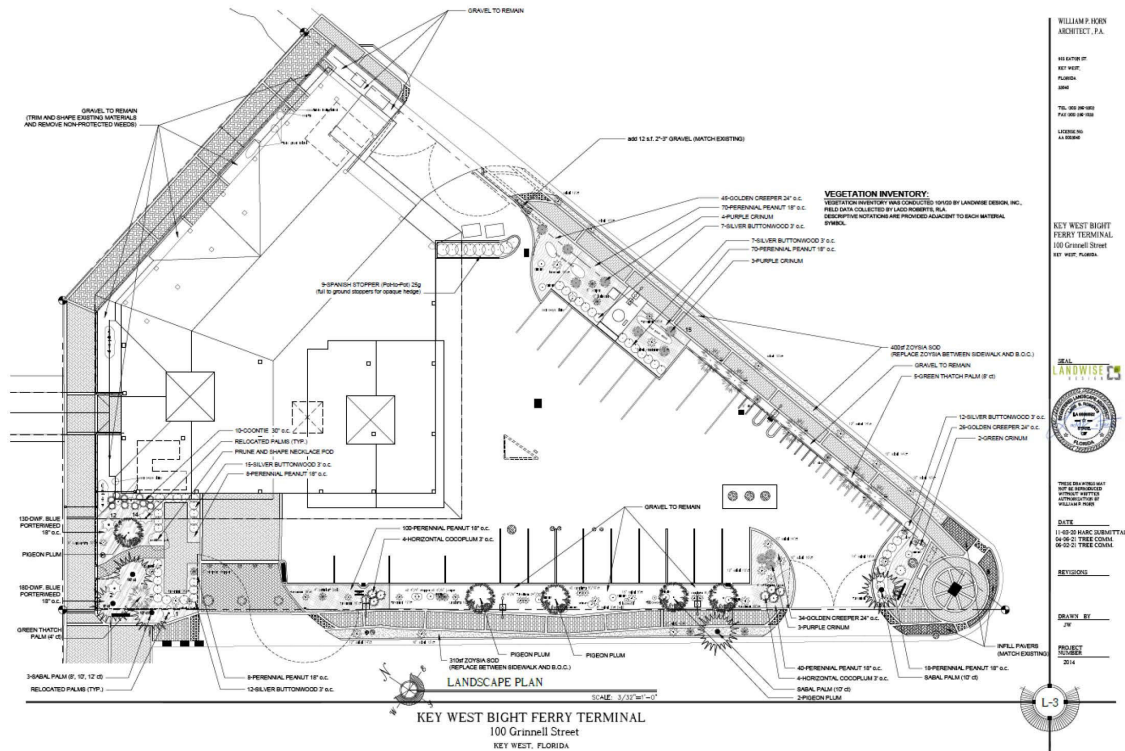
Construction Cost: \$2,067,508.53

Completion Date: July 2019

Contractor:
 Pedro Falcon Contractors, Inc.

Key Personnel

Principal Architect:
 William P. Horn, R.A.
 Intern Architect:
 Joanna Walczak
 Civil Engineer:
 Allen Perez, P.E.
 Structural Engineer:
 Mark Keister
 MEP Engineer:
 Don Austin, P.E.
 Sustainability Consultant:
 Jennifer Languell, Ph. D.



KEY WEST FERRY TERMINAL, KEY WEST, FL

Landwise Design, working through our Continuing Service Contract with the CoKW and with William P. Horn Architects produced a vegetative inventory plan, landscape and irrigation plans for the City of Key West Ferry Terminal.

The project required coordination with the City Arborist to produce bid plans for the renovation of the existing landscape around the terminal and parking area.

The project approach was to keep the landscape design as easy to maintain as

possible, provide easy surveillance of the parking area and while providing an aesthetic in keeping with the fabric of Key West.

Design Cost: \$18,600

Construction Cost: n/a

Design Completed: 2020





HIGGS BEACH PARK, MONROE COUNTY / KEY WEST, FL

William P. Horn Architect, Landwise Design and Mitchell Planning and Design teamed together to conduct public workshops, garner Monroe County and Key West input and produced a Master Plan for the renovation of Higgs Beach Park.

The final deliverable was a Master Plan Summary Report – 2011 outlining the various components of the park, summarizing the (GPR) ground penetrating radar report for unmarked graves near the African Memorial and

civic input from neighborhood groups. Our team has also been instrumental developing a Development Agreement with the City of Key West.

Client: Monroe County

Contact: Kevin Wilson, Director – PW&E
 1100 Siomonton Street
 Key West, FL 33040
 305-797-1547

Design Cost: \$45,000 plus 10K Survey

Construction Estimate (Total) 5.9 million

Completion: 2012





FLORIDA KEYS LAND SURVEYING

21460 OVERSEAS HWY, SUITE 4, CUDJOE KEY, FL 33042

PHONE: (305) 394-3690

EMAIL : FKLSemail@gmail.com

www.floridakeyslandsurveying.net

HIGHLIGHTED PROJECT

PROJECT NAME:

Key West Historic Seaport, Key West, Monroe County, State of Florida

CLIENT:

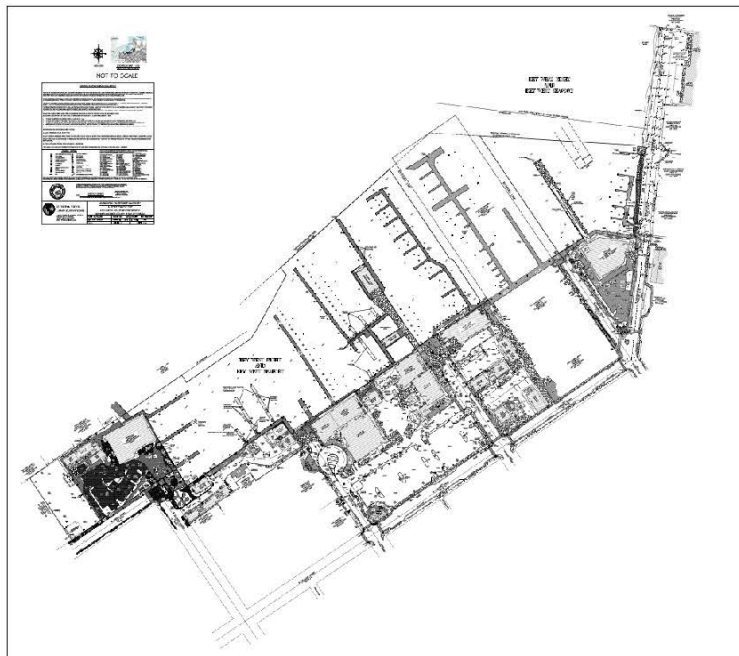
Karen Olson
City of Key West

FKLS ASSIGNED STAFF:

Eric Isaacs, Matthew Blomberg, Don Fletchall & Andrew Hicken

DATE OF COMPLETION:

September 16, 2022



PROJECT DESCRIPTION:

This project was a complete Boundary Survey of all the Key West Seaport, updating and combining previous surveys completed.

Appendix A Sworn Statements, Affidavits and Addenda

ANTI-KICKBACK AFFIDAVIT

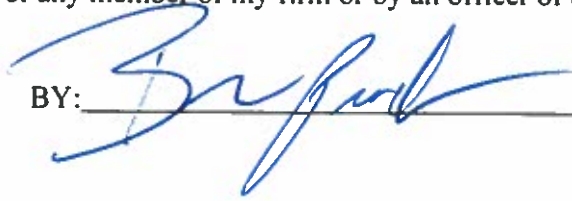
STATE OF FLORIDA

SS:

COUNTY OF ~~MONROE~~ *Martin*

I the undersigned hereby duly sworn, depose and say that no portion of the sum herein response will be paid to any employee 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 prescribed before me this 20th day of February 2023.

NOTARY PUBLIC, State of Florida

My commission expires:



NON-COLLUSION AFFIDAVIT

STATE OF FLORIDA)

: SS

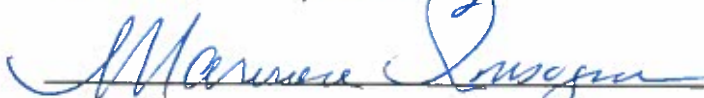
COUNTY OF ~~MONROE~~ *Martin*

I, the undersigned hereby declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

By: 

Sworn and subscribed before me this

20th day of February, 2023.



NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 12/23/26



SWORN STATEMENT PURSUANT TO SECTION 287.133(3)(A)
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES

THIS FORM MUST BE SIGNED AND SWORN TO IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATHS,

1. This sworn statement is submitted for Tetra Tech, Inc.
(print individual's name and title)

by Brian Proctor, Vice President, Southeast Operations
(print name of entity submitting sworn statement)

whose business address is 759 South Federal Highway, Suite 314, Stuart, FL 34994

and (if applicable) its Federal Employer Identification Number (FEIN) is

954148514

(if the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement): _____

2. 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 of 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, or material misrepresentation.
3. I understand that "conviction" as defined in Paragraph 287.133(1)(g), 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 or information after July 01, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.
4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:
- a. A predecessor or successor of a person convicted of a public entity crime: or
 - b. 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 agent who are active in the management of an

affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment of 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.

5. I understand that a "person" as defined in Paragraph 287.133(1)(e), Florida Statute means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.

6. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement (indicate which statement applies).

_____ Neither the entity submitting this sworn statement, or any of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 01, 1989.

_____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members, or agents who are active in the management of the entity or an affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 01, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the entity submitting this sworn statement on the convicted vendor list (attach a copy of the final order.

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE (1) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM

REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR THE CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

Brian Proctor

(SIGNATURE)

2/20/2023

(DATE)

STATE OF Florida

COUNTY OF Martin

PERSONALLY APPEARED BEFORE ME, the undersigned authority
Brian Proctor who, after first being sworn by me,
(name of individual)
affixed his/her signature in the space provided above on this
20th day of February 2023.

Marirose Inogna NOTARY PUBLIC

My commission expires:



CITY OF KEY WEST INDEMNIFICATION FORM

PROPOSER agrees to protect, defend, indemnify, save and hold harmless The City of Key West, all its Departments, Agencies, Boards, Commissions, officers, City's Consultant, agents, servants and employees, including volunteers, from and against any and all claims, debts, demands, expense and liability arising out of injury or death to any person or the damage, loss of destruction of any property which may occur or in any way grow out of any act or omission of the PROPOSER, its agents, servants, and employees, or any and all costs, expense and/or attorney fees incurred by the City as a result of any claim, demands, and/or causes of action except for those claims, demands, and/or causes of action arising out of the negligence of The City of Key West, all its Departments, Agencies, Boards, Commissions, officers, agents, servants and employees. The PROPOSER agrees to investigate, handle, respond to, provide defense for and defend any such claims, demand, or suit at its sole expense and agrees to bear all other costs and expenses related thereto, even if it (claims, etc.) is groundless, false or fraudulent. The City of Key West does not waive any of its sovereign immunity rights, including but not limited to, those expressed in Section 768.28, Florida Statutes.

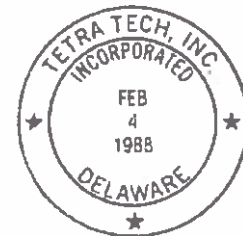
These indemnifications shall survive the term of this agreement. In the event that any action or proceeding is brought against the City of Key West by reason of such claim or demand, PROPOSER shall, upon written notice from the City of Key West, resist and defend such action or proceeding by counsel satisfactory to the City of Key West.

The indemnification provided above shall obligate PROPOSER to defend at its own expense to and through appellate, supplemental or bankruptcy proceeding, or to provide for such defense, at the City of Key West's option, any and all claims of liability and all suits and actions of every name and description covered above which may be brought against the City of Key West whether performed by PROPOSER, or persons employed or utilized by PROPOSER.

The PROPOSER's obligation under this provision shall not be limited in any way by the agreed upon Contract Price as shown in this agreement, or the PROPOSER's limit of or lack of sufficient insurance protection.

COMPANY SEAL

PROPOSER: Tetra Tech, Inc.



759 South Federal Highway, Suite 314, Stuart, FL 34994

Address

Signature

A handwritten signature in blue ink, appearing to read "Brian Proctor", written over a horizontal line.

Brian Proctor

Print Name

2/20/2023

Date

Title

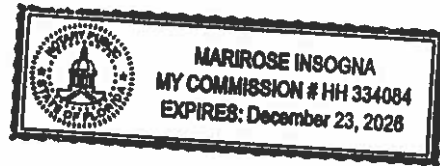
VP SE Operations

NOTARY FOR THE PROPOSER

STATE OF Florida
COUNTY OF Martin

The foregoing instrument was acknowledged before me this 20th day of February 2023. By Brian Procter, of Tetra Tech Inc (Name of officer or agent, title of officer or agent) Name of corporation acknowledging) or has produced _____ as identification.

Marirose Inogna
Signature of Notary



Return Completed form with _____ Print, Type or Stamp Name of Notary

Supporting documents to: City of Key West Purchasing

Title or Rank

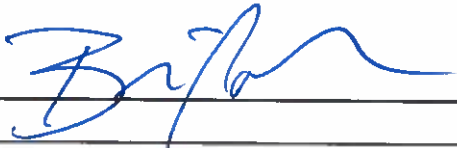
Brian Procter
VP, SE Ops Mgr

**VENDOR CERTIFICATION REGARDING
SCRUTINIZED COMPANIES LISTS**

Respondent Vendor Name: <u>Tetra Tech, Inc.</u>		
Vendor FEIN: <u>954148514</u>		
Vendor's Authorized Representative Name and Title: <u>Brian Proctor, Vice President, SE Operations</u>		
Address: <u>759 South Federal Highway, Suite 314</u>		
City: <u>Stuart</u>	State: <u>Florida</u>	Zip: <u>34994</u>
Phone Number: <u>772-781-3400</u>		
Email Address: <u>brian.proctor@tetrattech.com</u>		

Section 287.135(2)(a), Florida Statutes, prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services of any amount if, at the time of contracting or renewal, the company is on the Scrutinized Companies that Boycott Israel List, created pursuant to section 215.4725, Florida Statutes, or is engaged in a boycott of Israel. Section 287.135(2)(b), Florida Statutes, further prohibits a company from bidding on, submitting a proposal for, or entering into or renewing a contract for goods or services over one million dollars (\$1,000,000) if, at the time of contracting or renewal, the company is on either the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, both created pursuant to section 215.473, Florida Statutes, or the company is engaged in business operations in Cuba or Syria.

As the person authorized to sign on behalf of Respondent, I hereby certify that the company identified above in the section entitled "Respondent Vendor Name" is not listed on either the Scrutinized Companies that Boycott Israel List, Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List I understand that pursuant to section 287.135, Florida Statutes, the submission of a false certification may subject such company to civil penalties, attorney's fees, and/or costs and termination of the contract at the option of the awarding governmental entity.

Certified By: <u>Brian Proctor, Vice President, Southeast Operations</u>	
<i>Print Name</i>	<i>Print Title</i>
Authorized Signature: 	



PORT & MARINE SERVICES
201 William Street
Key West, FL
33040

ADDENDUM NO. 1

**KEY WEST BIGHT FERRY TERMINAL REVITALIZATION AND
SHORELINE STABILIZATION/ HARBORWALK EXTENSION**
funded by
AMERICAN RESCUE PLAN ACT (ARPA) of 2021
RPQ #23-002

The information contained in this Addendum adds information to be included in the RFQ and is hereby made a part of the document. The referenced RFQ package is hereby addended in accordance with the following items:

SCOPE OF WORK AND SERVICES:

Overall Nature of Services

ADD: replacement of existing elevator and its components.

All other elements of the RFQ documents, including the submission dates shall remain unchanged.

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


Signature

Tetra Tech
Name of Business



TETRA TECH

759 SW Federal Highway, Suite 314
Stuart, FL 34994

Tetra Tech is Leading with Science® to provide innovative, sustainable solutions that help our clients address their water, environment, infrastructure, resource management, energy, and international development challenges. We are proud to be home to leading technical experts in every sector and to use that expertise throughout the project life cycle. Our commitment to safety is ingrained in our culture and at the forefront of every project. We combine the resources of a global, multibillion-dollar company with local, client-focused delivery. [ttratech.com](https://www.ttratech.com)