TETRA TECH

December 6, 2022

Cheri, Smith, MMC, CPM
City of Key West
1300 White Street
Key West, Florida 33040

Reference: City of Key West, Request for Qualifications No. 22-006 for General Engineering Services

Dear Members of the Selection Committee,

We understand many of the unique challenges that face the City of Key West now and in the years to come. Among these are the need to bolster workforce housing, to sustainably address the effects of climate change and sea level rise, and to continue to provide a high level of service not only to the Conch residents who call Key West home, but also the droves of tourists who flock to Key West for its indelible reputation as a historically iconic destination.

For the past six years, we have been proud to provide the City of Key West with our dedicated team of qualified and experienced professionals offering exceptional project management, technical expertise and a unique understanding of the City's needs on each of your projects. Our efforts have delivered tangible results in all phases of the project cycle: from initial planning with assessments and evaluations of alternatives to procurement of regulatory permits, bid support, construction administration and project close-out. Each of these projects has culminated with the delivery of safe, successful, and properly managed construction projects. With each project, Tetra Tech has maintained a keen focus on delivering our work products on schedule and at or under budget.

Tetra Tech has developed a productive working relationship with both the City's Engineering Department and Port & Marine Services Department. We have supported the Engineering and Utility Departments with a number of projects as well. These projects have allowed us to interact with and address the needs of many of your staff throughout the Building & Planning Departments. We see ourselves as an extension of your staff, as part of the same *One Human Family*. We look forward to further fostering these relationships to understand even better the City's operations, processes, and procedures to develop customized solutions.

Within Florida, Tetra Tech has a staff of over 1,000 professionals located in over 25 offices. Over 50 towns, cities, and counties throughout the state of Florida have entrusted Tetra Tech with similar contracts for on-call services. Tetra Tech continues to serve these municipalities with multiple contract renewals because we produce results year after year. Tetra Tech's team is eager to work immediately with the City and deliver successful projects. Mr. David Frodsham, PE, located in our Stuart, Florida office, will continue to serve as the Client Contact and Program Manager. Mr. Frodsham has a diverse pool of resources to draw upon from senior level experts to up-and-coming graduate engineers providing the right balance for budgets and technical demands.

We are able to meet the City's requirements for licensure and insurance and will provide an updated documents if awarded. We appreciate the opportunity to submit this statement of qualifications for the City's consideration to select Tetra Tech as one of your professional engineering consultants. Our entire team is committed to serving as an extension of the City's staff, and we look forward to continuing to bring our years of experience, local knowledge, and dedication to quality service to the City of Key West.

Sincerely,
Tetra Tech, Inc.

Brian Proctor
Vice President, SE Operations

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STATEMENT OF QUALIFICATIONS

General Engineering Services

Request for Qualifications No. 22-006

Prepared for

City of Key West

Submitted by

TETRA TECH

759 South Federal Highway, Suite 314,
Stuart, FL 34994
(772) 781-3400

This proposal represents Tetra Tech, Inc.'s integrated approach to its business as applied to the specifications of this proposal. This proposal and all information contained herein is confidential, commercial information proprietary to Tetra Tech, Inc. The contents of this proposal shall not be disclosed, in whole or in part, for any purposes other than to evaluate this information.

December 6, 2022

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Exhibit A - Sworn Statements and Affidavits

Information Page

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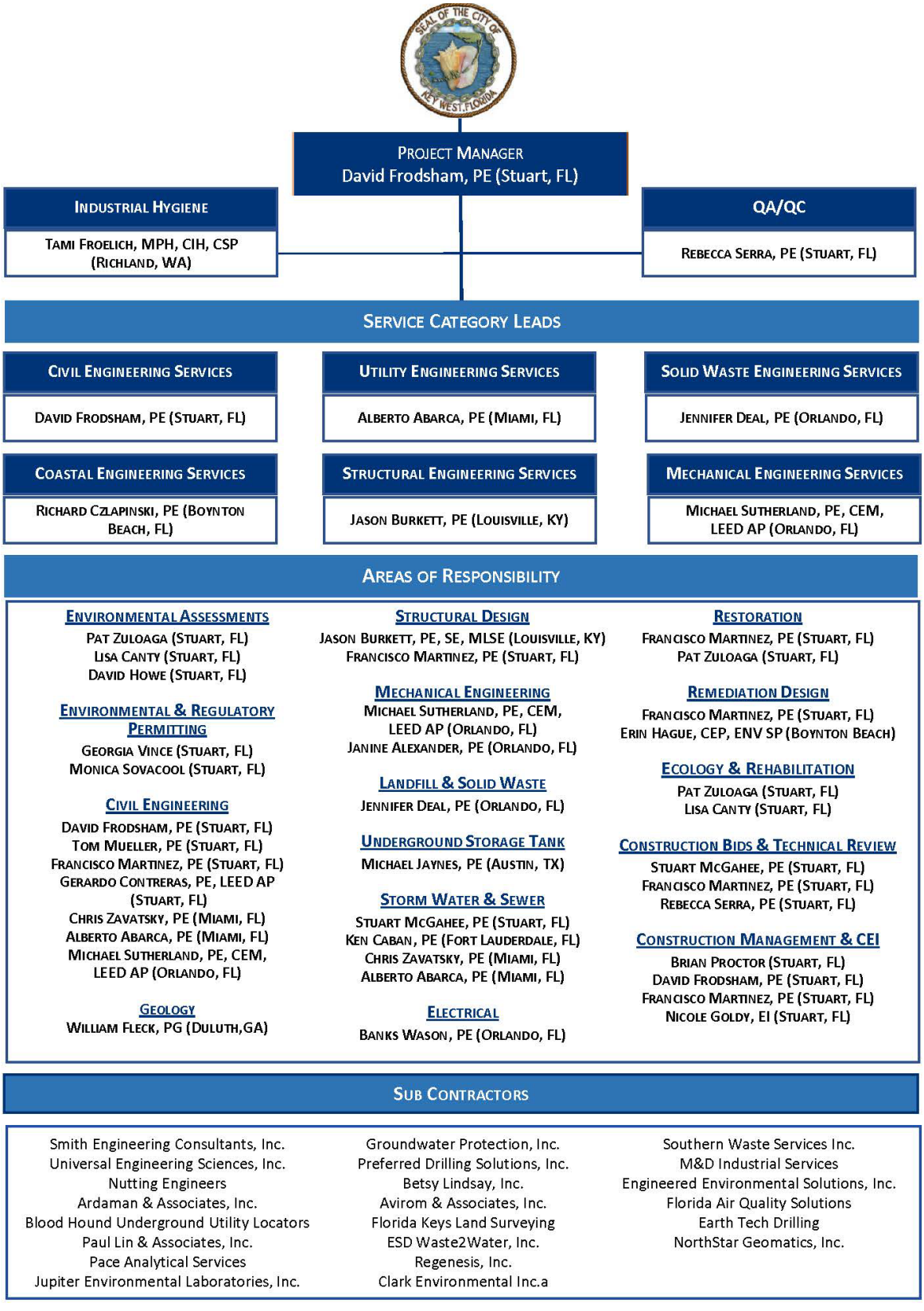
Organization



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 and number 2 rankings in Solid Waste and Environmental Science.

Tetra Tech is a recognized leader (number 2 in ENR rankings) in solid waste facility engineering and design—from conventional landfills and disposal sites to state-of-the-art waste composting facilities and anaerobic digesters.

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.

Past Performance for the City of Key West

For the past more than seven 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 image on the next page depicts most of those efforts, the majority of which have been successfully completed with a few currently on-going.

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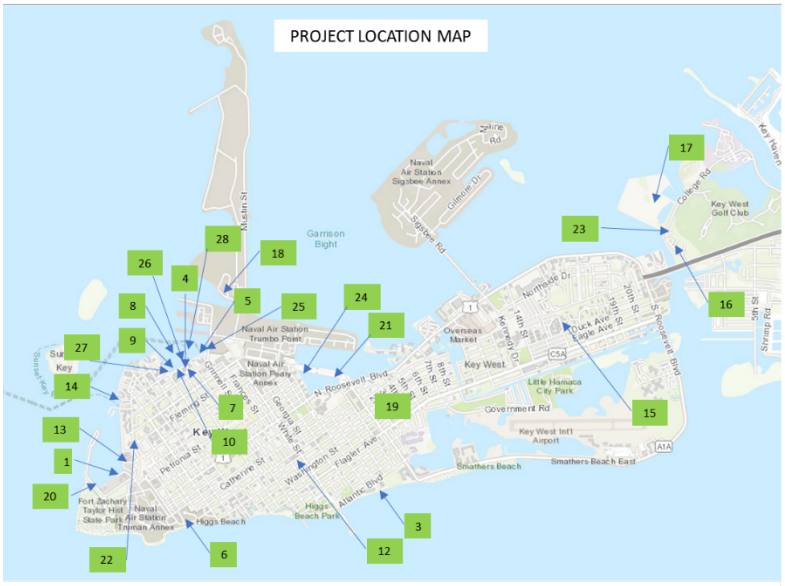

1. NOAA/FKNMS TRUMAN SEAWALL REPLACEMENT: DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT
2. DOUGLAS BAND ROOM ASBESTOS SURVEY
3. REST BEACH SEAWALL: DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT
4. HALF SHELL RAW BAR SEAWALL REPLACEMENT: DESIGN, PERMITTING, CORAL RELOCATION & CONSTRUCTION MANAGEMENT
5. FERRY TERMINAL EXPANSION: STRUCTURAL EXPANSION, GENERATOR/ELECTRICAL UPGRADES, MOORING PILE DESIGN
6. MLK COMMUNITY CENTER LBP SURVEY
7. TURTLE KRAALS SEAWALL ASSESSMENT, DESIGN & PERMITTING
8. KEY WEST BIGHT TIMBER PILING REPLACEMENT: ASSESSMENT & PERMITTING
9. KEY WEST BIGHT SEAWALL FROM TURTLE KRAALS TO CONCH REPUBLIC: ASSESSMENT, DESIGN & PERMITTING
10. FEMA LOMR - SCHOONER WHARF
11. ATLANTIC BLVD PHASE 1
12. GLYNN ARCHER GYM LBP SURVEY
13. BLD 103 LBP SURVEY
14. KEY WEST AQUARIUM SEAWALL & PILING REPLACEMENT: DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT
15. POINCIANA HOUSE LBP & ASBESTOS SURVEYS
16. COLLEGE RD. AFFORDABLE HOUSING: LBP & ASBESTOS STUDIES, PHASE I/II ASSESSMENTS, REMEDIATION & VSR
17. LANDFILL CONSULTING SERVICES
18. WWTP AIR CONDITIONER SIZING PEER REVIEW
19. FDOT CULTURAL RESOURCE ASSESSMENT, LAST MILE GRANT BICYCLE IMPROVEMENTS
20. US NAVY MOLE PIER UNDERWATER ASSESSMENT, DESIGN, & PERMITTING
21. CHARTER BOAT ROW SEAWALL ASSESSMENTS
22. 3.2 ACRE PARCEL SOIL INVESTIGATION & ENVIRONMENTAL ASSESSMENTS
23. KOTS ENVIRONMENTAL ASSESSMENT
24. ANGELFISH PIER STRUCTURAL ASSESSMENT
25. FERRY TERMINAL SEAWALL & PIER STRUCTURAL ASSESSMENT
26. SCHOONER FLOATING DOCKS DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT
27. H2 DOCK EXPANSION DESIGN, PERMITTING & CONSTRUCTION MANAGEMENT
28. KEY WEST BIGHT SUBMERGED LANDS LEASE RENEWAL

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.

Past Performance for the Naval Air Station, Key West

Tetra Tech has been providing support to the U.S. Navy through comprehensive long-term environmental Navy contract at bases throughout the North and Southeast United States. As part of that contract, since 1997, Tetra Tech has provided a suite of environmental and remedial services to protect the human health and environment at Naval Air Station (NAS) Key West and its former properties. We have executed over $20 million of contracted task orders to assess, investigate, cleanup, restore and reduce the former and current operational areas, properties and land parcels used by the U.S. Navy at NAS Key West. We are consistently ahead of schedule and below-budget on every task order issued by the U.S. Navy. The U.S. Navy has consistently evaluated our performance as either excellent or good and our project managers receive recognition and recommendations on their management of projects.

> "The quality of work is produced and executed in a professional manner with minimal errors. Lines of communication between the Navy and contractor POC are responsive to all aspects of the project."
>
> – NAVFAC SE

Tetra Tech has worked closely with the U.S. Navy to remove or mitigate environmental risks and restore former U.S. Navy properties to potential and current use for the City of Key West. A few examples of our past performance are the investigative work that led to the release of Poinciana Housing Complex to the City of Key West. Through these actions, additional low-income housing was deeded to the City of Key West. Tetra Tech also performed all the investigative work that led to the release of the Hamaca Hawk Missile Site, which was also deeded to the City of Key West and was used to house homeless veterans and now is used for a paintball recreational park. Tetra Tech performed all investigative and remedial actions at the intersection of Caroline and William Streets to determine the impact of a fuel line leak from Trumbo Point Tank Farm and the former Tauank Island. Through our work, we were able to clear the site through Florida Department of Environmental Restoration (FDEP) and restore the intersection to operational status.

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Tetra Tech performed all the original investigative work at Truman Annex, Trumbo Point, Fleming Key, and Dredgers Key (Sigsbee Annex). It was through this work that several parcels of land (DRMO, Parcel K, Parcel E, Building 136, Buildings 102, 103, and 104, and Building 223) were deeded to the City of Key West; these current environmental sites are being treated or monitored; and that the footprint of NAS Key West is being reduced; thereby adding land and resources to the City of Key West. Furthermore, Tetra Tech has assisted the U.S. Navy with DEO Grant administration for the installation of a Reverse Osmosis facility.

For 23 years, Tetra Tech has worked diligently to help the U.S. Navy, and in part the City of Key West, restore or maintain environmental sites for future use.

Subcontractors

While Tetra Tech can self-perform nearly every aspect of engineering work assigned to us, we keep a deep roster of subconsultants to assist with project related tasks. We have a good working relationship with a number of high-quality subconsultants, several of them Keys-based, and have brought them on-board for surveying, geotechnical, and environmental services when feasible to provide cost reducing benefits to the City of Key West and in support of the local economy. Several our subconsultants are listed in the table below.

Exhibit 1. Subcontractor Services

Vendor	Services Provided
Smith Engineering Consultants, Inc. West Palm Beach, FL	Electrical and Mechanical Engineering; Geotechnical Services
Universal Engineering Sciences, Inc. Miami, FL	Asbestos Inspection; Confined space entry; Drilling; Emergency response operations; Lead Inspection; Survey and Geotechnical Services
Nutting Engineers Miami-Dade, FL	Geotechnical Services; Environmental; Materials Testing; Inspections
Ardaman & Associates, Inc. Sarasota, FL	Geotechnical, civil and environmental engineering aspects of siting, design, construction monitoring, management and closure of industrial solid waste disposal facilities in general and phosphogypsum disposal stacks and coal combustion residual landfills in particular
Blood Hound Underground Utility Locators Brownsburg, IN	Subsurface Utility Locator Services
Paul Lin & Associates Miami, FL	Engineering; LOMR (Letter of Map Revision) Services
Pace Analytical Services Ormond Beach, FL	Laboratory
Jupiter Environmental Laboratories, Inc Tampa, FL	Environmental Laboratory
Groundwater Protection, Inc. Orlando, FL	Auger Drilling / Mud Rotary; Sonic Drilling; Direct Push
Preferred Drilling Solutions, Inc. Pinellas Park, FL	Drilling; Hazardous waste storage, recycling, treatment or other hazardous waste management services
Avirom & Associates, Inc. Key West, FL	3-D Survey; Submerged Land Lease Easements and Field Surveys; Utility Location Surveys; Hydrographic / Bathymetric Surveys; Construction Surveys / Services; Route-of-Line Surveys; Right-of-Way Surveys
Florida Keys Land Surveying Summerland Key, FL	Land Surveyors
ESD Waste2Water, Inc. Ocala, FL	Environmental Remediation; Dewatering Systems; Wash Water Recycling
Regenesis, Inc.	Environmental Remediation
Clark Environmental, Inc. Mulberry, FL	Transport, treat, and dispose of non-hazardous and hazardous contaminated soil, sludge, and liquid wastes
Southern Waste Services, Inc.	Recycling & waste hauling company

M&D Industrial Services	Waste recovery and disposal, emergency spill response, and environmental assessment, remedial action, and compliance services
Engineered Environmental Solutions, Inc. Lantana, Fl	environmental construction, remediation, engineering, storage tank management, remedial equipment, and pilot testing services
Florida Air Quality Solutions Cape Coral, FL	Air Quality ad Mold Inspections
Earth Tech Drilling Pompano Beach, FL	Sonic Drilling; Environmental Drilling; Geotechnical; Direct Push; Vacuum Excavation
NorthStar Geomatics, Inc. Stuart, FL	Architectural, Engineering, and Related Services, Professional, Scientific, and Technical Services

Methodology and Approach

Civil Engineering

Tetra Tech maintains a deep roster of widely skilled engineers and environmental scientists that are equipped to address a wide variety of civil engineering projects within the City of Key West. Tetra Tech has been ranked #1 in Water by *Engineering News-Record* magazine for 19 years in a row. Tetra Tech helps provide access to safe, abundant water supplies; effective treatment of stormwater and wastewater; flood control and restoration tools; and innovative watershed protection approaches to assess, protect, and restore our water bodies. Our potable water services help protect public health and improve quality of life. Tetra Tech is involved in all phases of the water cycle, combining state-of-the-art techniques and demonstrated best practices.

Tetra Tech assists numerous municipalities and government agencies to identify and evaluate water resources. As industry leaders in potable and non-potable reuse, desalination, utility resiliency, and green infrastructure, Tetra Tech guides and supports efficient, effective total water management for communities.

Many of our staff are former regulatory employees who intimately understand the nuances and complexities of successful regulatory permitting. We are versed in all forms of civil site design, including conceptual design, site remediation, stormwater engineering, utility installation and upgrades, wastewater treatment plant services, coastal engineering projects, construction management, and project close-out.

Utility Engineering

Tetra Tech provides full-service engineering, architectural, and construction management services to municipal, private, and federal clients. Tetra Tech's services include water, wastewater, and reuse utility infrastructure; transportation facilities such as roadways, bridges, and ports; architecture and engineering for schools, public works operations, and federal facilities; industrial control and automation system engineering for water processing, distribution, and design of safety critical systems; and hatcheries. Specialties include civil, environmental, structural, mechanical, electrical and instrumentation and controls, and security and communications engineering; architecture; environmental compliance; geology and hydrology; and surveying.

Depth of Resources

With over 1,000 professionals throughout Florida and a comprehensive library of complete in-house resources, our team is readily positioned and fully equipped to dedicate immediate services to the City as required. We offer integrated services for the entire project life cycle; from front-end science and planning through design, construction, operations, and maintenance for optimization. Our proximity and management philosophy will allow sound communication between the Tetra Tech team and City staff. We bring a proven track record of planning effectively, responding quickly, and managing efficiently a multitude of task orders concurrently for on-call contracts throughout the region.

History and Past Performance

Tetra Tech has provided a variety of engineering services through continuing contracts for hundreds of clients across the country. Our portfolio includes thousands of projects from minor pipeline improvements and lift stations upgrades to watershed management studies and treatment plant improvements and expansions. Through efficient management and effective leadership, our professionals provide similar continuing services for clients across Florida, including the municipalities of Indian River County, Toho Water Authority, Polk County, City of Orlando, Orange County, Monroe County, Hendry County, Collier County, Lee County, Seminole Tribe of Florida, City of Pompano Beach, City of Hollywood, and others. Many of these clients are repeat clients as Tetra Tech has provided responsive service and innovative solutions on-time and within budget.

Water/ Stormwater/Wastewater Infrastructure General Engineering Services Contracts

Tetra Tech has provided consulting, engineering, program management, construction management, and technical services to clients for over 50 years. We have provided a variety of engineering services through general engineering services contracts for hundreds of clients across the country.

Since general engineering services contracts are comprised of multiple and varied tasks, we plan to provide the correct skilled staff and appropriate resources early on to complete all assigned tasks on time and within established budgets. We plan early so valuable time is not wasted later. In addition, during our review of assigned tasks, we actively integrate lessons learned from previous projects, increasing efficiency and reducing the potential of schedule delays due to unanticipated issues.

Most importantly, our standard approach is to work as an extension of our clients' staff, allowing our team to develop a deeper understanding of client operations, processes, and procedures, giving us the ability to develop customized solutions. Tetra Tech has successfully assisted many other South Florida water/stormwater/wastewater utilities with various infrastructure projects. These projects include new infrastructure and replacement or rehabilitation of existing infrastructure. Some of Tetra Tech's most recent and relevant projects include the following utilities and infrastructure projects:

- Florida Keys Aqueduct Authority SCADA Miscellaneous Services
- Hollywood Stormwater Pump Station Condition Assessment
- Village of Key Biscayne Stormwater and Resiliency Project
- Hollywood Water Main Replacement Program
- Hollywood Wastewater Program

Water/Wastewater Treatment Facility Capabilities

Tetra Tech's drinking water services help clients protect the public health and quality of life in their communities. Whether our clients are maintaining or improving existing water supply infrastructure, planning new construction to expand capacity or enhance water quality, or seeking to minimize life-cycle costs, Tetra Tech provides sustainable solutions to complex water treatment challenges.

Our engineers and scientists have been helping local governments and municipal utilities provide safe and secure drinking water for decades. Our approach to water resources management and innovative water treatment practices help our clients create a reliable 21st century roadmap for their water systems.

Our team has extensive experience designing treatment facilities throughout the United States including the state of Florida. We have experience designing expansions to existing treatment facilities, as well as designing new treatment facilities at green field sites and/or at the site of existing water utility infrastructure. For the past 19 years, Tetra Tech has been ranked Number 1 by *Engineering News-Record* for Water and Number 1 for Water Treatment and Desalination due to our volume of work in this practice area. Based on the number of

treatment facilities that our team has delivered, we have developed close working relationships with manufacturers and specialists.

Tetra Tech has significant expertise in the areas of water supply, distribution, treatment, storage, and other miscellaneous water utility related services. We have designed a combined 300 MGD of constructed and installed membrane capacity and constructed and installed over 100 MGD of brackish RO processes at water treatment facilities within the last 10 years. Tetra Tech has provided planning, permitting, design, bidding assistance, construction administration assistance, and start-up and testing services at all of these membrane treatment facilities. Our staff includes experts who are also well-versed in hydraulic and water quality modeling for evaluation of distribution system blending, and transmission pipeline design. In addition, we have significant pilot testing experience for assessing treatability, recovery rates, and optimal pre-treatment chemical dosing. Tetra Tech understands the technical issues related to blending finished waters from different sources and have designed and constructed water treatment facilities that blend up to as many as five finished waters at a single site, putting our theory and computer modeling to the test by delivering potable water to the customer that is clean, safe, and aesthetically pleasing. Among the wastewater treatment services we provide are:

- Flow equalization
- Sedimentation
- Biological nutrient removal
- Activated sludge
- Sequencing batch reactors
- Membrane bioreactors
- Fixed-film processes
- Oxidation ditch technology
- Aerated lagoons
- Disinfection and dechlorination
- Nutrient recovery systems
- Small community and decentralized
- systems
- Soil dispersal and aquifer recharge
- Constructed wetlands
- Water reclamation
- Membrane treatment of secondary effluent
- Process evaluation and optimization

Stormwater

Tetra Tech's current and recent stormwater projects include:

- Channel restoration
- Erosion control
- Flooding mitigation
- Green solutions
- Local street reconstruction and rehabilitation projects
- Sea-Level Rise Solutions
- Rural, suburban, and urban project locations
- Stormwater retention and detention
- Street reconstruction

Urban Stormwater Planning and Analysis

Developed for the U.S. EPA, Tetra Tech's System for Urban Stormwater Treatment and Analysis Integration (SUSTAIN) is an innovative and complex modeling system that forecasts and plans for extreme conditions to optimize combinations of various types of stormwater controls. It allows for more informed decisions on placement of practices to cost-effectively meet flood protection, SSO reduction, and water quality goals.

Stormwater Experience

Tetra Tech provides stormwater management solutions that effectively ensure regulatory compliance while integrating and maximizing other program, environmental, and community benefits. With mounting regulatory

and climate resiliency pressures, stormwater managers are burdened with near- and long-term compliance responsibilities, asset management challenges, flooding, and water supply shortages. Tetra Tech's engineers, policy experts, and scientists help clients effectively address daunting technical, policy, and day-to-day management issues.

We fully understand the emerging issues in stormwater management and leverage new technology, innovative approaches, and big data to inform smart decision making and maximize use of limited resources.

Creating, adapting, and maintaining a successful stormwater management program requires a breadth and depth of knowledge not commonly found in a single consulting firm. Tetra Tech is well-known for the diversity of its stormwater expertise. Our long history of supporting large, on-call stormwater contracts for major municipalities has allowed our staff to forge long term relationships with our clients, working together to address new and challenging problems while learning valuable lessons on how to sustain effective programs.

- Hydraulics and hydrology services
- Watershed management and green infrastructure approaches
- Modeling
- Flow reduction (sewer separation and targeted elimination)
- In-system storage (basins, tunnels)
- Engineering design services Combined sewer system upgrades
- Sanitary sewer system upgrades
- Instrumentation and controls
- High-rate treatment and disinfection
- Real-time control (RTC) systems
- Long-term control plans

We are currently designing protection systems to prevent flooding and the devastating consequences of channel erosion. The Tetra Tech team has planned, designed, constructed, and monitored storm drainage solutions for both new development and site retrofits throughout Florida and the nation.

For green solutions to be truly successful, the design team must place the right plants in the right settings and create designs that residents and businesses will accept and embrace. Our engineers and landscape architects have designed and installed native landscapes using best management practices throughout the nation in both formal and informal arrangements. They will select plant materials and create designs that ensure the green solutions function as planned and will work with the residents during the public involvement process to identify themes and designs to enhance the neighborhood character. Finally, while native landscapes reduce runoff and require less maintenance over time, considerable planning and care is required initially to promote proper establishment and maintain an attractive appearance.

Water Distribution System Improvements

Tetra Tech has planned, designed, permitted, and constructed thousands of water distribution systems, including booster pump stations, ground storage tanks, and transmission and distribution mains. Our services extend from preliminary planning, hydraulic modeling, and critical pipeline analysis through design, permitting, and construction for all sizes of water main replacements.

Our experience includes the design of thousands of miles of water distribution infrastructure in sizes ranging from 4 to 72 inches, a variety of trenchless technologies, over 200 booster pump stations ranging up to 206 MGD, and ground storage tanks up to 5 MG, as well as other distribution infrastructure improvements. Our team works to understand the dynamic relationship between system demands and pumping and storage capacity. Our design is guided by computer modeling and system data to create facilities that are optimal at maintaining pressure during peak levels of service.

Wastewater Collection Systems

Having designed smaller collection system pipelines ranging from 6- to 15-inches in diameter, large gravity sanitary sewers of 36- to 54-inches in diameter, and complex networks with wastewater pumping and transmission systems with capacities exceeding 200 MGD, Tetra Tech has the engineering expertise related to wastewater treatment and transmission for both gravity systems and force mains. Tetra Tech also has extensive experience with the construction of new lift stations as well as the rehabilitation of older lift stations and force mains. Our local design team includes seasoned engineers who can evaluate pump operating conditions to select the correct pumps and appropriately manage head conditions for smooth, reliable pump operation. We also perform condition assessments of lift stations to identify necessary capital improvement projects. Our team is resourceful and creative when working on retrofit projects and has experience rehabilitating various kinds of lift stations including vacuum primed suction lift pumps, submersible pumps, and dry pit submersibles.

Solid Waste Engineering

Tetra Tech's solid waste facility designs are based on constructability, functionality, and delivery of the highest levels of environmental protection. Effective solid waste facility design requires a unique blend of skills in civil, geotechnical, environmental, mechanical, structural, and landfill gas engineering. Tetra Tech's industry-leading team of solid waste engineers and planners have extensive practical experience integrating our clients' functional needs with the physical resources and challenges of a site. Tetra Tech has developed construction plans and specifications for landfills, material recovery facilities, transfer stations, intermodal facilities, composting, anaerobic digestion, and waste-to-energy facilities for public and private sector clients throughout North America. We use an iterative process in developing design concepts so that our clients' short- and long-term operational needs are incorporated into final designs. Our designs optimize capacity, minimize construction and permitting costs, and streamline operations, while adhering to local and federal regulatory standards. We complement our capabilities in the design of solid waste facility infrastructure with full capabilities to design, build, construct, and operate landfill gas extraction and treatment systems.

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, and construction repairs.

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

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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:

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 & UMAM Assessments
- Seagrass and Aquatic Habitat Restoration
- Water Quality Sampling & 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, for example:

- 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

Permit Preparation

Tetra Tech will lead the overall effort and coordination in permitting with open and regular communication by the team with the City, 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. **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.

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.

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 of 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.

Structural Engineering

As a leader in engineering design of water facilities, Tetra Tech provides specialized structural assessment, planning, design, and construction as it relates to water (and wastewater) storage, conveyance, and treatment facilities. The understanding of the unique structural aspects of these types of structures is key to planning and design of each structure within a municipal design. Additionally, our structural engineering team has provided designs on various types of structures for an array of industry sectors located locally as well as globally.

Projects have included industrial and commercial buildings, military construction, air pollution control structures, parking structures, water and wastewater treatment facilities, storage and equipment facilities, manufacturing and stamping facilities, and civil works projects that include flood walls and levee protection systems.

In addition to new projects, Tetra Tech also has experience associated with adaptive re-use or redesign to correct structural inadequacies and to prevent structural failure. These projects typically include, surveys of structural conditions including trusses, beams, and roof supports, determination and upgrade of floor capacities, underpinning of basement and foundation walls, lateral bracing of exterior walls to prevent additional movement, and upgrading facilities to become compliant with current building code requirements. Some of Tetra Tech's most recent and relevant projects include the following civil and structural engineering projects:

- Key West City Hall
- U.S. Navy Mole Pier Structural Assessment, Design & Permitting
- Miami South Police Station Parking Lot
- Pompano Beach Hurricane Hardening
- Miami Brickell Bay Drive Improvements

Mechanical Engineering

Tetra Tech is nationally recognized as a leader in providing mechanical, electrical, and plumbing (MEP) designs to facilities. Our mechanical engineers and designers specialize in building systems for municipalities that include specialized environments such as high humidity and residual chlorine environments. Locally, our engineers are also LEED certified, and we focus our designs on long term cost savings through energy efficient designs.

Our traditional and sustainable building designs are energy and resource efficient and promote a healthier environment for building occupants. Our mechanical engineers also work hand-in-hand with our process engineers for layout and design of robust equipment design needed to facilitate process piping. This includes pneumatic and hydraulically controlled systems.

In addition to traditional engineering solutions Tetra Tech also has a building assessment group that focuses on assessments of all types of facilities, including mechanical systems, plumbing, fire protection, building structural analysis, and lighting. We use Arch GIS, tables, and smart devices to collect, manage, store, and display gathered information, which we can easily extract to produce reports, excel files, or even import into asset management programs or work management programs.

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. Dave Frodsham, PE, the Project Manager 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 the 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 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 & safety program, and training) necessary to ensure staff proficiency are in place.

Tetra Tech recognizes that this is a general engineering services contract with Work Orders 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 work order managers, discipline leads and other required support staff to meet any assignment and workload requirements.

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 any Work Order.

Coordination with City Staff and Other Governmental and Private Stake Holders

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 and Work Order management 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 a work order 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 work order team with historical background for the assignment, and leading refinements to meet City's needs.

- During Work Order implementation, Mr. Frodsham will maintain weekly contact on work order status with the City for feedback and to ensure overall satisfaction. This partnering approach will continue through closeout of the work order to foster continuous improvement.

Personnel

While our firm counts 21,000 professional staff worldwide, the key staff members that will be assigned to support the City through work orders for General Engineering Services are described below. Others may be assigned as needs arise.

David Frodsham, PE		***Project Manager/Civil Engineering Lead***	
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 63 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, & 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 63 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 & 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 & specifications, bid support, construction administration & 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 & 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 & conducted periodic site inspections for general conformance with engineering plans & 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, & 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 & 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 & 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.

Jennifer Deal, PE — *Solid Waste Engineering*

Education	BS, Environmental Engineering, University of Central Florida, 1997		
Registrations/ Affiliations	Professional Engineer, Florida (#58592); Georgia (#044474); South Carolina (#36691); Tennessee (122963); Alabama (#39076-E) • FDEP Certified Stormwater Inspector • Tetra Tech Quality Assurance Manager • HAZWOPER Supervisor		
Areas of Expertise	Solid waste management • Permitting • Landfill construction quality assurance • Contamination assessment • Landfill operations compliance		
Office	Orlando, FL	**Years of Experience**	25

EXPERIENCE SUMMARY

Ms. Deal has 25 years of experience as an engineer and project manager in the environmental field, focusing on regulatory compliance assistance, client management, regulatory agency interaction, permitting and technical design, and quality assurance. Ms. Deal has 18 years' experience managing multi-disciplinary projects, primarily for solid waste management facilities, assessment, and remediation projects. She has 14 years of experience conducting project quality assurance reviews for commercial projects in Florida. Ms. Deal has performed project quality reviews for work plans, contamination/site assessment reports, state and local permit applications and supporting documentation, construction quality assurance plans and technical specifications, solid waste master plans, proposals/contracts, general regulatory or client correspondence, Phase I/II ESA reports, remedial action plans, remediation summary reports, construction progress reports, among others.

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RELEVANT EXPERIENCE

Stock Island Landfill, Key West, FL. Project Engineer reviewing landfill closure documentation and associated groundwater monitoring data, providing opinion on current assessment of the landfill.

Cedar Trail Landfill, Bartow, FL. Certifying Engineer and Project Manager for construction quality assurance of multiple double composite liner landfill cells, including review of soil and geosynthetic material testing, review of contractor invoicing, and regulatory coordination. Project Engineer and Project Manager for landfill permit modifications, operations, and general compliance.

Broadhurst Environmental Landfill, Screven, GA. Certifying Engineer and Project Manager for removal of unauthorized waste inadvertently disposed in the landfill. Prepared a Waste Removal Plan, conducted pre-construction meeting with client and contractors, performed field oversight of waste excavation for off-site disposal, off-site odor monitoring, reviewed confirmatory sample analytical results, prepared a Waste Removal Summary Report, and coordination with client and state regulatory agency.

Closed Durango Paper Mill Landfill, St. Marys, GA. Certifying Engineer for closed landfill cap repairs and stormwater management system repairs. Assisted with bid package preparation and contractor selection, completed periodic construction inspections, approval of materials, and prepared certification report.

Sand Valley Landfill, Collinsville, AL. Certifying Engineer and Project Manager for construction of a new composite lined landfill cell, including review of soil and geosynthetic material testing, and regulatory coordination. Certifying Engineer and Project Manager for construction of a 9-acre final closure.

City of Tampa, Solid Waste Department, Tampa, FL. Project Manager and Project Engineer for development of a new Solid Waste Master Plan. Conducted facility inspections and completed permitting and compliance overview for existing solid waste management facilities. Finalized the final Solid Waste Master Plan document.

Lee County Solid Waste, Integrated Waste Management Plan, Lee County, FL. Project Manager and Project Engineer for development and compilation of a new Integrated Waste Management Plan. Managed field components for a Waste Characterization Study of residential solid waste and recyclables. Reviewed individual solid waste facility audits and options for upgrades or modifications.

Confidential Sites, Acquisition Due Diligence, Various Locations, KY. Project Manager and Project Engineer for site reconnaissance and preparation of Phase I ESA reports for one operating municipal solid waste landfill and four operating solid waste transfer stations. Completed due diligence evaluation for facility operations, environmental and operational compliance, and reporting. Phase II ESAs were completed for the landfill and two of the transfer stations.

Richard Czlapinski, PE, D.CE — *Lead Coastal Engineer*

Education	OE Ocean Engineering, Massachusetts Institute of Technology, 1975 • MS Ocean Engineering, Massachusetts Institute of Technology, 1975 • BCE Civil Engineering, University of Detroit, 1969		
Registrations/ Affiliations	Professional Engineer, Alabama (#37717); Florida (#42834); Hawaii (#12608); Louisiana (#33412); North Carolina (#12157); New Jersey (#23886); New York (#99200); South Carolina (#9712), Texas (#140922)		
Areas of Expertise	Coastal engineering • Coastal Structure Design • Coastal Processes Modeling • Natural/nature-based shore stabilization design		
Office	Stuart, FL	**Years of Experience**	49

EXPERIENCE SUMMARY

Richard Czlapinski is a registered professional engineer in several states and 49 years of professional experience in civil and coastal engineering. He has extensive experience in project feasibility and design studies, hydrodynamic, hydrothermal and contaminant transport modeling, dredging and coastal sediment transport investigations. Mr. Czlapinski is a coastal engineering diplomate with the Academy of Coastal, Ocean, Port, and Navigation Engineers, ACOPNE, and served as an Executive Committee member the of the ACOPNE

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Board of Trustees from 2009-2014 and its President for 2012-2013. Richard was the Engineer of Record for our work efforts on Rest Beach.

RELEVANT EXPERIENCE

Rest Beach Shoreline Armoring, City of Key West, FL. Project Manager, Engineer of Record responsible for storm erosion modeling, analysis and reporting as well as alternatives evaluation, design and permitting of shoreline armoring of a 660-foot segment of public beach/shoreline located adjacent to the White Street Pier. Guidance to be provided to the City in selection of an appropriate alternative. Regulatory approval will be obtained from the Florida Department of Environmental Protection, final design plans and technical/environmental specifications will be prepared and bid phase support services will be provided.

Raw Water Intake Channel Dredging, Lake Monroe, Deltona, Fl. Lead Coastal Engineer for the design of dredging of a raw water intake channel and dredged material management area as part of an expansion of the City of Deltona's reclaimed water withdrawal project. The task included sediment sampling and testing, channel prism design, design of the dewatering facility, permitting support and the development of plans and specifications for the dredging related components of the project.

Muck Removal Project, Brevard County, Turkey Creek, FL. Project Manager and Engineer of Record for dredging feasibility and design of dredging projects to remove organic silts and clays to remove legacy loads of nutrients and to improve water quality in the Indian River Lagoon on the east central Florida coast. Plans and specifications were prepared for dredging of up to 235,000 cy of muck sediments from Turkey Creek. Construction oversight of the dredging work began in late 2015.

Fort Pierce Marina Reconstruction, City of Fort Pierce, FL. Project Manager for design and permitting of the replacement and expansion of the City Marina that was destroyed in the hurricanes of 2004. The project involved in coordination with the Federal Emergency Management Agency (FEMA) regarding the hurricane damage to the marina and in the development of a damage mitigation plan to protect the rebuilt marina from future storm wave and current damage. The reconstruction program includes design of about 150 slips on floating docks with full utilities, design of a new bulkhead, design of a system of island breakwaters to protect the marina as well as the design of shore stabilization at an adjacent city park. The project received the Industrial Fabrics Association International – International Achievement Award of Excellence – geotextile fabrics category 2014; the American Society of Civil Engineers – Project Excellence Award – large project category 2016; and the National Association of Environmental Professionals Excellence Award 2017.

Manatee Pocket Dredging Program, Martin County, FL. Project Manager, Engineer of Record. Led field investigations, design studies, dredged material handling, and regulatory permitting, public participation, grant research and writing, and construction support services for the development of a navigational channel in Manatee Pocket at Stuart, Florida. Tetra Tech contributed the project's qualification for about $10M of the $13M construction cost. In October 2010, the Treasure Coast Chapter of the Florida Association of Environmental Professionals gave the project its Project Award for the single project that provided the most environmental enhancement.

Miami Harbor Deepening Project Phase III, USACE Jacksonville District, Miami, FL. Worked with GLDD as the Prime Contractor (for end client USACE Jacksonville District) to conduct environmental management and quality control/quality assurance reviews and reporting to the USACE, Florida Department of Environmental Protection, and federal and state resource agencies of this approximately two-year duration project. Supported artificial reef construction of 9.28-acres of low-relief and high-relief reef comprised of quarry-sourced limestone from Miami-Dade County, as mitigation to offset impacts of channel deepening on coral and hardbottom communities. Reefs will be placed approximately 2.4-miles offshore in water depths of 42 to 45 ft MLLW.

Jason Burkett, PE, SE, MLSE — *Structural Engineer*

Education	MS, Civil Engineering (Structures and Foundations), University of Central Florida, 2005 • BS, Civil Engineering (Structures Emphasis), University of Central Florida, 2003
Registrations/ Affiliations	Professional Engineer, Florida (#69879) + 12 other states • Structural Engineer, Illinois (#081007184); Hawaii (PE-17132); Oklahoma (#26253) • Model Law Structural Engineer, National Council of Examiners for Engineering and Surveying (#47938) • Guiding Principles Compliance Professional, Green Building Initiative
Areas of Expertise	Structural Engineering

EXPERIENCE SUMMARY

Mr. Burkett is a senior structural engineer with over 17 years' experience with many structural systems including: reinforced concrete, steel framing, composite steel, masonry, prestressed/precast concrete, tilt-up concrete panels, light-gage steel, timber, and aluminum. He has extensive experience designing, reviewing other's designs, and performing independent technical reviews for structural projects related to drinking water, wastewater, stormwater, solid waste, industrial, commercial, Department of Defense, hurricane shelters, high-velocity hurricane zones, health care, residential, education, aviation, marine construction, performing arts, roofing components, renovations, additions, and investigations.

RELEVANT EXPERIENCE

Key West Administration Building, Key West, FL. Lead Structural Engineer. Two-story, 26,000-sf City Hall building, a two-story, 7,200-sf fire station, a four-story parking garage, and a few ancillary structures. Structure was designed for 150-MPH winds, Exposure C, and an importance factor of 1.15. Building designed with shallow foundations on rock anchors with the entire building detailed using architectural/structural precast concrete components including, insulated sandwich panels, double tees, hollow core planks, inverted tee beams, and L-shaped beams.

City of Pompano Beach, Water Treatment Plant Hurricane Hardening and Resiliency Project, Pompano Beach, FL. Structural Engineer-of-Record. Design drawings for five buildings to be strengthened to meet the current hurricane wind forces. Constructed from 1960 through 1988, buildings are critical to the community's drinking water supply and need to remain operational during and after a major storm event. Reviewed drawings and performed field investigation to verify information on record drawings and document as-built information that was not available. After investigation, performed a retrofitting design to strengthen buildings for 180-mph design wind speeds.

City of Pompano Beach, Water Treatment Plant Hurricane Hardening Study, Pompano Beach, FL. Lead Structural Engineer/Investigator. Evaluated five buildings dating back to the 1960s for compliance with current Florida Building Code wind design requirements. Outlined deficiencies in a report along with a cost breakdown for retrofitting.

Marco Island Library, Marco Island, FL. Lead Structural Engineer. 4,000-sf, one-story library addition. Structural design included spread footing, load bearing concrete masonry unit, sloped bar joists supported by a steel-framed ridge beam and struts. Concrete tie-beam at the top of the concrete masonry unit walls designed to act as a tension ring.

Marco Island, WTP Pressure Membrane Building, Marco Island, FL. Structural Design Engineer. Design of a one-story, load-bearing concrete masonry unit building. Structural design included a structural slab on grade to support heavy equipment, structural steel truss girders to support cold-formed roof trusses, and crane hoists.

City of Fort Myers, Olga WTP Improvements, Fort Myers, FL. Structural Engineer-of-Record. Structural design of several plant improvements including aluminum canopy structures to cover chemical storage tanks, metal building enclosure, and an auger-cast pile supported slab for chemical equipment.

Alberto Abarca, PE — *Civil Engineer*

Education	MS, Environmental/ Environmental Health Engineering, Florida International University, 2017 • BS, Industrial Engineering, Universidad Rafael Urdaneta, Maracaibo, Venezuela, 2014
Registrations/ Affiliations	Professional Engineer, Florida (#94299)
Areas of Expertise	Utility Engineering • Civil Engineering

EXPERIENCE SUMMARY

Mr. Abarca has over five years of experience in utility engineering. He has provided engineering support as project engineer for scoping, utility coordination, design, permitting, construction administration, inspections, and certifications for numerous public sector projects, including water main, raw water main, reclaimed water main, force main, lift station and gravity sewer projects. He has trenchless experience, including directional drills and jack and bores under railways, major roadway crossings, subaqueous crossings, and others.

RELEVANT EXPERIENCE

City of Hollywood, Stormwater Pump Station Condition Assessment, Hollywood, FL. Civil Engineer. Prepared a technical memorandum of the City's 10 stormwater pump stations ranging in size and capacity between 10 HP to 60 HP and 400 GPM to 21,200 GPM. Performed a pump station discharge analysis, computed the stormwater runoff volume for the sub-basins contribution to each of the pump stations, converted City's existing stormwater model ICPR to version 4, and modeled year 2020 and 2050 for five of the pump stations. Studied multiple model runs under normal groundwater and King Tide conditions for the two different years and performed model runs incrementing the pump's capacity by 10-, 20-, and 30-percent. Provided two alternatives for pump stations SW-06 and SW-08, which need to improve the discharge piping configuration.

City of Hollywood, Water Main Replacement Program, Hollywood, FL. Project Engineer. Providing engineering support for utility coordination, project engineering, and construction management on multiple projects being completed concurrently. The entire program includes over 225,000 linear feet (42 miles) of water main replacement, reconnection of over 1,000 service connections, numerous underground and overhead utilities conflicts, FEC railroad crossings, permitting through multiple agencies, and construction within schedule and budget. Existing aged cast iron water mains were replaced with both DIP and PVC water mains, ranging from 4-inch to 24-inch diameters.

City of Hollywood, Replacement of Hallandale Beach Force Main and Large User Meter 07 (LUM-07), Hollywood, FL. Project Engineer. Provided engineering support for the construction of approximately 3,600 LF of 16-inch DR-18 PVC force main; 620 LF of 20-inch DR-11 HDPE force main installed via horizontal directional drill (HDD); line stops; plug valves; air release valves; LUM-07 site improvements, including complete demolition and reconstruction; installing new 10-inch meter; bypass system; associated improvements; and other miscellaneous appurtenances. Complexity of the project involved trenchless Florida Department of Transportation right-of-way (ROW) crossing and coordination with another municipality (City of Hallandale Beach). Deliverables and tasks included development of a technical memorandum to properly size the new force main and analyze multiple routes; completion of accelerated design plans and specifications for 90 percent and bid set submittals; internal coordination with other engineering disciplines for structural and electrical engineering support, especially for LUM-07 site improvements; coordination with subconsultants; and review of survey, geotechnical, and subsurface utility exploration reports; utility coordination; securing construction permits with Broward County/Florida Department of Environmental Protection (FDEP) and ROW use permit with FDOT; bid support, including review of low bidder's qualifications; providing recommendation of award letter; assisting engineer-of-record with multiple construction administration tasks, including pre-construction meetings, shop drawings, requests for information, change orders, and pay application review, as-built drawing review, record drawings preparation, and clearance permit with Broward County/FDEP.

Exhibit 2. Names, Job classifications and Qualifications of Staff

Name	Job Classification	Qualifications	Florida PG/PE License	Location	Availability
David Frodsham, PE	Senior Engineer	Civil / Coastal Engineer	75507	Stuart, FL	90%
Tami Froelich, CIH	Health & Safety	MPH, CSP, CIH		Richland, WA	10%
Rebecca Serra, PE	Senior Engineer	QA/QC, Hydrology	35624	Stuart, FL	30%
Michael Sutherland, PE, CEM, LEED AP	Senior Engineer	Utility / Mechanical Engineer	78587	Orlando, FL	50%
Jennifer Deal, PE	Senior Engineer	Solid Waste Engineer	58592	Orlando, FL	50%
Richard Czlapinski, PE	Senior Engineer	Coastal / Ocean	42834	Boynton Beach, FL	50%
Jason Burkett, PE	Senior Engineer	Structural Engineer	698879	Orlando, FL	50%
Banks Wason, PE	Senior Engineer	Electrical Engineer	73973	Orlando, FL	50%
Gerardo Contreras, PE	Senior Engineer	Coastal / Structural	66381	Boynton Beach, FL	50%
Chris Zavatsky, PE	Senior Engineer	Civil Engineer	76885	Orlando, FL	50%
Alberto Abarca, PE	Engineer	Civil / Utility Engineer	94299	Miami, FL	70%
Francisco Martinez, PE	Engineer	Civil/Coastal Engineer	86702	Stuart, FL	70%
Michael Jaynes, PE	Engineer	Environmental Engineer	55441	Austin, TX	30%
Stuart McGahee, PE	Senior Engineer	General Civil	57536	Stuart, FL	40%
William Fleck	Senior Geololgist	Geologist		Duluth, GA	30%
Erin Hague, CEP	Senior Scientist	CEP, ENV SP		Boynton Beach, FL	30%
Brian Proctor	Senior Scientist	FSESCI #22435		Stuart, FL	20%
Georgia Vince	Senior Scientist	Environmental / Regulatory		Stuart, FL	30%
Pat Zuloaga	Senior Scientist	Restoration / Ecology / Rehabilitation		Stuart, FL	30%
Lisa Canty	Senior Scientist	Environmental / Regulatory		Stuart, FL	30%

Certifications

Tetra Tech holds Engineering and Geology Business licenses with the State of Florida. Tetra Tech possesses numerous design professionals with LEED accreditation, FDOT Certifications, Professional Engineering Licensure, and FDOT certifications.

In addition to the Tetra Tech employees listed above, other employees hold certifications in scientific diving, surveying, and industrial hygiene. Furthermore, almost all of our employees hold CPR/First Aid, OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) certifications.

Qualifications

Continuing Engineering Services – Cape Coral, FL	
Design Service Fee: Varies $10k-$100k by task **Construction Cost:** Varies $100k-$2M by task	**Period of Performance:** 2000-Present; **Construction:** Numerous
Project Details	
Name of Client:	City of Cape Coral
Client's Representative:	Tom McLean, PE
Address:	PO Box 150027 Cape Coral, FL 33915
Phone	239-872-2380
Key Personnel:	Danny Nelson, PE; Roderick Cashe, PE; Fred Mittl, PE; Tyler Wainright, PE

Tetra Tech has provided continuing miscellaneous professional engineering services to the City of Cape Coral for a variety of utility related capital improvement projects since 2000, and prior to that for preparation of the City's Annual Reports as required for compliance with their Utility Bond covenants. Specific projects have included lift station refurbishment design, water and wastewater treatment plant modifications, utility infrastructure improvements, public works facilities, and other miscellaneous engineering services as needed:

- Water main, wastewater collection, irrigation system upgrades, and replacements
- Installation of over 200 miles of water, wastewater, and irrigation piping
- Installation of (2) 5 MG ground storage reservoirs
- Rehabilitation of over 30 wastewater pumping stations
- Construction of nearly 20 new wastewater pumping stations
- Evaluations and inspections of the existing utility systems. Biosolids improvements at the Southwest WRF
- Chemical storage and pumping improvements at the Southwest and North WTP
- Degasifier improvements at plants 1 and 2 at the Southwest WTP
- Preparation of annual reports and engineering report for utility bonds
- Building improvements/additions associated with WTP, other utility buildings
- Assistance with development of the City's groundwater monitoring plan Irrigation supply improvements including:
- Water Quality modeling associated with the City's stormwater master plan
- Design for gator slough improvements, including the raising of weirs 11, 13, 14, 15 and 19 for additional irrigation water storage
- Design for installation of over 5,000 feet of piping for basin interconnection
- Design for installation of a transfer pump station to be able to move water between multiple basins
- Evaluation of an existing aggregates mine for potential surface water storage for future irrigation use

Use or disclosure of data contained on this page is subject to the restriction on the title page of this proposal.

- Permitting for the modification of Weir 29 associated with flow release to Yellow Fever Creek
- Electrical and Instrumentation improvements, including design for control panel upgrades at remote booster stations and deep injection wells, and design for new pump stations and fiber optic control system design for communication of water, wastewater, and irrigation systems throughout the City

Continuing Professional Engineering Services – Kissimmee, FL	
Design Service Fee: $1.4M YTD for 2022 **Construction Cost:** Varies by Task	**Period of Performance:** 1996-Present; **Construction:** Numerous
Project Details	
Name of Client:	Toho Water Authority
Client's Representative:	Deborah Beatty, PE
Address:	951 MLK Jr. Blvd. Kissimmee, FL 34741
Phone	407-944-5023
Key Personnel:	Jon Fox, PE; Charles Drake, PG; Jon Bundy, PE; John Toomey, PE

Tetra Tech has provided continuing professional engineering services to Toho Water Authority (TWA) since 1996. Projects have included numerous lift station upgrades and refurbishments, pipelines, and other engineering services. Specific projects include:

- Lift Station Rehabilitation: Lift Stations 13P, 26B, 35P, 48, 87, 93, 101P and 124. Tetra Tech is providing electrical engineering services for the power and control panel upgrades of listed lift stations throughout the service area.
- 16-Inch Celebration Force Main Replacement. Tetra Tech provided surveying, geotechnical engineering, pipeline design, permitting and construction administration services for the replacement of three segments of 16-inch force main along West Irlo Bronson Memorial Highway totalling approximately 5,550 LF. The existing main had been inspected and identified gas pockets and/or thinning pipe wall thickness. In addition to the pipe replacement, eight air release valves were installed.
- Collector Roads Gravity Sewer Removal and Replacement - Project 1. This task authorization includes 19 gravity sewer, manhole, and lateral repair locations within collector roadways requiring removal and replacement. Gravity sewer point repairs include 8-inch to 12-inch pipe. Manhole replacement includes 4-foot and 5-foot diameter manholes. Additional CIPP lining and manhole rehabilitation was required in collector roadways.
- Richard McLaughlin WTP Well and Raw Water Main. This project included construction of a new raw water supply well RM-3 and 16-inch raw water transmission main to serve the Richard McLaughlin Water Treatment Plant (RMcWTP). The vertical turbine well pump was rated at 3,500 gpm and connected to the RMcWTP via 4,900 linear feet of 16-inch diameter raw water transmission piping. The pipeline construction included approximately 720 linear feet of horizontal directional drilling installation and 4,180 linear feet of open-cut installation.
- Parkway WRF Influent Screen Replacement. Tetra Tech assisted with establishing performance criteria and construction documents for replacement of their existing mechanical bar screen at the Parkway Water Reclamation Facility. We also assisted TWA with construction administration

services, including document conforming, shop drawing review, and inspection prior to and during startup.

- 16-inch Celebration Force Main Replacement. Survey, final design, permitting, bidding assistance, and construction administration services to replace three sections of existing 16-inch force main piping along West Irlo Bronson Memorial Highway totaling approximately 5,550 feet in areas previously identified by others where the existing ductile iron main had been evaluated for gas pockets and/or thinning pipe wall thickness.

Hollywood Stormwater Pump Station Condition Assessment – Condition Assessment, Discharge Analysis, Hydraulic Modeling Analysis, and Piping Configuration Analysis Services

Contract Award: $199,472 **Period of Performance:** 2019-2022

Project Details

Name of Client:	City of Hollywood
Client's Representative:	Raul Wainer, PE
Address:	2600 Hollywood Blvd, Hollywood, FL 33020
Phone:	954.921.9390
Key Personnel:	Chris Zavatsky, PE; Ken Caban, PE

Tetra Tech provided engineering services to the City of Hollywood for stormwater pump station condition assessment. We prepared a technical memorandum of the City's 10 stormwater pump stations ranging in size and capacity between 10 HP to 60 HP and 400 GPM to 21,200 GPM. The scope of engineering services included the following:

Pump Station Condition Assessment: Each pump station (SW01-SW-10) was inspected and evaluated based on visual observation of the condition of the pump stations civil, mechanical, electrical, structural, and architectural infrastructure. An opinion of probable construction cost was provided for the recommended rehabilitation improvements.

Pump Station Discharge Analysis: The stormwater runoff volume for the Sub-basins contributing to each of the pump stations was computed.

Coastal Pump Stations Hydraulic Modeling Analysis: The existing City's stormwater model was converted from ICPR version 3 to version 4 and utilized for the hydraulic modeling of year 2020 and 2050 for five (5) of the pump stations in coastal area. These pump stations were SW-01, SW-02, SW-06, SW-07 and SW-09. Multiple model runs were studied under normal groundwater and King Tide conditions for the two different years. Model runs were performed incrementing the pump's capacity by 10 percent, 20 percent, and 30 percent.

Pump Station SW-06 and SW-08 Piping Configuration Analysis: Both pump stations SW-06 and SW-08 had a need to improve the discharge piping configuration. Two alternatives were provided to address this issue for each pump station

Hollywood Water Main Replacement Program – Surveying, Geotechnical, Design, Permitting, and Construction Administration Services

Contract Award: ~$3M **Period of Performance:** Professional Services, 2011-Ongoing •
Construction Cost: ~20M **Construction:** 2012-Ongoing

Project Details

Name of Client:	City of Hollywood
Client's Representative:	Wilhelmina Montero, PE

Address:	1621 N 14th Ave, Hollywood, FL 33019
Phone:	954.921.9390
Key Personnel:	Ken Caban, PE; Janine Alexander, PE

As part of the City of Hollywood Water Main Replacement Program, Tetra Tech is providing surveying, geotechnical evaluations, design, permitting, and construction administration services on multiple projects concurrently. To date, the program comprises over 300,000 linear feet (56 miles) of water main replacement, reconnection of over 1,000 service connections, conflict resolution for numerous underground and overhead utilities, permitting through multiple regulatory agencies, and construction within schedule and budget. The projects are also State Revolving Funded (SRF) projects, which included document control, payroll reviews, and compliance reviews for Davis Bacon, American Iron and Steel (AIS), and other funding requirements.

The improvements included replacing existing aged cast iron water mains with both DIP and PVC water mains, ranging from 4- to 24-inch in diameter. The existing water mains were located within residential streets, paved and unpaved alleys, and easements in the rear of residential lots, which had become overgrown or encroached upon by property owners. These improvements relocated existing water meters within unpaved alleys or rear easements to the front of the lots and included new water services within private property and replaced aged fire hydrants with new fire hydrants. The program also includes extensive maintenance of traffic (MOT), asphalt pavement, and pavement markings restoration and improvements.

Project Number	Linear Feet	Construction Cost	Water Services	Status	Permitting Agencies
1	27,000	$2.3 M	300	Constructed	Department of Health (DOH) Department of Transportation (DOT) City of Hollywood (COH)
2	99,000	$13 M (est.)	1,000	Constructed	COH, DOH, DOT
3	99,700	$13 M (est.)	1,000	Under Construction	COH, DOH, DOT, Broward County, Florida East Coast Railway
4	3,000	$1 M	N/A	Constructed	COH, Florida Department of Environmental Protection (FDEP) Broward County
5	70,000	N/A	N/A	Design	DOH, DOT, COH, Broward County

Hollywood Wastewater Program – Surveying, Geotechnical, Design, Permitting, and Construction Administration Services

Contract Award: ~1M	**Period of Performance:** Professional Services, 2017-Ongoing •
Construction Cost: ~10M	**Construction:** 2017-Ongoing

Project Details

Name of Client:	City of Hollywood
Client's Representative:	Wilhelmina Montero, PE
Address:	1621 N 14th Ave Hollywood, FL 33019
Phone	954.921.3930
Key Personnel:	Ken Caban, PE; Alberto Abarca, PE; Chris Zavatsky, PE

Tetra Tech is providing surveying, geotechnical evaluations, design, permitting, and construction administration services on multiple projects concurrently. To date, Tetra Tech's program project comprises over 50,000 linear feet of gravity sewers and force mains. The improvements included sewer expansion with new gravity sewers, ranging from 8- to 15-inch in diameter. Gravity sewer expansions included manholes, sewer laterals, and cleanouts at the property lines. In addition, lift stations were proposed or rehabilitated, along with new or replaced force mains. The gravity sewers and force mains were located within residential

streets. The program also includes extensive maintenance of traffic (MOT), asphalt pavement, and pavement markings restoration and improvements.

Royal Poinciana Septic to Sewer: Tetra Tech performed design, permitting, bidding, and construction administration services for ~27,000 feet of gravity mains and force mains between 8- and 15-inches in diameter. Plans also contained pavement removal and replacement, marking/striping plans, and maintenance of traffic details. Existing private lift stations and septic tanks were abandoned and connected to the new gravity sewers.

Pembroke Road to Hollywood Boulevard from SR 7 to S 52 Avenue: Tetra Tech performed design, permitting, bidding, and construction administration services for ~25,000 feet of gravity mains between 8- and 15-inches in diameter. Plans also contained pavement removal and replacement, marking/striping plans, and maintenance of traffic details. Existing septic tanks will be abandoned and connected to the new gravity sewers.

City of Hallandale Large User Meter 7 and Force Main Replacement: Tetra Tech performed final design, permitting, and construction administration services the replacement of ~3,000 feet of 10- through 12-inch diameter force main and meter along local City streets and across two FDOT right of ways. These improvements involve upgrading and upsizing the existing force main and meter to address increased wastewater flows due to increased redevelopment. The project included a horizontal directional drill of the force main under US 1. Permitting included FDOT utility, FDEP, Broward County, and City of Hollywood and Hallandale Building Departments.

Hollywood Beach Utility Infrastructure Improvements: Tetra Tech is performing final design, permitting, and construction administration services for replacement/rehabilitation of the existing 8-inch force main and lift stations. The project consists of ~8,000 feet of 12-inch diameter force main and replacement of one duplex lift statin, along local City streets and within FDOT right of ways. These improvements involve upgrading and upsizing the existing force main and lift station to address increased wastewater flows due to increased redevelopment. Permitting includes FDOT utility, FDEP, Broward County, and City of Hollywood Building Department.

Key Biscayne Stormwater & Resiliency Project – Stormwater Master Plan and Floodplain Management Plan Update Services

Design Service Fee: Varies by Task, $143k-$700k
Construction Cost: $24M

Period of Performance: Professional Services 2004 - 2020

Project Details	
Name of Client:	Village of Key Biscayne
Client's Representative:	Jose G. Lopez, PE (retired)
Address:	607 Ocean Dr Unit 8J Key Biscayne, FL 33149
Phone	786.351.2383
Key Personnel:	Ken Caban, PE; Rod Cashe, PE; Bill Musser, PE, CFM, PH

Tetra Tech has served as an integral part of the Village's growth and development since its creation. While southeast Florida county governments made steps toward addressing climate change, Tetra Tech worked closely with the Village of Key Biscayne to provide innovative, technical solutions with each study, design, calculation, and cost estimate. Our broad range of services has included studies, design, permitting, bidding and construction administration services and public outreach, as applicable. Related projects include:

- Outfall O-15R at 398 Harbor Drive: Design, permitting, cost estimates, bidding, and construction administration for a new 24-inch stormwater outfall within an existing easement along with backflow prevention device within a stormwater structure situated in the ROW to facilitate maintenance.
- Outfall O-16 at 260 Harbor Drive: Design, permitting, cost estimates, bidding, and construction administration for the removal and replacement of an 18-inch stormwater outfall within drainage easement along with backflow prevention device within a stormwater structure situated in the ROW.
- Pavement Rehabilitation: Construction plans and specifications, cost estimates, bidding and award support, and construction administration assistance for pavement overlay of streets east of Crandon Boulevard, involving milling/resurfacing and/or reconstruction of existing asphalt pavement along Ocean Lane Dr, East Heather Dr, Galen Dr, Sunrise Dr, East Enid Dr, Seaview Dr, and Grapetree Dr.
- West Wood Drive Traffic Calming Improvements: Design, bidding, and construction administration and inspection services for four traffic calming devices, including two circles and two speed tables.
- Drainage Improvements for Buttonwood Dr, Glenridge Rd, and Woodcrest Rd: Prepared revised plans and permitting for expansion of drainage basin for installation of additional storm drain pipes and inlets.
- Stormwater Master Plan Update: Update of existing stormwater master plan from 1993 involving hydraulic & hydrologic modeling, and GIS mapping given existing as-built and record drawings. Responsible for presenting team during RFQ shortlisting, obtaining Council approval through public presentations, maintaining communication, and assuring client needs and expectations were met.

Miami Police Department – South Station Parking Project – Design, Permitting, and Bidding Services

Design Service Fee: ~$104,000 **Period of Performance:** Professional Services 2020 - Ongoing
Construction Cost: ~$1.1M

Project Details

Name of Client:	City of Miami
Client's Representative:	Orlando Misas Project Manager
Address:	444 SW 2nd Ave Miami, FL 33130
Phone	305-416-1038
Key Personnel:	Diana Santander, PE; Chris Zavatsky, PE

Located at 2200 West Flagler Street, the Miami Police Department South Station serves five communities of the City of Miami (City): Coral Way, Flagami, Coconut Grove, Little Havana, and Brickell-Roads. The facility operates 24 hours per day constantly, regardless of the type of threat or emergency. Since its construction in 1990, the parking lot area has deteriorated as is evident from tree roots growing through the asphalt, overgrown landscaping, operating failure of the entry gates, and from overall use. The drainage system, currently over 30 years old, is said by the City to drain directly to groundwater via exfiltration trenches. Neither construction drawings nor as-built drawings are available. No surface waters (lakes, canals, etc.) exist on or adjacent to the property.

Tetra Tech is completing the design, permitting, and bidding for the improvements to the parking lot area, which will be completely remodeled. Specific tasks performed by Tetra Tech include:

- Installation of new drainage system and removal/abandonment of the existing drainage system
- Installation of a new covered parking area for 10 motorcycles

- Replacement of the existing lighting system: adding lighting at the gated areas and prisoner offloading area
- Installation of improved entry gates, widened vehicular entry and exist lanes, and circulation within the parking lot
- Performance technical specification for new security cameras, security gates, and the parking lot area
- Landscaping
- Minor repairs to the perimeter wall only where impacted by improvements to the entrances and coating the entire perimeter wall
- Sidewalk and ADA access to building, removing all sudden changes in elevation between the prisoner offloading area and the entrance to the building
- Asphalt, pavement markings, vehicular traffic signage, and designated parking signage
- In addition to zoning requirements, the City of Miami specifically requests the following parking requirements:
    - 23 reserved parking spaces: 1 – South District Major; 5 – Net Commander: Coral Way, Flagami, Coconut Grove, Little Havana, and Brickell-Roads; 2 – Field Duty Lieutenant; 5 – On-Duty Sergeant; 4 – Administrative Personnel; 1 – LPR; 3 – Rental Vehicles; 1 – SDSS Officer of the Month; and 1 other (to be confirmed)
    - Max 134 parking spaces – currently an average of 81 parking spaces are in use

Miami 21 and codes of other agencies having jurisdiction will govern the design and construction of the remodeled parking lot, landscaping, irrigation, electrical, covered parking, and the permits necessary for construction.

Pompano Beach Continuing Services Contract – General Engineering Services, Design, Permitting, Construction Administration	
Design Service Fee: $675,044	**Period of Performance:** Professional Services 2016 – Ongoing;
Construction Cost: ~$3,141,249	**Construction**: 2021 - Ongoing
Project Details	
Name of Client:	City of Pompano Beach
Client's Representative:	Randy Brown, PE
Address:	1205 NE 5th Ave Pompano Beach, FL 33060
Phone	(954) 545-7044
Key Personnel:	Chris Zavatsky, PE: Diana Santander, PE; Jason Burkett, PE

The following projects have been or are currently being completed by Tetra Tech on this continuing contract:

WTP Hurricane Hardening Study: Tetra Tech completed a facility-wide hurricane hardening evaluation for the WTP's manned buildings. Tetra Tech detailed deficiencies and capital improvements in line with Florida's Building Code. Cost estimates and a prioritized improvements schedule were developed to aid the City in planning implementation of the improvements.

WTP Filter and High Service Pumps 1-4 Building Hurricane Hardening Design: Tetra Tech provided engineering and architecture services to design the hurricane hardening project, including plans, calculations, specifications, and an opinion of probable cost. The improvements were permitted through the City Building Department and Fire Department. Tetra Tech assisted the City in bidding and awarding the project and providing construction phases services through project closeout.

WTP Chemical Feed Building Hurricane Hardening Design: Tetra Tech provided engineering and architecture services to design the hurricane hardening project. including plans, calculations, specifications, and an opinion of probable cost. The improvements are being permitted through the City Building Department and Fire Department. Tetra Tech assisted the City in bidding and awarding the project and providing construction phases services through project closeout.

WTP Sludge Dewatering Building Hurricane Hardening Design: Tetra Tech provided engineering and architecture services to design the hurricane hardening project, including plans, calculations, specifications, and an opinion of probable cost. The improvements are being permitted through the City Building Department and Fire Department. Tetra Tech assisted the City in bidding and awarding the project and providing construction phases services through project closeout.

WTP Filter Administration Building with Exterior Tanks and Membrane Building Hurricane Improvements Design: The City requested additional improvements to aid in reducing long term maintenance on the filter/administration building and exterior tanks. In addition, the membrane building's exterior façade, water proofing, drainage, electrical, and mechanical systems were included. Tetra Tech provided engineering and architecture services to design the hurricane hardening project including plans, calculations, specifications, and an opinion of probable cost. The improvements are being permitted through the City Building Department and Fire Department. Tetra Tech assisted the City in bidding and awarding the project and providing construction phases services through project closeout.

Southwest 6&7 Utility Expansion Program – Value Engineering, Design, Hydraulic Modeling, Permitting, Financial & Bidding Assistance, and Construction Management Services

Design Service Fee: $7.2M
Construction Cost: $72.5M

Period of Performance: 2012-2015; **Construction** 2013-2017

Project Details

Name of Client:	City of Cape Coral
Client's Representative:	Paul Clinghan
Address:	PO Box 150097 Cape Coral, FL 33915-0027
Phone	239-574-0464
Key Personnel:	Danny Nelson, PE; Roderick Cashe, PE; Fred Mittl, PE; Tyler Wainright, PE

The initial development for Cape Coral planned for more than 350,000 residential lots and a projected population of over 400,000. Today, the City has nearly 170,000 residents and is the third largest city geographically in the state of Florida. As development continued, centralized water and wastewater services were added. However, as development began to outpace the rate at which centralized services could be provided, water and wastewater service had to be provided through on-site wells and septic tank/drain field systems. Although the City did expand service as funds were available, the pace of growth far exceeded the utility extension pace. As such, the City developed and adopted a Utilities Master Plan that outlined the Utility Extension Program (UEP) in a phased approach that would ultimately extend water, wastewater, and irrigation water service to virtually all areas south of Pine Island Road (SR 78) and some areas north of Pine Island Road.

As part of the UEP, the City selected Tetra Tech to perform value engineering and plan adoption of the prior design, hydraulic modeling, financial assistance, bidding assistance (including assistance with pre-qualifying contractors), and construction management/construction engineering inspection (CEI) services for the Southwest 6 & 7 UEP. The project area consists of over 4 square miles and 200 miles collectively of infrastructure consisting of the following:

- 53 miles of 4-inch through 12-inch potable water mains (PVC)
- 65 miles of 4-inch through 30-inch irrigation water mains (PVC)
- 12 miles of 4-inch through 12-inch wastewater force mains (PVC)
- 60 miles of 8-inch through 24-inch wastewater gravity collection piping (PVC)
- 10 miles of 12-inch through 42-inch stormwater pipe (HDPE and RCP)
- 18 wastewater lift stations
- 60 miles of new road construction

Florida Keys SCADA Miscellaneous Services – Miscellaneous SCADA Services	
Design Service Fee: $40k **Construction Cost:** N/A	**Period of Performance:** 2021-2022; **Construction:** N/A
Project Details	
Name of Client:	Florida Keys Aqueduct Authority
Client's Representative:	Reyner Lopez
Address:	1100 Kennedy Drive Key West, FL 33040
Phone	305-778-9753
Key Personnel:	Ken Caban, PE; Jessica Knight, PE; Phong Hoang

Tetra Tech provided control system program maintenance services, changes to process controls as determined by FKAA, documentation review, enhancements, upgrades, optimization, network support services, historical reporting services, and other management and information solution (M&IS) services as requested.

FKAA utilizes Aveva InTouch, Schneider Electric Modicon PLCs, Schneider Electric Vijeo, Aveva Historian, and MDT Autosave.

Water and Sewer Commercial Corridors Basis of Design Reports – Preparation of 18 BODRs for Design & Construction Services	
Design Service Fee: $2.5M **Construction Cost:** N/A	**Period of Performance:** 2015-2022; **Construction:** N/A
Project Details	
Name of Client:	Miami-Dade County Water and Sewer Department
Client's Representative:	Josenrique Cueto, PE
Address:	701 NW 1st Court Miami, FL 33136
Phone	786-498-9600
Key Personnel:	Diana Santander, PE; Chris Zavatsky, PE; Alberto Abarca, PE; Tim Vanderwalker, PE

Tetra Tech provided services to Miami-Dade County Water and Sewer Department for the preparation of 18 Basis of Design Reports (BODRs) for the design and construction of water and sewer infrastructure improvements within commercial and industrial corridors in Miami-Dade County to promote development of industries eligible for the Targeted Jobs Incentive Fund Program. Tetra Tech used existing data including as-built documentation, geographic information systems (GIS), light detection and ranging (LIDAR), and available environmental and geotechnical information for the preparation of the BODRs. In addition, Tetra Tech received input and coordinated the proposed layouts with several stakeholders, including other County

agencies, the Florida Department of Transportation, other municipalities, and various MDWASD sections and divisions.

The BODRs also considered climate risk considerations, in particular those associated with the 50-year projected sea level rise, storm surge, and flooding. Specific activities performed included:

- Developing base mapping and include readily available parcel and right-of-way information using available GIS and identify areas where easements could be required
- Coordinating with municipal jurisdictions and special requirements as provided by the local municipalities
- Coordinating with regulatory agencies having jurisdiction of the project
- Developing proposed horizontal alignment of sanitary sewer gravity mains and potential force main based on the preliminary data collected and show on an aerial base map, taking into consideration the regulatory separations and slopes required by MDWASD design standards
- Coordinating with Sunshine One Call to obtain list of utility companies providing services in the project area
- Identifying potential conflicts based on information received with existing utilities and highlighting these conflicts on the base mapping plans
- Selecting pipe material and collection methods
- Identifying required permits
- Preparing cost estimates for each of the identified project areas following the American Association of Cost Engineers (AACE) Class 3 standards
- Reviewing available funding to implement these projects as well as any scheduling requirements. Each project was evaluated for opportunities to expedite implementation through conventional design-bid-build or design-build mechanisms

The BODR for each of the projects described the purpose, assumptions, and criteria for calculations, cost estimates, and recommended improvements. In addition, the BODRs contained discussions of the reported existing conditions, proposed feasible methods for construction and key engineering, and construction considerations.

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:** 2021-Present; **Construction:** N/A
Construction Cost: $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; Ken Caban, 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 ever 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.

Injection Well and ASR Evaluation for Effluent Disposal - City of Largo

Design Service Fee: $1.5M **Period of Performance:** 2019; **Construction:** N/A
Construction Cost: $5.5M (Estimate)

Project Details	
Name of Client:	City of Largo, FL
Client's Representative:	Jerald Wolozynski, PE
Address:	201 Highland Avenue Largo, FL 33779
Phone	727-587-6713
Key Personnel:	Charles Drake, PG; Miguel Garcia, PG

In 2019, the City of Largo retained Tetra Tech under their continuing services contract to attend meetings, prepare documents to evaluate the use of deep injection wells, and/ or ASR to dispose of excess reclaimed water and reduce reliance on discharge to Feather Sound. The services included deep injection well cost estimates, disposal capacities, injection and monitor well construction requirements and details, FDEP meetings, and preparation of a technical memorandum.

Tetra Tech met with the City to discuss conceptual injection well and ASR well designs and capacities, and where these wells could be located on the City's WWRF campus and outside of the WWRF in the distribution system. We prepared an abbreviated area of review to determine if there were any issues that would need to be resolved prior to submitting an application for a Class I injection well construction and testing permit.

The abbreviate AOR was prepared and was reviewed with the FDEP at an informal meeting to brief them on the City's efforts to resolve their disposal issue. Tetra Tech prepared graphics for City staff to use in a to the City Council at the December 10, 2019, workshop. Tetra Tech explained the purpose of injection wells and

how they are designed and the safety of injection wells. The City decided to not move forward with injection wells at that time.

In 2021, after Senate Bill 64 was signed into law and surface water discharges had to cease by 2032, the City of Largo requested that Tetra Tech prepare a technical memorandum to outline the process and project schedule of designing, permitting, constructing, testing, and putting into operation an injection well system. The injection well system would eliminate excess reclaimed water discharges to Feather Sound, which would be used only in emergencies. This technical memorandum outlines the major tasks, timeline and estimated costs associated to design, permit, construct and test the injection well system and place into production under an FDEP Operation Permit. It also describes similar processes for aquifer storage and recovery well system design, permitting, construction, and testing. The technical memorandum did not include the cost of yard piping and above grade facilities.

Lee County Landfill, Southwest, FL – Integrated Waste Management System (IWMS) Expansion project

Contract Award: ~$900,000 **Period of Performance:** 08/2019 - 03/2022

Project Details	
Name of Client:	Solid Waste Resource Recovery
Client's Representative:	Rebecca Rodriguez
Address:	10550 Buckingham Rd, Fort Myers, FL 33905
Phone	239-839-1799
Key Personnel:	Don Hullings, PE; Diana Santander, PE; Jennifer Deal, PE; Mark Swyka, PE; and Doug Allen

Tetra Tech assisted Lee County, Florida with its Integrated Waste Management System (IWMS) Master Plan project. The project identified and evaluated available technologies to expand, supplement, or replace the County's existing infrastructure to manage the community's solid waste management needs into the next 20-40-year horizon. Currently, the County's IWMS manages approximately 800,000 tons annually and provides services to about 660,000 residents.

Tetra Tech evaluated County growth rates along with expected changes regarding the quantity and type of waste that is generated in our society and in Lee County. The study carefully considered future capacity requirements that can meet the County's needs. The program included evaluating current assets, including landfills, transfer stations, and a mulching/composting operation. Tetra Tech also benchmarked a variety of operations against other counties and municipality operations.

Tetra Tech reviewed all operating costs including sub-consultant agreements and assisted the County with allocating costs into cost centers so the true cost of providing services could be assessed. We also provided alternative costs and developed 4 options with different focus including maximizing recycling, expanding waste-to-energy, landfill expansion, and status quo. The team worked with the bond revenue engineer on developing impacts to the County and bonding for the various options. The Tetra Tech team submitted a final report to the County, which is currently considering recommendations

North Dade Landfill – Construction Quality Assurance (CQA) Services for Gas Collection and Control System

Design Service Fee: ~$213,000 **Period of Performance:** Professional Services 11/2020 – 09/2021; Construction Services 11/2021 – Ongoing

Project Details	
Name of Client:	Miami-Dade County Department of Solid Waste Management
Client's Representative:	Achaya Kelapanda, PE
Address:	2525 NW 62nd Street, Suite 5100, Miami, FL 33147

Phone	305.514.6687
Key Personnel:	Diana Santander, PE; Don Hullings, PE; Thomas Bilgri, PE

The NDL is an approximately 180-acre Class III, Sanitary Landfill bounded by the Florida Turnpike Homestead Extension to the north, NW 47th Avenue to the east, NW 57th Avenue to the west, and Snake Creek Canal to the south. The Facility has a total area of 269 acres (Miami-Dade County Folio 30-1131-001-0010). The site consists of two cells, East and West. The East Cell is approximately 100 acres, lined with 80 mil high density polyethylene (HDPE) liner and is active. It has been permitted to a 135 feet National Geodetic Vertical Datum (NGVD) elevation. The West Cell is approximately 80 acres, unlined and closed with a 2-foot limestone cap. It is permitted to a 95 feet NGVD elevation. Tetra Tech provided CQA services and certification of GCCS of this landfill. The construction included approximately 1,800 linear feet of drilling and 16,000 linear feet of pipe installation. Tetra Tech prepared a Construction Documentation Report (CDR) for the LFG system improvements and modifications for submittal to the Florida Department of Environmental Protection (FDEP).

South Dade Landfill, Miami, FL – Landfill Gas System

Contract Award: $213,000	**Period of Performance:** Professional Services 03/2020 – Ongoing;
Construction Cost: $2.9M	Construction Services 11/2021 – Ongoing

Project Details

Name of Client:	Miami-Dade County Department of Solid Waste Management
Client's Representative:	Achaya Kelapanda, P.E.
Address:	2525 NW 62nd Street, Suite 5100, Miami, FL 33147
Phone	305-514-6687
Key Personnel:	Diana Santander, PE; Don Hullings, PE; Thomas Bilgri, PE

The SDLF is located at 23707 S.W. 97th Avenue just west of the Black Point Marina in southeastern Miami-Dade County. According to the USGS Perrine, Florida 7.5 – Minute Series Quadrangle Map, the site lies within Section 21, Township 56 South, Range 40 East. The approximate 200-acre site is bounded by S.W. 97th Avenue on the west, S.W. 248th Street on the south, the C-1 (Black Creek) Canal on the north, and a borrow canal on the east. This Class I municipal solid waste landfill consists of five cells. Cells 1 and 2 were closed in 1997, Cell 3 was closed in 2010, Cell 4 is in active operation by the DSWM, and Cell 5 is currently under construction. Tetra Tech performed the design of the gas collection and control system (GCCS) for Cells 4 and 5 and a new flare for the management of the gas from Cell 4 and 5.

Cedar Trail Landfill, Solid Waste Services – Engineering and Environmental services

Contract Award: ~$2M	Period of Performance: Professional Services, 2014-Ongoing • Construction, 2021-2022

Project Details

Name of Client:	Republic Services of Florida, LP
Client's Representative:	Randy Sherman, PG
Address:	1000 St. Marks Pond Boulevard, St. Augustine, FL 32095
Phone	904-704-2089
Key Personnel:	Jennifer Deal, PE

Tetra Tech has been providing ongoing engineering services for the Republic Services Cedar Trail Landfill since 2014. These services include, but are not limited to, the following:

- Provided landfill construction quality assurance services for multiple double composite lined landfill cells (Cell 12 highlighted in the table above), including review of field documentation, soil and geosynthetic material testing, and preparation of the construction certification reports.
- Prepared and construction plans, construction quality assurance plan, and technical specifications for multiple double composite lined landfill cells. Also provided engineering support during construction.
- Prepared conceptual landfill expansion plans, including capacity calculations and estimated construction costs.
- Prepared permit modification documents for the Florida Department of Environmental Protection solid waste construction and operations permits and modifications to the environmental resource permits.
- Completed extensive soil due diligence studies in support of a land transaction, including logging of sonic borings, soil geotechnical testing, calculation of soil volumes, and preparation of summary reports.
- Completed annual stormwater inspection services and certification of stormwater system components associated with landfill cell construction projects.
- Installed multiple groundwater monitoring wells and completed initial groundwater sampling.
- Provided assistance with customer audits.
- Provided ongoing general compliance and operations support.

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

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

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.

Key West Ferry Terminal Extension – Surveys, Coordination with US 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 US 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 US 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 Rest Beach Seawall – Topographic and Bathymetric survey, Vegetation Survey, Stormwater study, Permitting Agencies Coordination, Design, Mitigation Plan

Design Service Fee: $250,000 **Period of Performance:** Professional Services, 2016 • Construction, 2017
Construction: $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:	Richard Czlapinski, PE; Stuart McGahee, PE; Francisco Martinez

The City of Key West and Tetra Tech evaluated several potential solutions to address ongoing erosional impacts that were gradually moving the shoreline landward and endangering the Atlantic Boulevard right-of-

way. Atlantic Boulevard serves as a primary evacuation/emergency response route out of the City of Key West in the event of a hurricane. The two options that were finally considered and presented to the state permitting agencies for their input were continuous rip-rap armoring along the shoreline and a vertical seawall. The State of Florida required the use of a vertical seawall to prevent any possible hazard that could befall a potentially nesting sea turtle. The existing beach was considered marginal nesting habitat (because of the relatively thin layer of beach sand overlaying the cemented coral hardpan does not provide for nest development). Nonetheless, the vertical seawall was selected because it would strictly limit sea turtle access to the uplands.

The project itself involved collecting detailed topographic and bathymetric survey data for the beach and the waters in the area near the pier. This data was used to develop a wave run up study to determine how much of the Atlantic Boulevard right-of-way would be inundated by stormwater conditions. Using this information and coordination with the permitting agencies, a cantilevered seawall design was developed. The existing upland vegetation was surveyed and cataloged, and a mitigation plan was developed to account for the few palm tress and shoreline grasses that would be impacted during the construction process.

Construction of the wall involved clearing the beach of vegetation that was damaged during Hurricane Irma in a strip just wide enough to support the excavator and vibratory hammer/power-unit. The steel cantilevered sheet pile was then vibrated into place, and the cap was formed and poured. Finally, suitable beach sand was brought in to backfill behind the seawall and the vegetation was replanted. Several of the park's picnic table pavilions were damaged during the hurricane and were also replaced as part of this project.

- Coastal armoring provided by seawall installation to protect main evacuation route out of Key West.
- Seawall was over 650 feet long and was needed to close a gap in between the White street pier and condominiums to the northeast.
- The unprotected shoreline has traditionally suffered from scouring created by swirling waters around the pier during heavy weather events.

Key West Half Shell Bar – Upland, Bathymetric and Submerged Resource Surveys, Construction Oversight	
Design Service Fee: $70k **Construction**: $600k	**Period of Performance:** Professional Services, 2016 • Construction, 2017
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.

College Road Housing Project – LBP & Asbestos Surveys, Phase I/II Environmental Assessments, Site Assessment & Voluntary Source Removal

Design Service Fee: $200K
Construction Cost: $1M

Period of Performance: Professional Services 2019-2020

Project Details

Name of Client:	City of Key West
Client's Representative:	Albi Balliu, Steve McAlearney
Address:	1300 White St. Key West, FL 33040
Phone	305.809.3962
Key Personnel:	David Frodsham, PE; Francisco Martinez, PE

Tetra Tech provided a variety of remediation and assessment services in support of the City of Key West's efforts to develop a housing project on the former Mosquito Control property located on College Rd. Tetra Tech provided a Lead & Asbestos survey to support the demolition of on-site structures to make way for the proposed development. Phase I and Phase II assessment of the property have also been delivered in support of underwriting requirements. Tetra Tech developed a Voluntary Source Removal (VSR) Plan and interfaced with FDEP on behalf of the City and been accepted by the FDEP. Tetra Tech self-performed the implementation of the VSR, beginning in early January 2020. Furthermore, Tetra Tech performed a Site Assessment Report (SAR) on the facility, also in support of financing requirements. Tetra Tech brokered a shared vision with the FKAA, City, and County entities for successful remediation of the property in support of the City's initiative to provide workforce housing.

Fort Pierce Marina and Storm Protection Islands Design and Construction Management Services, Fort Pierce, FL

Design Service Fee: $5M
Construction Cost: $18.8M

Period of Performance: Professional Services 2005-Present ; Construction Services 2011-2014

Project Details

Name of Client:	City of Fort Pierce
Client's Representative:	Edward Seissiger
Address:	100 North US Highway 1, Fort Pierce, FL 34954
Phone	772.460.2200 ext. 157
Key Personnel:	Richard Czlapinski, PE; Georgia Vince; Brian Proctor; Stuart McGahee, PE; Patrick Zuloaga; Dave Frodsham, PE; Francisco Martinez, PE

Tetra Tech was selected to design, permit and perform construction management services, including Construction Engineering Inspections (CEI) for the City of Fort Pierce Marina and Storm Water Protection Islands.

In the fall of 2004, the City of Fort Pierce marina was completely destroyed by Hurricanes Frances and Jeanne. The marina comprises a boat basin of 21 acres and is a vital component of the City's waterfront redevelopment efforts. The City retained Tetra Tech to handle the design and permitting of the reconstruction and expansion of the City of Fort Pierce Marina, as well as temporary facilities to protect the interior marina while the outer marina and its associated wave protection components are constructed.

Tetra Tech has designed an island breakwater system to provide wave and current protection for the marina. The protection system includes an artificial island complex that will serve as a first line breakwater system and will include mangrove plantings, tidal lagoon features and an artificial reef area. The island system will also involve the beneficial reuse of dredged material. The design of the islands incorporated hydrodynamic modeling, field data collection and sampling, turbidity modeling, and a scaled physical model to ensure the island design would withstand a 100 year storm. The development and approval of this project required close coordination with FEMA, the U.S. Army Corps of Engineers and Florida Department of Environmental Protection and provided significant regulatory challenges

CEI services for the project including weekly underwater inspections, above water surveys, reviewed work plans, RFI's, acceptance reviews and meetings with the City and consultants performing the activities including the seagrass, mangrove and dune vegetation mitigation components. Tetra Tech successfully reduced and eliminated change orders during the implementation of the Fort Pierce Marina and Storm Protection Islands project. This was achieved by ensuring a shared vision with the City of Ft. Pierce, the design engineer and the various contractors working on the project. Weekly team meetings were held to address issues and to ensure the scope of work and level of effort were understood by all parties. The weekly meetings provided all parties the opportunity to clarify the expected scope, schedule and budget, thus ensuring all parties met the scope, schedule and budget. Through a value engineering exercise, Tetra Tech was able to provide $1,000,000 dollars in cost savings for the City of Ft. Pierce. Tetra Tech continues to assist the City of Fort Pierce with compliance monitoring of the facility.

Exhibit A - Sworn statements and affidavits

Use or disclosure of data contained on this page is subject to the restriction on the title page of this proposal.

THE CITY OF KEY WEST
Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3883

ADDENDUM NO. 1

Engineering Services RFQ 2022

This addendum is issued as supplemental information to the Request for Qualifications package for clarification of certain matters of both a general and a technical nature. The referenced Request for Qualifications package is hereby amended in accordance with the following items:

1) Question: Are sub-consultants only to be shown as supplemental staff to the prime or are we to include only in-house staff? There is some confusion per "A.3 Ability to provide required services with in-house staff."
   Response: Both in-house staff and sub-consultants should be listed. A.3 highlights that the ability for in-house staff to provide services will be part of the selection criteria, so in-house capabilities are of value.

2) Question: Does the City plan to provide an extension due to the Thanksgiving holiday?
   Response: The original deadline was 11/23 and has already been extended for the holiday to 11/30.

3) Question: Will the City include covers, tabs, and table of contents in the 40-page max?
   Response: The items listed will not be included in the 40-page limit.

4) Question: Can a firm serve as both sub and prime?
   Response: To avoid any conflicts of interest, the City will not accept proposals where consultants considered the prime are listed as sub-consultants on other proposals.

5) Can the City please confirm the deadline for clarification; the RFP stats Oct. 21, 2022.
   Response: The deadline for clarification is November 21, 2022.

Prior to final award, proposers shall acknowledge receipt and acceptance of all Addendums. Proposals submitted without acknowledgement may be considered non-responsive.

Signature

Tetra Tech
Name of Business

THE CITY OF KEY WEST
Post Office Box 1409 Key West, FL 33041-1409 (305) 809-3883

ADDENDUM NO. 2

Engineering Services RFQ 2022

This addendum is issued as supplemental information to the Request for Qualifications package for clarification of certain matters of both a general and a technical nature. The referenced Request for Qualifications package is hereby amended in accordance with the following items:

1) **Question:** Can the City confirm if staff resumes are included in the 40 single-page limit?
Response: Pages used for organizational and formatting purposes, like cover sheets, table of contents, section headers, etc. and required forms like sworn statements and affidavits are not included in the page limit. Content to be considered for ranking, such as company and staff information and background, resumes, past projects, references, etc. are to be included in the page limit.

2) **Question:** Can 11"x17" pages be used? If so, how many 11"x17" pages will count towards the 40 single-page limit?
Response: The proposal should consist of standard 8.5"x11" pages. Pages can be displayed in landscape orientation if desired.

3) **Question:** Due to the page limit on the proposal, will the City consider resumes for personnel identified on the Organization Chart be excluded from the page count in the proposal?
Response: All resumes will be included in the page count.

4) **Question:** Do resumes have to be provided for everyone identified on the Organization Chart or only key personnel?
Response: Resumes are not required for all personnel.

5) **Question:** There are several office closures in place for staff to prepare for Tropical Storm Nicole. Would the City consider moving the submission date another week to have sufficient time to put proposals together?
Response: The proposal due date has been changed to 12/7/2022 at 3PM.

Prior to final award, proposers shall acknowledge receipt and acceptance of all Addendums. Proposals submitted without acknowledgement may be considered non-responsive.

Signature

Tetra Tech
Name of Business

Exhibit A

Affidavits

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 28th day of November , 2022

NOTARY PUBLIC, State of Florida

My commission expires:

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

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

28th day of November, 2022.

_____

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 12/23/22

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

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 City of Key West RFQ No. 22-006 General Engineering Services (print individual's name and title)

   by Tetra Tech

   (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

   95-4148514

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

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).

__X__ 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.

(SIGNATURE)

11/28/2022
(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
28th day of November, 2022

NOTARY PUBLIC

My commission expires:

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

STATE OF Florida)

: SS

COUNTY OF Martin)

I, the undersigned hereby duly sworn, depose and say that the firm of Tetra Tech

provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses, per City of Key West Code of Ordinances Sec. 2-799.

By: _____

Sworn and subscribed before me this 28th day of November 20 22 .

NOTARY PUBLIC, State of Florida at Large

My Commission Expires:

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

CONE OF SILENCE AFFIDAVIT

Pursuant to City of Key West Code of Ordinances Section 2-773 (attached below)

STATE OF Florida)
: SS
COUNTY OF Martin)

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

28th day of November, 20 22.

Marirose Insogna
NOTARY PUBLLIC, State of Florida at Large

My Commission Expires: 12/23/22

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

Sec. 2-773. Cone of Silence.

(a) *Definitions.* For purposes of this section, reference to one gender shall include the other, use of the plural shall include the singular, and use of the singular shall include the plural. The following definitions apply unless the context in which the word or phrase is used requires a different definition:

(1) *Competitive solicitation* means a formal process by the City of Key West relating to the acquisition of goods or services, which process is intended to provide an equal and open opportunity to qualified persons and entities to be selected to provide the goods or services. Completive solicitation shall include request for proposals ("RFP"), request for qualifications ("RFQ"), request for letters of interest ("RFLI"), invitation to bid ("ITB") or any other advertised solicitation.

(2) *Cone of silence* means a period of time during which there is a prohibition on communication regarding a particular competitive solicitation.

(3) *Evaluation or selection committee* means a group of persons appointed or designated by the city to evaluate, rank, select, or make a recommendation regarding a vendor or the vendor's response to the competitive solicitation. A member of such a committee shall be deemed a city official for the purposes of subsection (c) below.

(4) *Vendor* means a person or entity that has entered into or that desires to enter into a contract with the City of Key West or that seeks an award from the city to provide goods, perform a service, render an opinion or advice, or make a recommendation related to a competitive solicitation for compensation or other consideration.

(5) *Vendor's representative* means an owner, individual, employee, partner, officer, or member of the board of directors of a vendor, or a engineer, lobbyist, or actual or potential subcontractor or sub-consultant who acts at the behest of a vendor in communicating regarding a competitive solicitation.

(b) *Prohibited communications.* A cone of silence shall be in effect during the course of a competitive solicitation and prohibit:

(1) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the city's administrative staff including, but not limited to, the city manager and his or her staff;

(2) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and the mayor, city commissioners, or their respective staff;

(3) Any communication regarding a particular competitive solicitation between a potential vendor or vendor's representative and any member of a city evaluation and/or selection committee therefore; and

(4) Any communication regarding a particular competitive solicitation between the mayor, city commissioners, or their respective staff, and a member of a city evaluation and/or selection committee therefore.

(c) *Permitted communications.* Notwithstanding the foregoing, nothing contained herein shall prohibit:

(1) Communication between members of the public who are not vendors or a vendor's representative and any city employee, official or member of the city commission;

(2) Communications in writing at any time with any city employee, official or member of the city commission, unless specifically prohibited by the applicable competitive solicitation.

(A) However, any written communication must be filed with the city clerk. Any city employee, official or member of the city commission receiving or making any written communication must immediately file it with the city clerk.

(B) The city clerk shall include all written communication as part of the agenda item when publishing information related to a particular competitive solicitation;

(3) Oral communications at duly noticed pre-bid conferences;

(4) Oral presentations before publicly noticed evaluation and/or selection committees;

(5) Contract discussions during any duly noticed public meeting;

(6) Public presentations made to the city commission or advisory body thereof during any duly noticed public meeting;

(7) Contract negotiations with city staff following the award of a competitive solicitation by the city commission; or

(8) Purchases exempt from the competitive process pursuant to section 2-797 of these Code of Ordinances;

(d) *Procedure.*

(1) The cone of silence shall be imposed upon each competitive solicitation at the time of public notice of such solicitation as provided by section 2-826 of this Code. Public notice of the cone of silence shall be included in the notice of the competitive solicitation. The city manager shall issue a written notice of the release of each competitive solicitation to the affected departments, with a copy thereof to each commission member, and shall include in any public solicitation for goods and services a statement disclosing the requirements of this ordinance.

(2) The cone of silence shall terminate at the time the city commission or other authorized body makes final award or gives final approval of a contract, rejects all bids or responses to the competitive solicitation or takes other action which ends the competitive solicitation.

(3) Any city employee, official or member of the city commission that is approached concerning a competitive solicitation while the cone of silence is in effect shall notify such individual of the prohibitions contained in this section. While the cone of silence is in effect, any city employee, official or member of the city commission who is the recipient of any oral communication by a potential vendor or vendor's representative in violation of this section shall create a written record of the event. The record shall indicate the date of such communication, the persons with whom such communication occurred, and a general summation of the communication.

(e) *Violations/penalties and procedures.*

(1) A sworn complaint alleging a violation of this ordinance may be filed with the city attorney's office. In each such instance, an initial investigation shall be performed to determine the existence of a violation. If a violation is found to exist, the penalties and process shall be as provided in section 1-15 of this Code.

(2) In addition to the penalties described herein and otherwise provided by law, a violation of this ordinance shall render the competitive solicitation void at the discretion of the city commission.

(3) Any person who violates a provision of this section shall be prohibited from serving on a City of Key West advisory board, evaluation and/or selection committee.

(4) In addition to any other penalty provided by law, violation of any provision of this ordinance by a City of Key West employee shall subject said employee to disciplinary action up to and including dismissal.

(5) If a vendor is determined to have violated the provisions of this section on two more occasions it shall constitute evidence under City Code section 2-834 that the vendor is not properly qualified to carry out the obligations or to complete the work contemplated by any new competitive solicitation. The city's purchasing agent shall also commence any available debarment from city work proceeding that may be available upon a finding of two or more violations by a vendor of this section. *(Ord. No. 13-11, § 1, 6-18-2013)*

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 Engineer, 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 of 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

Address: 759 SW Federal Hwy. Ste. 314; Stuart, FL 34994

Signature

Brian Proctor
Print Name

11/28/2022
Date

VP, SC Operations Manager
Title

NOTARY FOR THE PROPOSER

STATE OF Florida

COUNTY OF Martin

The foregoing instrument was acknowledged before me this 28th day of November, 2022. By, of Brian Proctor (Name of officer or agent, title of officer or agent) Name of corporation acknowledging)

or has produced_____as identification.

Signature of Notary

Marirose Insogna
NOTARY PUBLIC
STATE OF FLORIDA
Comm# GG277717
Expires 12/23/2022

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

Supporting documents to: City of Key West Purchasing

Title or Rank