



CITY OF FORT LAUDERDALE

REQUEST FOR QUALIFICATIONS CITY OF FORT LAUDERDALE INTRACOASTAL WATERWAY LAS OLAS MARINA DREDGING PROJECT

RFQ # 946-11484

SEPTEMBER 26, 2014



SUBMITTED TO

FORT LAUDERDALE CITY HALL
DIVISION OF PROCUREMENT SERVICES
100 N. ANDREWS AVENUE, ROOM 619
FORT LAUDERDALE, FLORIDA 33301-1801

PREPARED BY

TETRA TECH, INC.
1901 S. CONGRESS AVE., SUITE 200
BOYNTON BEACH, FL 33426
PHONE 561.735.0482



TETRA TECH

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1.0 PROPOSAL LETTER OF INTEREST

September 26, 2014

Fort Lauderdale City Hall
Procurement Services Division
C/o Mr. Ronald Archey
100 N. Andrews Avenue, #619
Fort Lauderdale, FL 33301

Subject: Response to the Request for Qualifications for Civil/Environmental Engineering Services for City of Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project

Dear Mr. Archey:

Tetra Tech, Inc. (Tetra Tech) is pleased to provide this response to the Request for Qualifications for Civil/Environmental Engineering Services for the City of Fort Lauderdale Intracoastal Waterway – Las Olas Marina Dredging project. We have assembled a qualified, experienced team to assist the City of Fort Lauderdale (City) with all required tasks to move the project from the planning stage, through permitting, to project construction. These professionals have provided design and permitting services for similar projects throughout South Florida, including work at the Las Olas Marina, and will be able to apply the lessons learned from previous project experiences to the permitting challenges faced by the City. The Tetra Tech Teams' experience and understanding of complex dredging projects as well as their extensive long-term relationships with regulatory agency personnel at the state and federal agencies will help to facilitate an efficient and effective regulatory process. Below are some of the key strengths and values our team can bring to the project.

Tetra Tech proposes **RICHARD CZLAPINSKI, PE, D. CE** as Project Manager and Engineering Lead. Mr. Czapinski has 42 years of experience in coastal engineering. He specializes in dredging studies and design, small craft harbor and port facilities design and hydrodynamic modeling. During his career, he has been a project manager and/or project engineer on numerous dredging projects ranging from a few thousand to several million cubic yards.

Mr. **MICHAEL BARNETT, PE, D. CE**, will act as our Coastal Engineering Consultant on the project. Mr. Barnett is a Senior Coastal Engineer and Project Manager with Tetra Tech. He began work with Tetra Tech in September 2011 after a nearly 8-year career as the Bureau Chief of the Florida Department of Environmental Protection's Bureau of Beaches and Coastal Systems. Prior to his public service with the state of Florida, Mr. Barnett served as a coastal engineering consultant for 12 years.

Ms. **ERIN HAGUE, CEP, REP**, will assist Mr. Czapinski with overall project management as Deputy Project Manager. Ms. Hague has 17 years of experience in environmental consulting services, with a particular emphasis on coastal protection and improvement projects. As Project Manager and Senior Scientist, she has contributed to the successful planning and implementation of large and small-scale projects involving the preparation of Feasibility Studies, mitigation and impact analyses, and Environmental Assessments and Environmental Impact Statements prepared in accordance with National Environmental Policy Act (NEPA).

Ms. **JAYNE BERGSTROM** will serve as the Permitting Lead for the project. Ms. Bergstrom has over 18 years of experience in environmental permitting and environmental resource management. She has permitted large-scale projects from both the public service and private sector perspective. She worked for 10 years for the Florida Department of Environmental Protection (FDEP) within the Submerged Lands and Environmental Resource Program. During her last four years, she served as the Southeast District Office Environmental Manager. Ms. Bergstrom also worked at the South Florida Water Management District as the Section Administrator, in the Office of Everglades Policy and Coordination where she served in a management role responsible for leading the Permitting and Compliance section. The section was in charge of obtaining regulatory approvals for *all* projects constructed by the District.

Mr. **CRAIG KRUEMPEL** is proposed as the Project Environmental Lead. Mr. Kruempel has more than 28 years of experience providing clients with coastal zone resource planning, documentation, permitting, and monitoring services. His extensive experience includes the development and implementation of comprehensive characterization, monitoring, and restoration program documents with an emphasis on natural and artificial marine hardbottom habitats. Mr. Kruempel has over 26 years of compliance and coordination experience implementing the NEPA regulations for federal agency actions; with a comprehensive understanding of State and Federal coastal resource permitting requirements.

We hope that you will agree that our Tetra Tech professionals are uniquely qualified and have the specific engineering and permitting experience to successfully complete the City's project. In addition, the project team is based in close proximity to Fort Lauderdale, in Boynton Beach and Delray Beach, and will be available to coordinate closely with the City throughout the life of the project. In addition, we have an office located within Fort Lauderdale in which the project team would be able to work from during the course of the project

Tetra Tech believes that the most important element in providing outstanding project implementation, management and oversight is to develop a Shared Vision of the four basic project objectives (scope, schedule, budget, and level of quality) and then to implement a strategy to ensure each of these objectives are met. Our success in providing exceptional project management and delivery to clients can be attributed to our commitment to the following:

- ✓ **PROVIDING HIGHLY QUALIFIED AND SKILLED PROJECT PROFESSIONALS.** In addition to extensive academic credentials, our senior Project Professionals are required to attend a series of rigorous Project Management courses that cover all aspects of managing multiple complex projects.
- ✓ **DETAILED PROJECT INITIATION PROCEDURES.** This includes processes such as definition of the scope of work in coordination with the County, internal team project readiness review meetings, kick-off meetings with the client to ensure a shared vision of the project objectives, and development of a Work Breakdown Structure (WBS) that organizes detailed work elements into logical time sequences and milestones. The elevated level of detail Tetra Tech affords to these processes has helped identify cost reduction and time-saving measures for several of our government clients.
- ✓ **CONTINUAL PROJECT OVERSIGHT, SCHEDULING AND ABILITY TO MEET ESTABLISHED DELIVERABLE DATES.** Tetra Tech has repeatedly demonstrated the ability to comply with performance schedules, even when clients adjust milestones to meet more aggressive project goals or expand the scopes of their projects. During project operations, Tetra Tech incorporates a variety of oversight measures to ensure project schedules, budgets, expected level of quality, and scopes of work are met. Some examples of these measures include senior level technical review of all deliverables, and regular project status meetings with Clients and team members.



- ✓ **OPEN LINES OF COMMUNICATION.** Tetra Tech emphasizes the need for early and effective communication between team members. Early and effective communication can assist in identifying cost saving measures, means to advance schedules, and may lead to the early resolution of potential project challenges. The PM will communicate weekly, or as frequently as necessary, with the County PM on key issues.
- ✓ **HEALTH AND SAFETY.** Tetra Tech integrates Health and Safety components into all aspects of our operations. For task orders involving field activities, a Site Specific Health and Safety Plan (HASP) will be prepared which will address project specific health and safety concerns and preventative measures to be employed by all field personnel. The HASP will take into account the hazards inherent to the planned field activities (e.g., severe weather, biological hazards, vessel operation, heat stress, and contact with hazardous wildlife).
- ✓ **QUALITY CONTROL AND QUALITY ASSURANCE.** 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.

The attached RFQ Response only addresses the Tasks listed in the City's Scope of Work. Please know that Tetra Tech is available and qualified to assist the City with further tasks such as: environmental resource and water quality monitoring during construction; permit compliance and coordination; mitigation construction and subsequent short-term/ long-term environmental monitoring requirements and construction support services. Below are the corporate and local points of contact for this response.

Local Point of Contact:

Richard Czapinski
Tetra Tech, Inc.
1901 S. Congress Avenue, Suite 200
Boynton Beach, FL 33426
E-mail: Richard.Czapinski@tetrattech.com
Phone: (561) 735-0482, ext. 202
Fax: (561) 742-0873

Firms Legal Name: Tetra Tech Inc.

Corporate Contact Information
Tetra Tech, Inc.
3475 East Foothill Blvd.
Pasadena, CA 91107-6024
Internet Address: www.tetrattech.com
Phone: (626) 351-4664
Fax: (626) 351-5291

Tetra Tech is excited about this opportunity to support the City on this important project and our project team is prepared to begin work immediately upon award. If you have any questions regarding our submittal or need additional information, please contact Richard Czapinski at (561) 735-0482, Ext. 202 (richard.czlapinski@tetrattech.com) if you have any questions regarding this response.

Sincerely,

TETRA TECH, INC.



Eric T. Dohner
Vice President

Attachment: RFQ Response



1.1 Proposal Signature Form

BID/PROPOSAL SIGNATURE PAGE

How to submit bids/proposals: Proposals must be submitted by hard copy only. It will be the sole responsibility of the Bidder to ensure that the bid reaches the City of Fort Lauderdale, City Hall, Procurement Services Division, Suite 619, 100 N. Andrews Avenue, Fort Lauderdale, FL 33301, prior to the bid opening date and time listed. Bids/proposals submitted by fax or email will NOT be accepted.

The below signed hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal I will accept a contract if approved by the CITY and such acceptance covers all terms, conditions, and specifications of this bid/proposal.

Please Note: All fields below **must** be completed. If the field does not apply to you, please note N/A in that field.

Submitted by: Eric Dohner 9/22/2014
 (signature) (date)

Name (printed) Eric Dohner Title: Vice President

Company: (Legal Registration) Tetra Tech, Inc.

CONTRACTOR, IF FOREIGN CORPORATION, MAY BE REQUIRED TO OBTAIN A CERTIFICATE OF AUTHORITY FROM THE DEPARTMENT OF STATE, IN ACCORDANCE WITH FLORIDA STATUTE §607.1501 (visit <http://www.dos.state.fl.us/>).

Address: 1901 S. Congress Avenue, Suite 200

City Boynton Beach State: FL Zip 33426

Telephone No. 561-735-0482 FAX No. 561-742-0873 Email: eric.dohner@tetrattech.com

Delivery: Calendar days after receipt of Purchase Order (section 1.02 of General Conditions): N/A

Payment Terms (section 1.04): Net 30 Total Bid Discount (section 1.05): N/A

Does your firm qualify for MBE or WBE status (section 1.09): MBE N/A WBE N/A

ADDENDUM ACKNOWLEDGEMENT - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No. N/A? Date Issued N/A

VARIANCES: State any variations to specifications, terms and conditions in the space provided below or reference in the space provided below all variances contained on other pages of bid, attachments or bid pages. No variations or exceptions by the Proposer will be deemed to be part of the bid submitted unless such variation or exception is listed and contained within the bid documents and referenced in the space provided below. If no statement is contained in the below space, it is hereby implied that your bid/proposal complies with the full scope of this solicitation. **HAVE YOU STATED ANY VARIANCES OR EXCEPTIONS BELOW? BIDDER MUST CLICK THE EXCEPTION LINK IF ANY VARIATION OR EXCEPTION IS TAKEN TO THE SPECIFICATIONS, TERMS AND CONDITIONS.** If this section does not apply to your bid, simply mark N/A in the section below.

Variances:

2.0 QUALIFICATIONS OF THE FIRM

2.1 Business Structure

Headquartered in Pasadena, CA, Tetra Tech is a full-service engineering and science firm with a substantial global presence. We help our clients conceptualize and execute innovative solutions to their most difficult problems. From front-end science and planning to design, construction management and operations, Tetra Tech's global service network, facilitated by our Initiatives Programs, coordinates resources for specific markets and provides best-in-class experts with worldwide project experience.

Tetra Tech is a public corporation and has offices and operational infrastructure throughout the United States, Canada, and abroad. With more than 14,000 employees at 330 offices in more than 130 countries on six continents, Tetra Tech's technical knowledge and hands-on site work is broad and deep. Tetra Tech is registered as a legal entity in the State of Florida, with over 500 professionals working in-state. Our staff is supported by a uniform administrative and management system that project teams can access immediately to ensure work is completed effectively.

Tetra Tech is organized into three business groups: Water, Environment and Infrastructure (WEI), Resource Management and Energy (RME), and Major Project Execution (MPE). Through these groups, Tetra Tech focuses its services collaboratively to facilitate outstanding project planning and execution. Tetra Tech is a global leader in providing engineering and technical services. Our company is acknowledged for its cutting-edge expertise in sophisticated environmental analysis, modeling, and design and for delivering this expertise effectively across an entire project life cycle. Our markets include oil & gas, energy, mining, transportation, and ports & harbors. Tetra Tech is one of the largest engineering and environmental firms in the nation and has been ranked No. 1 in Water for the past 11 years and is currently ranked No. 4 in Environmental Firms and No. 6 in Marine and Port Facilities by Engineering News-Record (ENR).



Tetra Tech delivers a high level of integrated services for the full project life-cycle in five service areas: water, natural resources, the environment, infrastructure, and energy. ENR magazine ranks Tetra Tech a national and international leader in several markets.

Company Facts

- **Employees: 14,000**
- **Revenue: \$2.6 billion (FY 2013)**
- **NASDAQ Symbol: TTEK**
- **Corporate Office: 3475 East Foothill Blvd., Pasadena, CA 91107; (626) 351-4664**
- **Geographic reach: 330 offices worldwide**

2.2 Corporate Standard Form 330

City of Fort Lauderdale – Civil – Environmental Engineering Services for
Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project RFQ 946-11484



ARCHITECT-ENGINEER QUALIFICATIONS

PART I – CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION (City and State) Tetra Tech Boynton Beach, FL	
2. PUBLIC NOTICE DATE August 29, 2014	3. SOLICITATION OR PROJECT NUMBER RFQ 946-11484

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE Craig Kruempel Senior Scientist \ Office Manager	
5. NAME OF FIRM Tetra Tech	
6. TELEPHONE NUMBER 561-735-0482	7. FAX NUMBER 561-742-0873
8. E-MAIL ADDRESS Craig.Kruempel@tetratech.com	

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

	(Check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	J-V PARTNER	SUBCON-TRACTOR			
a.	<input checked="" type="checkbox"/>			Tetra Tech <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	1901 S. Congress Ave., Suite 200 Boynton Beach, FL 33426	Project oversight, design and permitting, engineering, environmental services
b.			<input checked="" type="checkbox"/>	Sea Diversified, Inc. (SDI) <input type="checkbox"/> CHECK IF BRANCH OFFICE	21 NW 2 nd St. Delray Beach, FL 33444	Hydrographic survey services
c.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
d.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
e.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		
f.				<input type="checkbox"/> CHECK IF BRANCH OFFICE		

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

(Attached)



City of Fort Lauderdale – Civil – Environmental Engineering Services for
Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project RFQ 946-11484



ARCHITECT – ENGINEER QUALIFICATIONS	1. SOLICITATION NUMBER (IF ANY) RFQ 946-11484
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PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

A. CONTRACT INFORMATION

2a. FIRM (OR BRANCH OFFICE) NAME Tetra Tech, Inc.			3. YEAR ESTABLISHED March 7, 2003	4. DUNS NUMBER 96-882-9171
2b. STREET 1901 S. Congress Avenue, Suite 200			5. OWNERSHIP	
2c. CITY Boynton Beach			a. TYPE Corporation	
2d. STATE FL	2e. ZIP CODE 33426		b. SMALL BUSINESS STATUS Not Applicable	
6a. POINT OF CONTACT NAME AND TITLE Craig Kruempel Senior Scientist / Office Manager			7. NAME OF FIRM (If block 2a is a branch office) Tetra Tech, Inc.	
6b. TELEPHONE NUMBER 561-735-0482 Ext. 201	6c. E-MAIL ADDRESS Craig.Kruempel@tetratech.com			
8a. FORMER FIRM NAME(S) (If any)			8b. YR. ESTABLISHED	8c. DUNS NUMBER

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) FIRM	(2) BRANCH			
07	Biologist	348	2	C07	Coastal Engineering	3
	Civil Engineer	721	2	C14	Conservation and Resource Management	2
24	Environmental Scientist	247	2	C18	Construction Management	2
32	Project Manager	829	3	D06	Dams; Dikes; Levees	1
				D08	Dredging Studies and Design	2
				E01	Ecological	4
				E09	EIS	4
				E10	Environmental and Natural Resource	7
				G04	GIS	2
				N02	Navigation	1
				R11	Rivers, Canals, Waterways, Flood Control	1
				S05	Soils & Geologic Studies	3
				S09	Structural Design, Special Structures	2
				W02	Water Resources; Hydrology, Ground Water	2
Total		13,763	8			

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS <small>(insert revenue index number shown at right)</small> <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="padding: 5px;">a. Federal Work</td><td style="padding: 5px; text-align: center;">7</td></tr> <tr><td style="padding: 5px;">b. Non-Federal</td><td style="padding: 5px; text-align: center;">6</td></tr> <tr><td style="padding: 5px;">c. Total Work</td><td style="padding: 5px; text-align: center;">8</td></tr> </table>	a. Federal Work	7	b. Non-Federal	6	c. Total Work	8	PROFESSIONAL SERVICES REVENUE INDEX NUMBER 1. Less than \$100,000 2. \$100,000 to less than \$250,000 3. \$250,000 to less than \$500,000 4. \$500,000 to less than \$1 million 5. \$1 million to less than \$2 million 6. \$2 million to less than \$5 million 7. \$5 million to less than \$10 million 8. \$10 million to less than \$25 million 9. \$25 million to less than \$50 million 10. \$50 million or greater
a. Federal Work	7						
b. Non-Federal	6						
c. Total Work	8						

12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE September 9, 2014
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2.3 Representative Project Descriptions (SF 330)

City of Fort Lauderdale – Civil – Environmental Engineering Services for
Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project RFQ 946-11484



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT (Complete one Section F for each project.)		20. EXAMPLE PROJECT KEY NUMBER 1	
21. TITLE AND LOCATION (City and State)		22. YEAR COMPLETED	
Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida		PROFESSIONAL SERVICES 2012	CONSTRUCTION (if applicable) 2012
23. PROJECT OWNER'S INFORMATION			
A. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER	
Martin County, FL	Kathy FitzPatrick, PE	(772) 288-5429	
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope size, and cost)			

Tetra Tech was retained by Martin County in 2006 to design, permit, and support County implementation of a project to develop a new navigation channel, focusing on the following overall project goals: increase channel (water) depths to allow for better vessel access; define a channel to minimize effects on adjacent shallow-water areas, benthic resources, and benefit manatee protection; remove detrimental muck sediments; improve the ability of marine life to reestablish in Manatee Pocket; and, improve water quality.

Tetra Tech's professionals worked closely with the Florida Department of Environmental Protection (FDEP) and the Jacksonville District of the U. S. Army Corps of Engineers (USACE) in the development of a project design that accomplished the project goals in an environmentally acceptable manner without impacting sensitive estuarine habitats or species - thereby eliminating the need for project mitigation. This coordinated approach to the regulatory process resulted in expedited authorizations from the FDEP and USACE. The anticipated permit acquisition time was originally estimated to be 14 months. However, Tetra Tech expedited the permitting process and received all regulatory permits within 8 months in order to meet specific grant-funding timeline requirements.

In addition to the 280,000 cy of dredging included in the County project, about 50,000 cy of private dredging was performed. Tetra Tech organized a public workshop together with the USACE and FDEP to guide interested individuals and waterfront businesses through the dredging permitting process. Under the coordinated process, private dredging applicants did not have to complete sediment testing but could simply refer to the Tetra Tech reports. Applications were also "batched" so that cooperating agencies could review all the submitted applications as one consolidated project.

Tetra Tech Inc. supported Martin County in all aspects of the very successful grants program. The project's total cost was \$13.3 million and the total in grant awards was \$12.6 million which covered 95% of the project costs.

Tetra Tech identified, mapped and completed gopher tortoise surveys on a proposed dredged material discharge pipeline route and a previously used dewatering area at the Martin County Airport. The Hudson River bird strike/landing incident occurred just before the Manatee Pocket application package went out to bid and the FAA vetoed the use of the site for material disposal and dewatering due to the potential for increased avian activity at the site. Tetra Tech responded quickly and modified the bid package to require a design-build scenario where the contractor was responsible for the location and design of the dewatering operations. This quick response to the FAA rejection of the use of the site, and Tetra Tech's subsequent modification of the bid package allowed Martin County to remain on schedule and advance the project in a timely manner.

Tetra Tech prepared and submitted the Final Plans and Specifications to the County in March 2009, and project construction was accomplished from July 2010 to January 2012. Tetra Tech's professionals provided environmental management, monitoring, and construction management services in support of the County's efforts to accomplish this project in the most environmentally benign manner possible. In October 2010, the Florida Association of Environmental Professionals bestowed its Project Award on the Manatee Pocket Project in recognition of the significant amount of environmental enhancements that it provided.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT		
(1) FIRM NAME	(2) FIRM LOCATION (City and State)	(3) ROLE
a. Tetra Tech, Inc.	Boynton Beach, FL	Prime - Agency coordination, permitting, environmental management, grant applications, stakeholder coordination, public outreach, engineering design, geophysical surveying, technical reporting, construction document preparation, bidding support and construction support services



CITY OF FORT LAUDERDALE, FLORIDA
INTRACOASTAL WATERWAY – LAS OLAS MARINA DREDGING PROJECT
RFQ 946-11484



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
20. EXAMPLE PROJECT KEY NUMBER 2

Table with 2 columns: 21. TITLE AND LOCATION (City and State) and 22. YEAR COMPLETED. Row 1: Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida; Ongoing; 2015 expected.

23. PROJECT OWNER'S INFORMATION

Table with 3 columns: A. PROJECT OWNER, B. POINT OF CONTACT NAME, C. POINT OF CONTACT TELEPHONE NUMBER. Row 1: Fort Pierce City Marina, 1 Avenue A; Edward Seissiger, Fort Pierce Engineering Department; (772) 467-3780.

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope size, and cost)

Project Summary The City of Fort Pierce marina was destroyed by Hurricanes Frances and Jeanne in 2004. This marina comprises a boat basin of 21 acres and is a vital component of the City's waterfront redevelopment efforts.

- Ecological elements including mangroves, oyster reefs and dune grass to enhance the stability and functional performance under existing and projected sea level rise conditions
Project permitted as a pilot with a potential change in State policy on the use of sovereign submerged lands
Extensive numerical and physical modeling used to configure the complex located on an active flood tidal delta
Extensive planning (9 individual plans) to cover monitoring, mitigation and maintenance
21 acres of environmental enhancements in addition to off-site mitigation



Description of Work, Results and Significance Tetra Tech developed a 15-acre 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 oyster reef features.

Description of Methodology and Processes Specific design components for the island concept involved extensive surveys over a 40+ acre project area utilizing diver assessment and underwater video surveys to map seagrass, benthic, coral, and hard bottom resources.

Extensive numerical modeling of currents, waves and sediment transport were required to develop the design configuration that would reduce current magnitudes within the marina basin, protect the marina from storm waves and work in harmony with the natural sand movement patterns of the dynamic flood tidal site location without causing contributing to damage or degradation of adjacent marine resources.

"I was very impressed by the breakwater habitat islands - I've never seen a proposal with such a well-designed net environmental benefit before; you really did a great job." - Alexis Meyer, NOAA - NMFS Protected Resources Division

Project Schedule and Cost The cost of the island breakwaters is \$19.6 million. Phase II Marina reconstruction is beginning and will cost about \$11 million (2015 completion).

Project Challenges and Corrective Action A work Plan was established to be consistent with our modeling results and project permits to minimize disruption of sediment transport patterns. For scheduling reasons the construction contractor violated the work plan and constructed project elements out of sequence, thereby causing scour damage around and between the island breakwater system.

- Similarity in Scope and Complexity to SOW Construction of 15 acres of island in shallow water coastal habitat, proximity to marine resources, and enhancement features such as oyster reefs and mangroves.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

Table with 3 columns: (1) FIRM NAME, (2) FIRM LOCATION (City and State), (3) ROLE. Row 1: Tetra Tech, Inc.; Boynton Beach, FL; Permitting, design, marine resource surveys, construction documents, bid and construction support services, grant program.

City of Fort Lauderdale – Civil – Environmental Engineering Services for
 Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project RFQ 946-11484



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT <small>(Complete one Section F for each project.)</small>		20. EXAMPLE PROJECT KEY NUMBER
		3
21. TITLE AND LOCATION <small>(City and State)</small>	22. YEAR COMPLETED	
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida	PROFESSIONAL SERVICES Ongoing, Completion est. 2015	CONSTRUCTION <small>(if applicable)</small> Ongoing, Completion est. 2015
23. PROJECT OWNER'S INFORMATION		
A. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER
Great Lakes Dredge & Dock	Chris Pomfret, Project Superintendent	(305) 381-9309

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope size, and cost)

Tetra Tech is supporting implementation of the \$206 million widening and deepening project at PortMiami. This is the first project in the southeastern United States to prepare through deepening for the arrival of post Panamax cargo ships upon completion of the Panama Canal expansion. As a subcontractor to Great Lakes Dredge & Dock Company, Tetra Tech is responsible for \$24.4 million in environmental services and mitigation construction activities associated with the dredging contract.



For the first time, the US Army Corps of Engineers has awarded a contract that holds the dredging contractor directly accountable for the environmental management, comprehensive monitoring, and quality control of the project. Protection of sensitive hardbottom, coral, and seagrass habitat in and around the dredging area contributes to project complexity.

Tetra Tech's services on this project includes the provision of comprehensive environmental management; agency coordination and environmental reporting; quality control / oversight of the project environmental monitoring program – coral and hardbottom resources, seagrass communities, water quality, and listed species; quality control of coral and seagrass harvesting and transplanting activities; construction of low and high relief artificial reefs offshore in approximately 45 feet of water; and the select fill placement at the Julia Tuttle Seagrass Mitigation Area in Biscayne Bay.

The construction elements of Tetra Tech's project include:

- Construction of at least 5.6 acres of low-relief (<3 ft) and at least 3.7 acres of high relief (>3 ft) of artificial reef using an estimated 50,000 tons of quarried limestone boulders processed to meet a very stringent USACE specification.
- Select fill placement of 16.6 acres within a historic dredge hole located immediately north of the Julia Tuttle Causeway in the Biscayne Bay Aquatic Preserve.
- Coral species harvested from the entrance channel flare extension will be transplanted to natural and mitigative artificial reefs constructed by Tetra Tech.
- Seagrasses harvested from adjacent donor sites will be transplanted to the Julia Tuttle Seagrass Mitigation Site where strict criteria for select fill characteristics have been defined in order to support successful seagrass colonization of the site.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT		
(1) FIRM NAME	(2) FIRM LOCATION <small>(City and State)</small>	(3) ROLE
Tetra Tech, Inc.	Boynton Beach, FL	Subcontractor

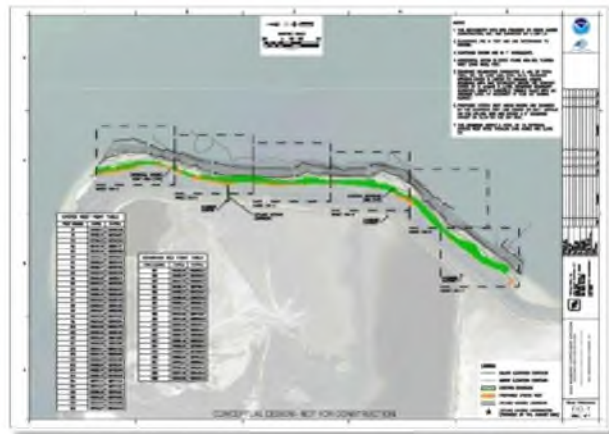
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F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT (Complete one Section F for each project.)		20. EXAMPLE PROJECT KEY NUMBER 4
21. TITLE AND LOCATION (City and State) NOAA Mulberry Oyster Reef Creation Project Hillsborough Bay, Florida		22. YEAR COMPLETED PROFESSIONAL SERVICES 2013 - Present CONSTRUCTION (if applicable) Expected 2015
23. PROJECT OWNER'S INFORMATION		
A. PROJECT OWNER	B. POINT OF CONTACT NAME	C. POINT OF CONTACT TELEPHONE NUMBER AND EMAIL ADDRESS
NOAA Fisheries, NMFS Restoration Center 263 13th Avenue South St. Petersburg, Florida 33701	Ms. Daphne Boothe, Project Manager/Marine Habitat Resource Specialist	727-824-5384 daphne.booth@noaa.gov

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope size, and cost)

Project Summary On December 7, 1997, a breach occurred in the wall of a phosphogypsum stack located at the MPI phosphoric acid/fertilizer production facility in Mulberry, Polk County, Florida. As a result, approximately 50-56 million gallons of acidic process water flowed into and through Skinned Sapling Creek into the Alafia River. The released process water lowered the pH along 35 miles of the Alafia River for several days, resulting in a fish kill in the Alafia River. Additionally, there were readily observable injuries to the shoreline and upland vegetation in some areas in Polk County; as well as injuries to other natural resources, including loss of resource services. A Final Damage Assessment and Restoration Plan and Environmental Assessment (DARP/EA), was developed by state, county and federal agencies, which identifies restoration alternatives to address the injury to, loss of, destruction of, and lost use of natural resources resulting from the spill. In this document, oyster reef was co-selected as an alternative for restoring the biomass of fish, crabs and shrimp lost as a result of the process water release. Since the release of the Final DARP/EA, the Restoration Council, consisting of the FDEP, NOAA, and the EPC of Hillsborough County, has completed additional work to specifically identify appropriate sites, materials and methods for oyster reef restoration. The Restoration Council and local partners agreed that oyster reef creation on the eastern side of Spoil Island 2D in Hillsborough Bay is likely to provide conditions most suitable for achieving project goals. Primary project goals include the creation of oyster habitat that provides foraging for nesting, migratory, and wintering shorebirds, and improves water quality in the area.



Description of Work, Results and Significance Tetra Tech, Inc. is implementing the oyster creation project at Spoil Island 2D under a two phased contract. Phase I includes: 1) marine resource and bathymetric surveys of the proposed project site, 2) sediment sampling and laboratory testing, 3) develop permit plans and specifications for the construction of a limestone oyster reef substrate, and 4) obtain local, state and federal regulatory permits. Phase II will include the preparation of construction cost estimates and the construction of the reef substrate.

In June 2013, Tetra Tech scientists conducted a marine resource survey along approximately 5,000 linear feet and collected sediment cores along the eastern shoreline of Spoil Island 2D. The purpose of the survey was to 1) delineate the seagrass boundaries, 2) determine the location of existing oyster beds, and 3) collect sediment cores to characterize the sediments and ascertain their suitability to support the proposed reef installation. The bathymetric survey was also conducted along the eastern shoreline project limits, extending out to -14 ft (NAD83). The results of the benthic and bathymetric surveys were used to 1) determine potential points of access for construction to avoid/minimize impacts to existing resources, and 2) identify adequate sites for oyster reef placement that avoids and/or minimizes impacts to existing resources.

Description of Methodology and Processes The seagrass survey was conducted by Tetra Tech marine biologists experienced in seagrass delineation, mangrove identification, and oyster reef habitat. Polyvinyl chloride pipes (PVC) were used to mark the landward and waterward extent of seagrass beds with a minimum cover of 10%. This minimum percent cover was pre-determined based on discussions between the Tetra Tech team and the regulatory and reviewing agencies. Tetra Tech's design calculations used wind, wave and water level conditions applicable to the design of the new oyster reef substrate complex. To achieve the project goals, Tetra Tech's oyster reef design concept utilizes an outer 'perimeter' of armor stone to resist the design wave forces and an interior section with smaller diameter material sized for optimal oyster recruitment and other benthic organisms. This design includes a total of 16 potential reef construction sites were identified totaling 28,360 square feet, or 0.65 acres. Agency coordination efforts and site visits spearheaded by Tetra Tech facilitated comprehensive coordination between the project planning/design team and regulatory agencies; which resulted in an expedited four month permit process for the US Army Corps NWP 27 and Section 7 Consultation, Southwest Florida Water Management District ERP, and Tampa Port Authority Minor Work Permit.

Project Schedule and Cost Phase 1 was completed between June 2013 and January 2014, with a total contract cost of \$105,500. Phase 2 consists of the construction of the oyster reef substrate system and is currently on hold. The original budget for the total project including construction was \$600,000. NOAA is determining the amount of funding that it can allocate to the project and is in discussions with the other trustees on the Restoration Council with respect to the extent of the construction. Tetra Tech will complete the final construction documents and construction is expected to be complete by Spring 2015.

Project Challenges and Corrective Action The oyster catcher nesting season (March 31st to August 31st) has largely driven the project timeline. Although permits were acquired in an expedited timeline, the project team did not have a large enough mobilization and construction window. Tetra Tech presented a letter to NOAA to initiate coordination with the Tampa Port Authority Migratory Bird Protection Committee and request an exception to the construction window. NOAA determined that the best course of action would be to put the project on hold and commence Phase II at the end of the nesting season.

Similarity in Scope and Complexity to SOW Construction of oyster reef habitat, shallow water coastal habitat, proximity to marine resources, project goals.

2.4 Sustainable Business Practices

Tetra Tech has long focused on helping our clients address water, natural resources, environment, infrastructure, and, more recently, renewable energy needs. We lead and support programs that minimize our collective impacts on the environment—through the solutions we provide for our clients; through our procurement and subcontracting practices; and by the processes we use within the company to promote sustainable practices, reduce costs, and minimize environmental impacts.

Tetra Tech actively promotes green actions and shares best practices by highlighting sustainability-oriented activities in internal publications and the company intranet. This year the company has initiated green information technology actions that reduce idle computers' energy use. We have moved from paper to electronic media in handling expense reporting and payroll. Throughout the company, offices and individuals have sponsored green awareness activities, led recycling programs, reduced waste and paper use, and encouraged green procurement decisions.



Rebecca Dougherty and Andrea Rinne represented Tetra Tech's Boynton Beach Florida office at the 2014 Annual International Coastal Cleanup.

Examples of our sustainability initiatives throughout the company include:

- Tetra Tech's IT Department initiated a process to shut down all company computer monitors after 15 minutes of inactivity. This switch points to a potential energy savings of 2.5 million KWh hours per year—enough to power more than 220 American households—and a companywide cost savings of about \$300,000 per year.
- Tetra Tech's Payroll Department switched from mailed paper pay stubs to electronic-only pay stubs in July 2009. This switch reduced paper consumption and the costs associated with mailing hard copy pay stubs.
- The Resource Management and Energy (RME) Business Group piloted an Operational Efficiency Program (OEP) that provides office specific tracking and reporting on sustainability. Each office nominates an Operational Efficiency Monitor to compile an office baseline, track utility costs and consumption, implement office conservation measures, and motivate and educate other Tetra Tech employees. As part of the EPA Climate Leaders Program, the EMI unit of RME set a goal of reducing its carbon footprint by 20% from 2006 to 2011. Based on their 2009 reporting period, this unit has successfully met almost 75% of its goal.
- The Major Project Execution (MPE) Business Group actively addresses sustainability objectives through environmental management system (EMS) programs based on International Organization for Standardization (ISO) 14000 standards.

- Employees from offices around the world participate in Earth Day and other local environmental events, removing trash from rivers and lakes, planting trees, and delivering environmental education presentations to students.



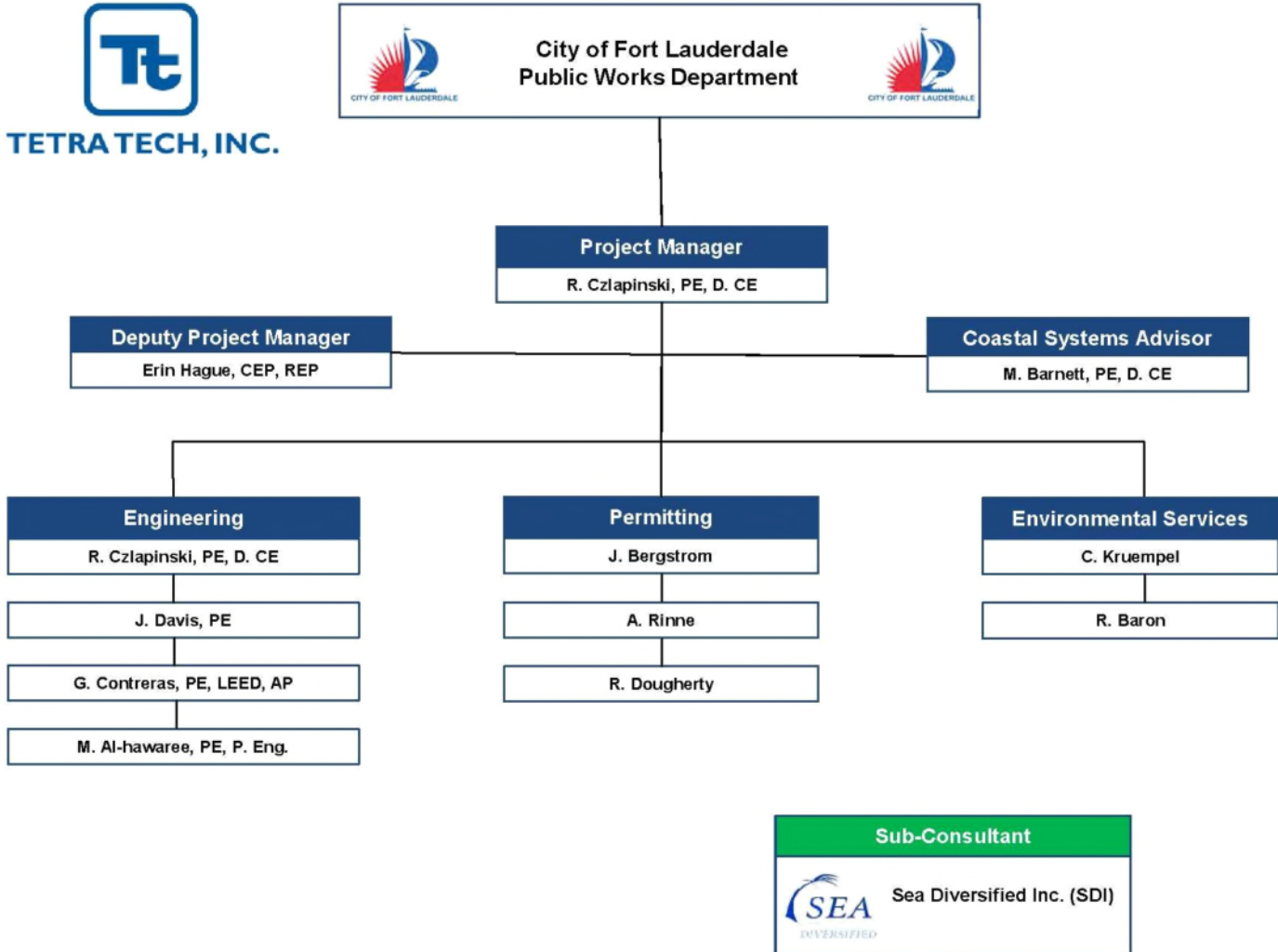
This year, on the 40th anniversary of Earth Day, Tetra Tech launched its Sustainability Council, comprised of representatives appointed by each Business Group and the relevant corporate departments. The Council's role is to help coordinate and track our sustainability program, oversee the development of an annual corporate Sustainability Report, and support the communication of best practices across the company. The Council will assist in the development of a Tetra Tech Sustainability Plan that provides leadership in promoting sustainability while reducing our costs and promoting a safe workplace.

Draft Mission Statement of the Sustainability Council:

“Support Tetra Tech by embracing sustainability and social responsibility in our business and operations while supporting the company in delivering excellent services to our clients, maintaining superior financial performance, and emphasizing safety in the execution of services.”

3.0 QUALIFICATIONS OF THE PROJECT TEAM

3.1 Project Team Organizational Chart



3.2 Key Personnel SF 330

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G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS											
26. NAMES OF KEY PERSONNEL <i>(From Section E, Block 12)</i>	27. ROLE IN THIS CONTRACT <i>(From Section E, Block 13)</i>	28. EXAMPLE PROJECTS LISTED IN SECTION F <i>(Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)</i>									
		1	2	3	4	5	6	7	8	9	10
Richard Czlapinski, PE, D. CE	Project Manager / Project Engineer	X	X	X	X						
Craig Kruempel	Environmental Lead			X	X						
Michael Barnett, PE, D. CE	Coastal Systems Advisor / Project Engineer			X	X						
Mohamad Al-hawaree, PE, P. Eng.	Geotechnical Engineer	X	X	X	X						
Erin Hague, CEP, REP	Deputy Project Manager / Senior Scientist	X	X	X	X						
Jayne Bergstrom	Permitting Lead / Senior Scientist	X	X	X							
Gerardo Contreras, PE, D. CE, D. PE, LEED, AP	Project Engineer	X	X	X	X						
Rob Baron	Senior Scientist			X							
Jesse Davis, PE	Project Engineer	X	X	X	X						
Andrea Rinne	Permitting / Project Scientist			X							
Rebecca Dougherty	Permitting / Project Scientist			X	X						
William Sadler, PSM, PE	Hydrographic Surveyor		X								
Ron Ball	Hydrographic Surveyor		X								

29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Manatee Pocket Dredging and Environmental Enhancement Project	6	
2	Fort Pierce City Marina Reconstruction and Expansion Project	7	
3	Miami Harbor Phase III Deepening Project, Environmental Management	8	
4	NOAA Mulberry Oyster Reef Creation Project	9	
5		10	

3.3 Project Team Résumés

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT			
<i>(Complete one Section E for each key person.)</i>			
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Richard Czlapinski, PE, D.CE	Project Manager \ Project Engineer	a. Total 42	b. With Current Firm 13
15. FIRM NAME AND LOCATON <i>(City and State)</i>			
Tetra Tech, Inc. (Boynton Beach, Florida)			
16. EDUCATION <i>(Degree and Specialization)</i>		17. CURRENT PROFESSIONAL REGISTRATION <i>(State and Discipline)</i>	
M.S., Ocean Engineering, MIT, 1975 O.E., Ocean Engineering, MIT, 1975 BCE, Civil Engineering, University of Detroit, 1969		Professional Engineer: Florida (42834) and , North Carolina, South Carolina, New Jersey, Louisiana and Hawaii	
18. OTHER PROFESSIONAL QUALIFICATIONS <i>(Publications, Organizations, Training, Awards, etc.)</i>			
American Society of Civil Engineers and COPRI, member Diplomate, Coastal Engineering/ past-president, ACOPNE, ASCE-affiliated academy for advanced technical specialty certification Florida Association of Environmental Professionals, member Project Award – Manatee Pocket – Treasure Coast Chapter of the Florida Association of Environmental Professionals Czlapinski, R. E., 2013. Nature-based Breakwater Islands for the Fort Pierce Marina, USACE Technical workshop on Natural and Nature-based Approaches to Support Coastal Resilience and Risk Reduction, Nov 21-22, Washington, DC Czlapinski, et al., 2010, Emulating Nature by Building an Island Styoe Breakwater for the Fort Pierce Marina, PORTS 2010, ASCE			
(1) TITLE AND LOCATION <i>(City and State)</i>		(2) YEAR COMPLETED	
Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida		PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(if applicable)</i> 2012
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firms	
a. Project Manager and Engineer of Record with overall responsibility for all aspects of project including engineering design, permitting, geophysical surveying, sediment and water quality sampling/testing, structural inspection services, construction support, grant applications and public outreach on a 280,000 cy new channel dredging project. Project included 1.5 miles of new channels and work adjacent to existing marinas and bulkheads. The project received \$12.6 million in grant funding covering most of the construction cost of the project. The Florida Association of Environmental Professionals awarded the project its Project Award in 2010 in recognition of the environmental enhancement components of the project. Fee: \$1.8 million; Construction Cost: \$12.2 M			
(1) TITLE AND LOCATION <i>(City and State)</i>		(2) YEAR COMPLETED	
Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida		PROFESSIONAL SERVICES Ongoing	CONSTRUCTION <i>(if applicable)</i> 2015 est
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firms	
b. Project Manager and Engineer of Record responsible for the design of the marina including wave protection natural-like breakwater islands, and repair/replacement of the existing bulkhead. Project includes access channel and basin dredging and use of the 150,000 cy of dredged material from this and two additional navigation projects in the island construction. The design of the island breakwaters includes about 21 acres of environmental enhancements including oyster reefs, mangroves, channel and basin dredging, beneficial use of dredged matdune grass and shorebird habitat. The project is in a dynamic flood tidal delta and Irequired hydrodynamic and physical modeling to avoid damage to adjacent seagrass beds. Fee: \$4.8 M; Construction Cost: \$31 M			
(1) TITLE AND LOCATION <i>(City and State)</i>		(2) YEAR COMPLETED	
Central Beach Redevelopment Project, Fort Lauderdale, Florida		PROFESSIONAL SERVICES 2012	CONSTRUCTION <i>(if applicable)</i> N/A
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firms	
c. Project engineer responsible for the conceptual design development and permitting feasibility of the proposed expansion of the Los Olas marina as a part of the overall feasibility study an intercoastal Promenade at the marina, for dock and waterfront improvements at the marina, Almond Ave streetscape, improvements along AIA and the adjacent beachfront areas under subcontract with Sasaki Associates.			
(1) TITLE AND LOCATION <i>(City and State)</i>		(2) YEAR COMPLETED	
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida		PROFESSIONAL SERVICES Ongoing	CONSTRUCTION <i>(if applicable)</i> 2015 est
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firms	
d. Project team member on the environmental management portion of the deepening project for Great Lakes Dredge and Dock Co. The project includes the construction of about 10 acres of artificial reef about 3 miles offshore of the port and the filling/capping and seagrass planting on about 16 acres of a dredge hole in the Biscayne Bay Lagoon. Total Contract cost is \$24.4 million.			

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12. NAME Erin A. Hague, CEP, REP	13. ROLE IN THIS CONTRACT Deputy Project Manager / Senior Scientist	14. YEARS EXPERIENCE	
		a. TOTAL 17	b. WITH CURRENT FIRM 6.5
15. FIRM NAME AND LOCATION (City and State) Tetra Tech, Inc., Boynton Beach, Florida			
16. EDUCATION (Degree and Specialization) MS, Coastal Zone Management (Conc. Marine Biology, 2007; BS, Geology (Marine Science Minor), 1995		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) Academy of Board Certified Environmental Prof. (#08040407); National Registry of Env. Prof. (#247381814)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Academy of Underwater Scientists (Voting #2328); Florida Association of Environmental Professionals; USACE Construction Quality Management for Contractors #784 (Certificate No. SE9-01-13-00051); Hague, E. and Baron, R., 2006. <i>Biological Community Analysis Near a Maintained Natural Inlet. Shore & Beach, 74(2), 30-33.</i>			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)	
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida	2013 to Present	Anticipated 2015	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
a. Tetra Tech is supporting implementation of the \$206 million widening and deepening project at PortMIAMI. Tetra Tech is responsible for \$24.4 million in environmental services and mitigation construction activities associated with the dredging contract. Ms. Hague is responsible for scheduling and conducting quality control monitoring to ensure permit compliance specific to the following activities: coral transplantation, hardbottom and coral reef habitat monitoring, and seagrass monitoring. Cost: \$24.4 Mil Role: Task Manager			
Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida	2012	2012	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
b. This project was designed to improve navigation and restore manatee habitat in the Pocket and its four tributaries by removing approximately 279,293 cubic yards of muck and sediment from a 50-acre area. Specific tasks included securing multiple modifications and approvals before and during construction (FDEP Environmental Resource Permit, Section 10 Department of Army Permit, USCG and FFWC Channel Marker Authorizations); coordination with the FAA and USDA for authorization of airport property for dewatering dredge material; senior scientist for field activities (Gopher Tortoise, seagrass, mangroves); and agency coordination. Cost: \$4.6 Mil Role: Task Manager, Senior Scientist, and Permitting Specialist			
NOAA Mulberry Oyster Reef Creation, Hillsborough County, Florida	2013 to Present	Anticipated 2015	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
c. Ms. Hague was responsible for the seagrass survey and mapping conducted along approximately 5,000 linear feet of shoreline, sediment and water quality sampling. Results were used to design 16 oyster reefs totaling 0.65 acres for the purpose of providing foraging for nesting, migratory, and wintering shorebirds and water quality improvement. Ms. Hague is also responsible for agency coordination and permitting. Cost: \$700,000 Role: Permitting Specialist, Senior Scientist, and Field Operations Lead			
Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida	2006 to 2009	2014	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
d. The City retained Tetra Tech to handle the design and permitting of the reconstruction and expansion of the marina, as well as temporary facilities to protect the interior marina while the outer marina and its associated wave protection components are constructed. Specific responsibilities include seagrass surveying and hydrographic mapping. Cost: \$4.8 Mil Role: Project Scientist			



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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12. NAME Michael R. Barnett, PE, D.CE	13. ROLE IN THIS CONTRACT Coastal Systems Advisor / Project Engineer	14. YEARS EXPERIENCE	
		a. TOTAL 31	b. WITH CURRENT FIRM 3
15. FIRM NAME AND LOCATION (City and State) Tetra Tech, Inc. Mobile, AL			
16. EDUCATION (Degree and Specialization) BS, Ocean Engineering, Florida Institute of Technology, 1981 ME, Coastal & Oceanographic Engineering, University of Florida, 1987		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) Professional Engineer, Alabama; License Number 32565 Professional Engineer, Florida; License Number 44625 Professional Engineer, Mississippi; License Number 20586 Professional Engineer, Texas; License Number 114806	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Diplomate, Coastal Engineering, Academy of Coastal, Port & Navigation Engineers, October 2011 Member, American Shore & Beach Preservation Association; Member, Florida Shore & Beach Preservation Association			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)		(2) YEAR COMPLETED	
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida		PROFESSIONAL SERVICES Ongoing (since 7/13)	CONSTRUCTION (If applicable) Ongoing (since 7/13)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE a. Served on a project team as a senior coastal engineer working with GLDD as the Prime Contractor (End Client is the USACE, Jacksonville District) to conduct environmental management and quality control/quality assurance reviews and reporting to the USACE, Florida Department of Environmental Protection (FDEP), and federal and state resource agencies of this approximately 2-year duration project. The base contract authorizes the dredging of approximately 5 million cubic yards of sediment and unconsolidated material from the federal channel to depths of -50 feet (ft) mean low, low water (MLLW), with the outer Cut to -52 ft MLLW, with one foot allowable overdepth in all stations within the federal channel. Water quality, coral relocation and hardbottom and seagrass monitoring and reporting requirements are elements for which the Project Team has the oversight and quality assurance/quality control (QA/QC) and agency reporting requirements. Responsible for project management of 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 are being placed approximately 2.4 miles offshore in water depths of approximately 42 – 45 ft MLLW, with construction to be completed in September 2014. Additionally responsible for task management of placement of approximately 60,000 cubic yards of 'select' fill (clean sand with a low percentage content of fine-grained sediments) to cap a base fill layer of dredge spoil material in a large dredge hole in Biscayne Bay (just north of the Julia Tuttle Causeway) located north of the Port of Miami. This activity will commence in November 2014.		<input checked="" type="checkbox"/> Check if project performed with current firm	
South Gulf Cove Lock Feasibility Study, Port Charlotte, Florida		PROFESSIONAL SERVICES July 2012	CONSTRUCTION (If applicable) N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE b. Served as project manager for services as a subconsultant on a team selected by Charlotte County, Florida to evaluate the feasibility of installing a second boat lock to connect an interior residential canal network to Charlotte Harbor. Services included conceptual design schematics, estimates of dredged material volumes and disposal options needed to accomplish the connection between water bodies, an interagency meeting to discuss permitting and proprietary issues, and development of significant elements of the feasibility report, which was transmitted to the County in early July 2012. Owing to significant environmental impact and land ownership issues, the study concluded that the project was not feasible.		<input checked="" type="checkbox"/> Check if project performed with current firm	
NOAA Mulberry Oyster Reef Creation, Hillsborough County, Florida		PROFESSIONAL SERVICES Ongoing	CONSTRUCTION (If applicable) N/A
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE c. Served on the project team as a senior coastal engineer to undertake design and permitting aspects of Phase I of this two-phase project. Per-formed review and quality control checks of wind, wave, and tidal forcing functions and unit sizing and stability calculations utilized in the design of a stable plan and cross-section configuration of a created oyster reef substrate. Provided text and review of descriptive and graphic elements of permit application packages assembled by the Team for submittal to the U.S. Army Corps of Engineers (USACE), Jacksonville District, the Southwest Florida Water Management District and the Tampa Port Authority. Conducted coordination with a local marine contractor selected to undertake the construction aspect of the project (Phase II) in order to develop a preliminary estimate of probable cost.		<input checked="" type="checkbox"/> Check if project performed with current firm	

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

12 NAME Jayne Bergstrom	13 ROLE IN THIS CONTRACT Permitting Lead	14. YEARS EXPERIENCE	
		a. TOTAL 18	b. WITH CURRENT FIRM 5

15 FIRM NAME AND LOCATION (City and State)
Tetra Tech Inc., Boynton Beach, Florida

16 EDUCATION (Degree and Specialization)
B.S. Biological Sciences, Minor in Botany, Florida Atlantic University, 1996

17 CURRENT PROFESSIONAL REGISTRATION (State and Discipline)

18 OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)
Training: Project Management 100 - 301, Tetra Tech (2005-2008); Wetland Delineation; Aquatic Plant Identification and Management Methodologies; Hydric Soils and Public Service. Awards: Tetra Tech Presidents Awards for Seagrass Restoration Work (2008); Tetra Tech Spot Bonus Awards for Permitting (2005-2009); and FAEP Award for Jensen Beach Boat Ramp Park Seagrass Mitigation (2007) and Florida Department of Environmental Protection Secretary Recognition for Coastal Resource Protection (2004).

19. RELEVANT PROJECTS

(1) TITLE AND LOCATION (City and State) Brevard County Palm Bay and Turkey Creek Muck Removal Project, Palm Bay, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES August 2014 - Present	CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm

a. Ms. Bergstrom serves as the Permitting Lead for a project involving the removal of approximately 380,000 cubic yards of muck sediment from Palm Bay and Turkey Creek. The project involves coordination and permitting with the Florida Department of Environmental Protection (FDEP) and the U.S. Army Corps of Engineers (USACE) and their associated commenting agencies. This is one of the first muck removal projects to move forward as part of the FL legislature funded effort to restore the Indian River Lagoon.

(1) TITLE AND LOCATION (City and State) Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2006- 2009	CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm

b. Ms. Bergstrom served as the Permitting Lead for the replacement and expansion of the City Marina that was destroyed in the hurricanes of 2004. The project involved coordination with the Federal Emergency Management Agency regarding hurricane damage to the marina and development of a damage mitigation plan to protect the rebuilt marina from future storm wave and current damage. In this role Ms. Bergstrom assisted in the design of a system of "living island breakwaters" to protect the marina and to stabilize the City's shoreline. In addition, she was responsible for obtaining regulatory authorizations from the FDEP and the USACE. As part of the permitting process, Ms. Bergstrom was responsible for: extensive coordination with federal and state agencies; implementing a water quality and sediment sampling program and 90-acre benthic habitat survey; development of the biological habitat plans for the waterfront protection islands; and the development of comprehensive mitigation plans to offset the project's natural resource impacts.

(1) TITLE AND LOCATION (City and State) Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2006- 2009	CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm

c. Ms. Bergstrom was the Permitting Lead for a 50-acre dredging and environmental enhancement project in Manatee Pocket in Stuart, Florida. Ms. Bergstrom was responsible for obtaining regulatory permits from the Florida DEP and the USACE. In addition, she assisted Project Manager with: dredging designs relating to key permitting considerations and environmental impacts; organizing and implementing all of the public outreach activities such as workshops, newsletters and local event participation; coordinated field scientists to implement the water quality and sediment sampling program and analysis of sampling data; and developed mitigation plans for seagrass recruitment areas for water quality and benthic community enhancements.

(1) TITLE AND LOCATION (City and State) South Florida Water Management District, West Palm Beach, Florida	(2) YEAR COMPLETED	
	PROFESSIONAL SERVICES 2009- 2014	CONSTRUCTION (If applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm



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During her five-year tenure at the South Florida Water Management District (District), Ms. Bergstrom served as the Director of the Martin/St. Lucie County Service Center; a Section Administrator in the Office of Everglades Policy and Coordination and as a Lead Supervisor in the Bureau of Land Management. As Service Center Director, Ms. Bergstrom served in a senior management role representing District Management in one of eight South Florida Water Management District's Services Centers ensuring all strategies, initiatives, programs, and processes support the agency's core mission of flood control, restoration and water supply. With the Office of Everglades Policy, she held a management role responsible for leading a centralized Everglades Restoration and Capital Projects permitting and compliance group. She was responsible for: obtaining state and federal permits for construction and operation of restoration projects, land management activities, recreation components and capital refurbishment projects for the Central and South Florida Flood Control System and overseeing the compliance of previously permitted restoration projects through construction and operation phases.

(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
Florida Department of Environmental Protection, West Palm Beach, Florida	PROFESSIONAL SERVICES 1996-2006	CONSTRUCTION (if applicable) N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE

Check if project performed with current firm

- e. At the FDEP, Ms. Bergstrom served as the permitting manager for the Submerged Lands and Environmental Resources Program where she was responsible for managing all permit applications for complex and controversial dredge and fill activities in wetlands, marine construction projects such as new marinas and marina expansions, and international fiber optic cable and natural gas pipeline landings. This position required close working relationships with local, regional and federal regulatory agencies



Office of America

CITY OF FORT LAUDERDALE, FLORIDA
INTRACOASTAL WATERWAY – LAS OLAS MARINA DREDGING PROJECT
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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT
(Complete one Section E for each key person.)

Table with 4 columns: 12. NAME, 13. ROLE IN THIS CONTRACT, 14. YEARS EXPERIENCE (a. Total, b. With Current Firm). Row 1: Craig J. Kruempel, Environmental Lead, 30, 6.

15. FIRM NAME AND LOCATON (City and State)
Tetra Tech, Inc. (Boynton Beach, FL)

Table with 2 columns: 16. EDUCATION (Degree and Specialization), 17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline). Row 1: MS/Coastal Zone Management, BS/Biology.

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)
SOP Sampling Training for Groundwater, Surface Water and Wastewater, University of Florida TREEO Center
Duke University Environmental Leadership Program, NEPA Certification Coursework
National Association of Environmental Professionals – General Member
American Academy of Underwater Scientists – Voting Member
PADI Certified Open Water, Advanced Open Water, Rescue Diver
NOAA Team Member of the Month, October 2002

Table with 3 columns: (1) TITLE AND LOCATION (City and State), (2) YEAR COMPLETED (PROFESSIONAL SERVICES, CONSTRUCTION (if applicable)). Row 1: Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida. 2013 – Ongoing, Ongoing. Includes description of role and project details.

Table with 3 columns: (1) TITLE AND LOCATION (City and State), (2) YEAR COMPLETED (PROFESSIONAL SERVICES, CONSTRUCTION (if applicable)). Row 1: Comprehensive Beach Management, Palm Beach, Florida. 2008 – Ongoing, Ongoing. Includes description of role and project details.

Table with 3 columns: (1) TITLE AND LOCATION (City and State), (2) YEAR COMPLETED (PROFESSIONAL SERVICES, CONSTRUCTION (if applicable)). Row 1: Broward County Shore Protection Program, Broward County, Florida. 1994-2008, N/A. Includes description of role and project details.

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Gerardo Contreras, PE, D. CE, D. PE, LEED, AP	Project Engineer	24	13
15. FIRM NAME AND LOCATION (City and State) Tetra Tech Inc.			
16. EDUCATION (Degree and Specialization) Executive MBA Civil Engineer		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) Florida PE, Civil Engineering	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) LEED Accredited Professional by the Green Building Council, Diplomat in Coastal Engineering and Port Engineering by the Academy of Coastal, Ocean, Port and Navigation Engineers. COPRI member			
19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida	PROFESSIONAL SERVICES Ongoing	CONSTRUCTION (If applicable) 2015 est	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
a.	Project includes access channel and basin dredging and use of the 150,000 cy of dredged material from this and two additional navigation projects in the island construction. The design of the island breakwaters includes about 21 acres of environmental enhancements including oyster reefs, mangroves, channel and basin dredging, beneficial use of dredged matdune grass and shorebird habitat. The project is in a dynamic flood tidal delta and required hydrodynamic and physical modeling to avoid damage to adjacent seagrass beds. Fee: \$4.8 M Construction Cost: \$31 M Role: Design Engineer		
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida	PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) 2013	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
b.	Project included 1.5 miles of new channels and work adjacent to existing marinas and bulkheads. The project received \$12.6 million in grant funding covering most of the construction cost of the project. The Florida Association of Environmental Professionals awarded the project its Project Award in 2010 in recognition of the environmental enhancement components of the project. Fee: \$1.8 M Construction Cost: \$12.2 M Role: Design Engineer		
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Port of Miami Seaport Redevelopment, Miami, Florida	PROFESSIONAL SERVICES 2006	CONSTRUCTION (If applicable) 2008	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
c.	Major Capital investment for Port redevelopment, roads improvements and re-design, wharves construction and modifications, cargo yards relocation, dredging, Cargo Gate, new parking facilities, rail relocation and many other improvements. Role: Design and Field Engineer		
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Seaplane Lagoon, NAVFAC SW, Alameda, California	PROFESSIONAL SERVICES 2008	CONSTRUCTION (If applicable) N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
d.	Remedial dredging and dewatering design project to remove radium-contaminated sediments from Seaplane Lagoon at the former Alameda Naval Air Station prior to its turnover to community interests. Role: Design Engineer		
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Concord Wilshire's Redevelopment of Ruffy's Marina, Hollywood, Florida	PROFESSIONAL SERVICES 2006	CONSTRUCTION (If applicable) N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
e.	The project included site, bathymetric, and sea grass surveys for input into the design and permitting process. Tasks included permit drawings preparation, alternatives analysis for dredging and mitigation, and input for submittals to the agencies. Role: Design Engineer		

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12. NAME Jesse Davis, PE	13. ROLE IN THIS CONTRACT Project Engineer	14. YEARS EXPERIENCE	
		a. TOTAL 10	b. WITH CURRENT FIRM 9
15. FIRM NAME AND LOCATION (City and State) Tetra Tech, Inc, Boynton Beach, FL			
16. EDUCATION (Degree and Specialization) MS, Ocean Engineering, Florida Institute of Technology BS, Ocean Engineering, Florida Institute of Technology		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) Professional Engineer, Florida License #70660	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Davis, Jesse, Phillips, Jenna, Czapinski, Richard, Seissiger, Edward and Cignarella, Pino, October 2013. Breakwater Island Creation. International Symposium on Design and Practice of Geosynthetic-Reinforced Soil Structures. Davis, Jesse and Jenna Phillips, February 2013. City of Fort Pierce Marina Island Breakwater Creation. National Conference on Beach Preservation Technology, Jacksonville, FL. Member, American Society of Civil Engineers, 40-Hr HAZWOPPER, Certified Open Water Diver, PADI, First Aid, CPR, AED, Emergency Oxygen Provider Training, PADI			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
Fort Pierce Marina Reconstruction and Expansion Project, Fort Pierce, Florida	PROFESSIONAL SERVICES 2005-Current	CONSTRUCTION (If applicable) 2012-Current	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
a.	Mr. Davis was responsible for overseeing project staff to provide the City of Fort Pierce with engineering services during the construction of a \$19 million dollar, 13-island breakwater system in Fort Pierce, Florida. Mr. Davis was also a primary contributor to the design and permitting of the island protection project. Design responsibilities included the development of hydrodynamic and numerical models to assess configuration alternatives and perform a regional influence evaluation. In addition, a turbidity/suspended sediment model was developed to assess the potential impacts that dredging and island construction activities may have on adjacent marine resources. Field investigation responsibilities included conducting underwater inspections, piston core borings, coordinating geotextile tube bench tests for model input, and surface water sampling within the Indian River Lagoon. Cost: \$19 Million Role: Project Engineer/Field Operations Lead		
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida	PROFESSIONAL SERVICES 2013-Current	CONSTRUCTION (If applicable) 2013-Current	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
b.	Mr. Davis is the project engineer responsible for the creation of 9.28 acres of low and high relief reef located approximately 2.5 miles offshore of Government Cut. Responsibilities include assisting in the procurement of limestone boulders from multiple quarries, ensuring efficient material deployments meeting the project plans and specifications, preparation of daily reports, and schedule coordination with the primary project stakeholders. Cost: \$24.4 Million Role: Project Engineer		
Manatee Pocket Dredging and Environmental Enhancement Project, Port Salerno, Florida	PROFESSIONAL SERVICES 2006-2012	CONSTRUCTION (If applicable) 2010-2012	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
c.	Mr. Davis assisted in the dredging design and permitting of the removal of 280,000 cubic yards of material for navigation and environmental enhancement of Manatee Pocket in Martin County, Florida. Responsibilities included dredging channel design, volume calculations, the development of a pipeline feasibility study, performing gopher tortoise surveys, detailed cost estimates, permit drawings, design of channel marker locations, production of bid documents, and review of contractor pay requests. This project was recognized as the Florida Association of Environmental Professionals Project of the Year in 2010. Cost: \$12.2 Million Role: Project Engineer		

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12. NAME Mohamad Al-Hawaree, PE, P. Eng	13. ROLE IN THIS CONTRACT Geotechnical Engineer	14. YEARS EXPERIENCE	
		a. TOTAL 13	b. WITH CURRENT FIRM 12
15. FIRM NAME AND LOCATION (City and State) Tetra Tech-AAI, Orlando, Florida			
16. EDUCATION (Degree and Specialization) BS in Civil Engineering MS in Geotechnical Engineering MBA		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline) Professional Engineer, Florida No. 58537; North Carolina No. 035978; Idaho No. 13667; Alberta, Canada No. M60526	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Society of Civil Engineers (ASCE); Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA)			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	
USACE-Wilmington District, N.C. – Military Ocean Terminal, Re-alignment and Deepening Initiative, Phase 3, Subsurface Investigation/Analysis, Sunny Point, North Carolina	2011	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Geological/geotechnical study in support of a dredging project. The study included (1) review of historical subsurface data, (2) planning and execution of a waterborne subsurface investigation, (3) laboratory analysis of samples, (4) perform geophysical field investigation and (5) provide results report and recommendations. Fees: \$494K Role: Senior Project Engineer			
USACE-Wilmington District, NC – Dredge Disposal Area Revetment Repair, Savannah River, Savannah, Georgia	2009-Ongoing	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm AAI involvement included geophysical field testing (seismic and electrical resistivity), mini-cone and seismic cone penetrometer soundings, landside and marine side Standard Penetration borings, and a suite of laboratory tests. Also conducted a slope stability analyses of the dredge disposal cell dikes. Fees: \$646K Role: Senior Geotechnical Project Manager			
USACE-Wilmington District, N.C. – Morehead City DMMP, Brandt Island, North Carolina	2010	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Geological/geotechnical investigation to characterize the types of soils that exist in the potential dredge disposal site. Brandt Island is an existing disposal site within the Morehead City Harbor, and the island may be expanded to accommodate future disposal. Fees: \$650K Role: Senior Geotechnical Project Manager			
Port Canaveral Navigations Improvements (Section 203 WRDA 1986) Engineering Investigations, Florida	2005-2007	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Planned and supervised the marine and land side geotechnical exploration and laboratory testing programs; collected available geotechnical information for the site and prepared a geotechnical data report. The work included foundation recommendations for dredging the navigation channels, slope stability analyses for the new channel cuts and stability evaluation for the existing bulkhead structures. Fees: \$102.6K Role: Senior Geotechnical Project Manager			

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT <i>(Complete one Section E for each key person.)</i>			
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Rebecca Dougherty	Permitting / Project Scientist	2	1
15. FIRM NAME AND LOCATION (City and State) Tetra Tech, Inc., Boynton Beach, Florida			
16. EDUCATION (Degree and Specialization) M.S. Environmental Science, Restoration Certificate, Expected 2015; B.S. Environmental Science (Chemistry, Latin Amer. Studies Minor), 2004		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) American Academy of Underwater Scientists (AAUS) Certified Scientific Diver, 2014, voting member; Florida Association of Environmental Professionals (FAEP) member			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
	PROFESSIONAL SERVICES	CONSTRUCTION (If applicable)	
Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida	2013-Present	2013-2015	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
<p>a. Tetra Tech is supporting implementation of the \$206 million widening and deepening project at PortMIAMI. This \$206 million project, of which Tetra Tech is responsible for \$24.4 million in services, includes environmental management and monitoring, mitigation programs, construction of low and high relief artificial reefs, and select fill placement in the Julia Tuttle Seagrass Mitigation Area in Biscayne Bay. Tetra Tech is responsible for agency coordination and reporting, and quality control and oversight of monitoring and relocation of sensitive hardbottom, coral reef, and seagrass resources. Ms. Dougherty is responsible for quality control of dive reports, management of QC data collection and project administration. She coordinates and maintains team and diver credentials, responsibilities and certifications for participants in the project as well as Dive Manual compliance.</p>			
NOAA Mulberry Oyster Reef Creation, Hillsborough County, FL	2013 to Present	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
<p>b. Tetra Tech was contracted to provide the analysis and implementation of an oyster restoration project in Hillsborough Bay, Florida after a breach occurred in the wall of a phosphogypsum stack at the MPI phosphoric acid/fertilizer production facility in Mulberry, Polk County, Florida. The goal of this project is to construct oyster reef habitat within the suitable shallow intertidal areas adjacent to the 2D spoil island in Hillsborough Bay. Ms. Dougherty assisted with the seagrass survey and mapping conducted along approximately 5,000 linear feet of shoreline, sediment and water quality sampling, preparation and compliance with Health & Safety Plan. Ms. Dougherty is also responsible for agency coordination and permitting. Results were used to design 16 oyster reefs totaling 0.65 acres for the purpose of providing foraging for nesting, migratory, and wintering shorebirds and water quality improvement.</p>			
Town of Palm Beach Environmental Monitoring Services, Palm Beach, FL	2009 to Present	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm			
<p>c. Tetra Tech has provided marine resource assessment and monitoring services which included, but not limited to: artificial reef, nearshore and offshore reefs and nearshore hardbottom monitoring, sea turtle, fish and marine organism assessments; federal and state agency coordination and permitting assistance; UMAM assessment; and development of project specific monitoring plans, benthic community characterization including in situ monitoring and characterization efforts include benthic hardbottom and artificial reef assessments, aerial time-series analysis, underwater photography and videography and benthic community assemblage data collection. Ms. Dougherty has assisted with field investigations related to nearshore and offshore reef monitoring, coral relocation efforts and artificial reef monitoring as well as data analysis and scientific reporting associated with three beach nourishment projects in the Town of Palm Beach. Continued services include edge mapping, hardbottom characterization, monitoring services and preparation and compliance with Health & Safety Plan.</p>			

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT <i>(Complete one Section E for each key person.)</i>			
12. NAME Andrea Rinne	13. ROLE IN THIS CONTRACT Permitting / Project Scientist	14. YEARS EXPERIENCE	
		a. TOTAL 4	b. WITH CURRENT FIRM 1
15. FIRM NAME AND LOCATION (City and State) Tetra Tech, Inc. (Boynton Beach, FL)			
16. EDUCATION (Degree and Specialization) M.S. Geography, University of Florida, 2009 B.A. French and Psychology, University of Wisconsin, 1999		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)	
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Palumbo, M. J., S. A. Johnson, F. M. Mundim, A. C. Wolf , S. Arunachalam, O. Gonzalez, A. Lau, J. L. Ulrich, A. Washuta, E. M. Bruna. 2012. Harnessing smartphones for ecological education, research, and outreach. Bulletin of the Ecological Society of America 93(4):390-393.			

19. RELEVANT PROJECTS		(2) YEAR COMPLETED	
a.	(1) TITLE AND LOCATION (City and State) Miami Harbor Phase III Deepening Project, Environmental Management, Miami, Florida	PROFESSIONAL SERVICES 2013-Present	CONSTRUCTION (If applicable) 2013-2015
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm This \$206 million project, of which Tetra Tech is responsible for \$24.4 million in services, includes environmental management and monitoring, mitigation programs, construction of artificial reefs, and select fill placement in the Julia Tuttle Seagrass Mitigation Area in Biscayne Bay. Tetra Tech is responsible for agency coordination and reporting, and quality control and oversight of monitoring and relocation of sensitive hardbottom, coral reef, and seagrass resources. Ms. Rinne is responsible for quality control of dive and water quality reports, report submission and coordination with participants in the project. She also maintains large amounts of data required for the project such as GIS data, media and reports.		
b.	(1) TITLE AND LOCATION (City and State) Puerto Azul, Belize District, Belize	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Tetra Tech was tasked with reconnaissance and scoping for development of an Environmental Impact Assessment for an ecologically friendly development off the coast of Belize. Ms. Rinne contributed to proposal development, data collection, and development of a project GIS database.		
c.	(1) TITLE AND LOCATION (City and State) Instructor for Introductory GIS Course, University of Florida, Gainesville, Florida	PROFESSIONAL SERVICES 2012	CONSTRUCTION (If applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Instructor for the theoretical lecture and computer lab session portions of the course. Topics included file management, projections and coordinate systems, geodatabase and database management, map development, geocoding, georeferencing and spatial data analysis.		
d.	(1) TITLE AND LOCATION (City and State) Contract Worker and Intern, St. John's River Water Management District, Palatka, Florida	PROFESSIONAL SERVICES 2010-2011	CONSTRUCTION (If applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Collection, editing, management and map development of agricultural land use GIS data for a District-wide agricultural survey. Every 5 years the District surveys permitted agricultural parcels to determine if the land is active, crop type, and irrigation system to model water consumption in the District. Additional responsibilities included obtaining, labeling and formatting current and historical aerial photographs for KML display in Google Earth. Formatting, coordinating and tracking folder and file structures for KML application and data base and KML validation and quality control audits were also performed to inform managers about minimum flow levels in District wetlands.		
e.	(1) TITLE AND LOCATION (City and State) Research Assistant, University of Florida, Gainesville, Florida	PROFESSIONAL SERVICES 2009	CONSTRUCTION (If applicable) N/A
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm Aerial photography technician for a project assessing the impact of oil and climate change on oyster reefs. Acquired current and historical aerial photographs of five oyster reefs along the Big Bend region of Florida's Gulf Coast, referenced, mosaicked and classified the photographs for change analysis using ERDAS Imagine software.		

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E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section E for each key person.)			
12 NAME Robert M. Baron	13 ROLE IN THIS CONTRACT Senior Scientist	14 YEARS EXPERIENCE a. TOTAL 14	
		b. WITH CURRENT FIRM <1	
15 FIRM NAME AND LOCATION (City and State) Tetra Tech Boynton Beach, FL			
16 EDUCATION (Degree and Specialization) Master's Degree Marine Biology Bachelor's Degree Marine Science, Biology Minor		17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)	
18 OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) AAUS Scientific Diver, PADI Divemaster, PADI Rescue Diver, UMAM Training, BOEM Marine Mammal Protected Species Observer Training			

19. RELEVANT PROJECTS			
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
	PROFESSIONAL SERVICES	CONSTRUCTION (if applicable)	
Bahia Mar Yachting Center Maintenance Dredging Project, Fort Lauderdale, Florida	2012	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm			
a. The goal of the Bahia Mar Yachting Center Maintenance Dredging Project was to dredge the mooring area along the main fueling dock adjacent to the Intracoastal Waterway (ICW), dredge the marina fairways located between docks, and dredge the ingress and egress corridors on the north and south sides of the marina. Mr. Baron led a qualitative marine resource survey within the seagrass growing season. The survey was conducted to document the extent and species of seagrasses present within the proposed maintenance dredge footprint. Role: Permitting Specialist, Senior Scientist and Field Operations Lead			
PortMiami Marina Development Project, Miami, Florida	2013	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm			
b. As Senior Scientist, Mr. Baron led field efforts to perform a biological assessment of the submerged lands located adjacent to the southwest corner of PortMiami (Dodge Island) in Miami-Dade County, Florida. The purpose of the assessment was to conduct a detailed survey of the submerged lands to confirm the location, composition and density of marine resources, including the federally listed species Johnson's Seagrass (<i>Halophila johnsonii</i>). Role: Senior Scientist and Field Operations Lead			
Miami Harbor Phase III Deepening Project, Miami, Florida	2012	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm			
c. As a sub consultant to PortMiami, Mr. Baron designed pre-construction baseline seagrass monitoring consistent with DEP Permit requirements and managed field installation of 25 transects and pre-construction baseline monitoring. Monitoring methodology included quadrat assessments to quantitatively describe seagrass cover within the project area. Mr. Baron was also the lead author of a report documenting pre-construction conditions to be utilized by PortMiami, USACE, and DEP to determine seagrass impacts that may result from Project equilibration relative to mitigation obligations. Role: Senior Scientist and Field Operations Lead			
Pompano Beach Pier Replacement Services, Pompano Beach, Florida	2014	N/A	
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input type="checkbox"/> Check if project performed with current firm			
d. In support of the City of Pompano Beach's project to replace the existing public fishing pier, a hardbottom analysis was conducted. A detailed underwater investigation of the hardbottom habitat was conducted to document the current conditions of hardbottom resources in the vicinity of Pompano Pier. The investigation included an in situ benthic assessment to quantitatively characterize the benthic community within the survey area. Based on the National Marine Fisheries Service (NMFS) Recommended Protocol, an <i>Acropora</i> (staghorn and elkhorn coral) survey was also completed over approximately 25 acres (10 hectares) of hardbottom habitat. Role: Environmental Project Manager, Senior Scientist and Field Operations Lead			

3.4 Licenses and Certifications

Corporate Registration

State of Florida Department of State

I certify from the records of this office that TETRA TECH, INC. is a Delaware corporation authorized to transact business in the State of Florida, qualified on April 28, 1988.

The document number of this corporation is P19034.

I further certify that said corporation has paid all fees due this office through December 31, 2014, that its most recent annual report/uniform business report was filed on January 10, 2014, and its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

*Given under my hand and the
Great Seal of the State of Florida
at Tallahassee, the Capital, this
the Seventeenth day of March,
2014*



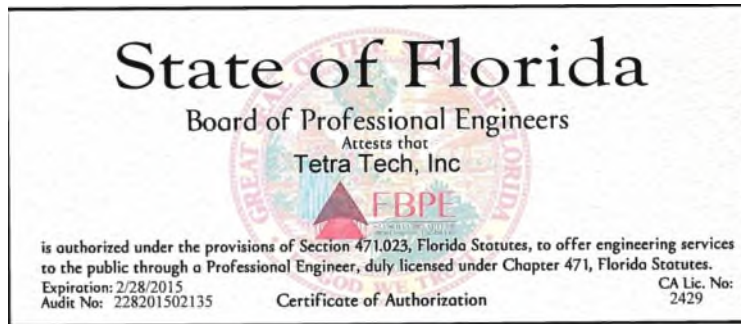
Ken Detjmer
Secretary of State

Authentication ID: CU1508822764

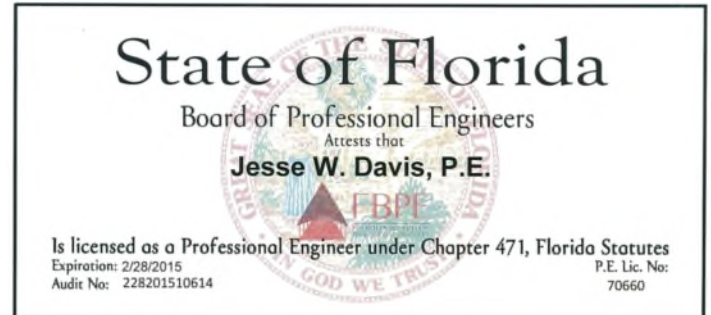
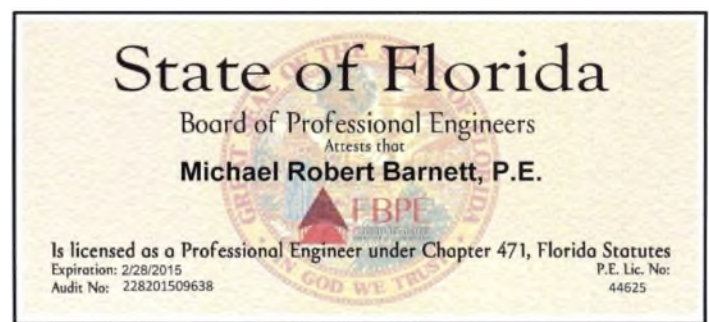
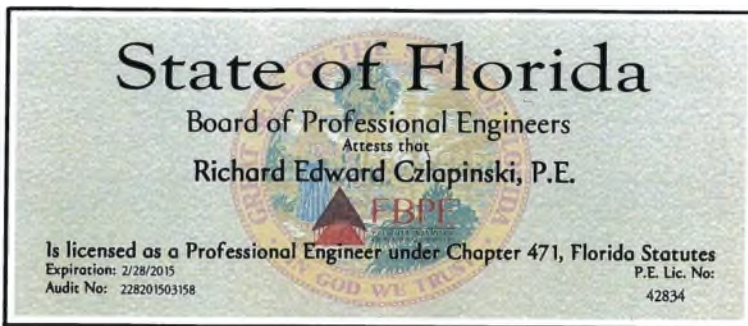
To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

<https://efile.sunbiz.org/certauthver.html>

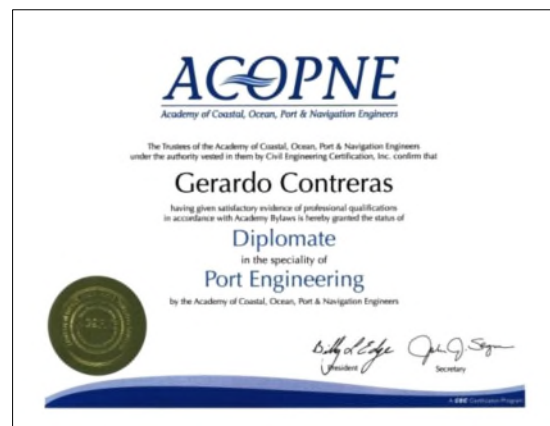
Tetra Tech Inc. Florida Certificate of Authorization

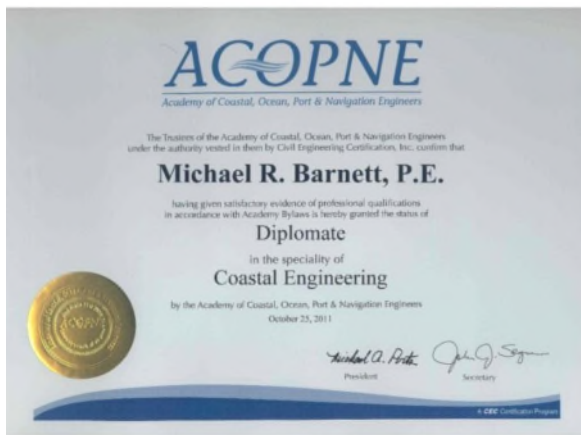


Professional Engineering Registrations



Advanced Technical Specialty Certifications





4.0 PROJECT MANAGER'S EXPERIENCE

Tetra Tech's proposed Project Manager for this project is Richard Czapinski, PE, D. CE. Mr. Czapinski has 42 years of experience in coastal engineering. He specializes in dredging studies and design, small craft harbor and port facilities design and hydrodynamic modeling. During his career, he has been a project manager and/or project engineer on numerous dredging projects ranging from a few thousand up to several million cubic yards. Mr. Czapinski is a diplomate in coastal engineering as determined by the Academy of Coastal, Ocean, Port and Navigation Engineers (ACOPNE). ACOPNE is a fully-owned subsidiary of the American Society of Civil Engineers. Diplomate status indicates that an individual has demonstrated extensive education, expertise in the particular advanced technical specialty and a commitment to the ethical practice of his/her profession. He has served on the Board of Trustees of ACOPNE since its founding in 2009 and is currently completing his term as Past-President of the Board.

Mr. Czapinski has served as an expert witness in the successful defense of the Port of Mississippi at Gulfport, a \$250 million case involving sediment transport and deposition in a casino gambling ship slip. He also served as Project Manager on an Environmental Impact Statement for the development of a 20 million ton/year coal transshipment facility for the Port of New York and New Jersey that involved over 2 million cubic yards of contaminated sediment dredging/disposal and wildlife issues involving endangered fish and bird species.

Mr. Czapinski was the Project Manager for the Manatee Pocket Dredging and Environmental Enhancement Project (www.manateepocketproject.com) that was completed in 2012. The project consisted of over 2 miles of new navigational channel created by removing about 320,000 cubic yards of sediments from Manatee Pocket, a tidal slough with extensive marine commercial and recreational usage. Mr. Czapinski directed all of the Tetra Tech efforts on the project that included design, marine resource surveys, sediment and water quality sampling and testing, geophysical surveys, shoreline structural inspections, 3-D lidar detailed surveys of all coastal structures, geotechnical engineering, public involvement, regulatory permitting, grant application support, preparation of construction documents, support of the project bidding and contractor selection and construction support services. Highlights of the Manatee Pocket project are the very successful grants program that covered 95% of the project's \$13.2 million cost. The project also received the Florida Association of Environmental Professionals Project Award in recognition of the significant environmental enhancements that it provided.

Mr. Czapinski also served as the Project Manager and the Engineer of Record for the design/permitting phase of the Fort Pierce City Marina Reconstruction and Expansion Project. This project involved reconstructing and protecting the floating dock portions of the City Marina that were completely destroyed by Hurricane Frances in 2004. The project involves the construction of 15 acres of natural island-like breakwaters to protect the marina from storm waves and currents in the Indian River Lagoon and to create essential fish habitat by creating artificial reefs, mangrove fringes, and seagrass and oyster habitats. The upland portion of the islands created habitat for shorebirds including the listed least tern. The project was completed with nearly \$30 million in FEMA public assistance and hazard damage mitigation funding and required extensive marine resource surveys, numerical and physical modeling and comprehensive reviews

by an independent technical reviewer, FDEP and by the USACE technical experts at the Engineer Research and Development Center. The project involved dredging of the marina basin and approach channels. In addition the project beneficially utilized about 150,000 cubic yards of project generated dredged material, additional material from a concurrent dredging project within the Fort Pierce Inlet and material from FIND's M-5 DMMA located adjacent to the St Lucie Inlet for the construction of the breakwater islands.

5.0 APPROACH TO SCOPE OF WORK

Tetra Tech proposes a three-phased approach for this project. The first phase would involve a project kick-off meeting, document reviews and an early coordination meeting with the regulatory agencies. By the end of Phase I, the City and Tetra Tech will have a clear understanding of the technical and permit challenges of the project before any additional funds are spent on site specific investigations, engineering and the permitting process. Phase II will include the compilation of all information and materials needed to apply for the regulatory permits and sovereign submerged land authorizations. This phase will include fieldwork for resource mapping, geotechnical analysis, preliminary design, supplemental agency coordination, and also close client coordination. Phase III is the construction phase of the project and includes the tasks of final design, assistance with applying for grant funding opportunities, construction bid support, project scheduling and coordination.

5.1 Phase I – Project Start

5.1.1 Project Management

Mr. Richard Czlapiński, the proposed Tetra Tech project manager (PM) will be responsible for completing the tasks and maintaining coordination with the City. The PM will be responsible for supervising and ensuring overall quality of the work, and will serve as liaison between the City and the project team.

Mr. Czlapiński will maintain frequent and effective communications between the Tetra Tech team and the City during all phases of the work, with particular emphasis given to key milestones during the execution of the project Scope of Work. The PM and Deputy Project Manager, Erin Hague, also will perform the following general project management tasks: management of sub-consultants; progress reporting; document control, and health and safety and quality control activities.

5.1.2 Project Kick-Off

We propose a kick-off meeting with representatives of the City, Tetra Tech and our sub-consultant Sea Diversified in order to establish a solid foundation of project goals, objectives and understanding, as well as an opportunity to solidify timelines and critical path items/issues associated with execution of project work elements. The meeting will also afford an opportunity for the City to share all technical studies, reports, current/expired permits for the marinas and the conceptual mitigation plan with the Tetra Tech Team.

5.1.3 Document Reviews

Tetra Tech understands that there has been preliminary planning and data collection for the two project areas. Our PM and Deputy PM both participated in the early planning stages of the project by analyzing and identifying City marina expansion opportunities and also provided resource mapping services. The

Tetra Tech team will review the documents received from the City at the project kick-off meeting in order to identify the need for any revisions to the proposed project.

If any of the project sites are within areas that have been previously dredged and the City proposes to dredge some of the same areas to the same depths, those portions of the project area may be exempt from needing a Florida Department of Environmental Protection permit and may qualify for an U.S. Army Corps Letter of Permission or a Nationwide permit. Similar impacts to previously impacted areas should not require mitigation. This meeting will allow us to have this discussion with the agencies before we enter the Phase II work. Tetra Tech understands that a preliminary mitigation plan has already been developed. It is our hope that we would be able to reach agreement on the nature and extent of mitigation responsibilities, and potential mitigation strategies early in the process.

5.1.4 Florida Inland Navigation District Coordination

The Florida Inland Navigation District (FIND) is the local sponsor for the federally authorized Atlantic Intracoastal Waterway (AIWW). It is a special taxing district with the primary program objective of providing maintenance of the waterway. FIND's maintenance responsibilities include navigation planning, channel design, development of permitted dredged material management areas (DMMA) and the design and implementation of dredging and dredged material management projects.

FIND has undertaken a comprehensive program to enhance navigational access in Broward County (County). It commissioned an economic study which demonstrated that deepening of the AIWW to allow its use by mega-yachts would lead to significant increases in revenue in commercial and recreational businesses within the County. Since 2005, FIND has undertaken the design, permitting and implementation of three dredging projects within the County. These include the deepening of about 2.8 miles of the AIWW to -17 feet between the 17th Street Causeway and a point about 4,000 feet north of the Las Olas Boulevard Bridge. The City's project will improve navigational access to both the Bahia Mar and Las Olas marinas. The most efficient and cost-effective method to dredge the two marinas is to accomplish this work in cooperation with and under FIND's AIWW dredging contract.

Tetra Tech will coordinate closely with FIND on the marina dredging projects. We routinely worked with FIND on the Fort Pierce Island Breakwater project. Coordination with FIND on that project provided the Fort Pierce project with 119,000 cubic yards of sand fill for the island construction at no cost for the material, and FIND was able to get needed capacity within its M-5 DMMA in time for a critically needed maintenance dredging project in the St Lucie Inlet.

5.1.5 Agency Coordination Meeting

Tetra Tech proposes an early coordination meeting between the project team and the regulatory agencies. A period of time has passed since the agencies first reviewed the proposed project and the mitigation plan. This meeting will be an opportunity to re-introduce the project to the regulators. Meeting with the agencies before formal submittal of the application should facilitate a more expedient permit process when the City and Tetra Tech initiate the permitting process.

Tetra Tech will prepare for and attend a meeting with the regulatory and commenting agencies to present and discuss the project elements, define the regulatory hurdles, identify timeframes for resource mapping,

and other requisite pieces that must be included in the permit application package prior to submittal to the agencies. The purpose of the meeting will be to describe the engineering, geotechnical, and environmental investigations performed to date and the design decisions reached in formulating the proposed project.

The Tetra Tech Team will schedule the coordination meeting sufficiently in advance to allow the attendance of those State and Federal agencies that will be responsible for the project evaluation. Agencies that will be invited include the Broward County Environmental Protection and Growth Management Department (BCEPGMD), Florida Department of Environmental Protection (FDEP, Southeast District), U. S. Army Corps of Engineers (USACE), National Marine Fisheries Service (NMFS, Protected Resources and Habitat Conservation Divisions), U. S. Fish and Wildlife Service (USFWS), and Florida Fish and Wildlife Conservation Commission (FFWC). In addition, the FIND will be invited to participate in the meeting to assist in responding to questions regarding project synchronization.

The goal of the coordination meeting is to obtain agency input on the proposed project, identify additional data needs and concerns, and develop responses to their issues before submittal of the permit application package. In addition, the outcome of the meeting will reveal the level of effort needed to obtain a favorable regulatory review with an expected timeframe for issuance of the local, state, and federal regulatory authorizations and approvals.

5.2 Phase II – Permit Application Development

Phase II of the project approach includes tasks needed to obtain the regulatory authorizations to construct the project (site investigations through receipt of permits). The need for additional survey, resource mapping, and sampling tasks will be identified during the agency coordination meeting described in Section 5.1.5.; however for this response, we have identified some of the technical information that is likely to be requested by the agencies during pre-application meetings, application process, or during their Request for Additional Information (RAI) stage of permitting.

5.2.1 Sampling Plans

Tetra Tech will prepare a Sampling and Analysis Plan (SAP)/Quality Assurance Plan (QAP), and a Health and Safety Plan (HASP) to govern the execution of all aspects of the project.

Sampling and Analysis Plan (SAP)/Quality Assurance Plan (QAP)

Tetra Tech will prepare a SAP/QAP to support collection and analysis of the sediment and elutriate sampling, and benthic surveys described below. The SAP/QAP will include the following items:

- Introduction which includes the site background and project location;
- Organizational chart of key project personnel and communication pathways;
- Project objectives;
- Identification of NELAC lab to be used for analysis;
- Field sampling standard operating procedures which shall include field methods, documentation, sample handling and transport (Chain of Custody);
- Laboratory analysis which shall include analyte list and screening values;

- Data validation;
- Reporting;
- Detection limits which shall be achieved for each analysis; and
- Remedial measures that shall be used to identify and correct analyses which appear erroneous.

Health and Safety Plan (HASP)

A site-specific HASP will be prepared to include the tasks outlined in this scope of work. The HASP will be completed in accordance with applicable Occupational Safety and Health Administration (OSHA) requirements.

5.2.2 Sediment Sampling and Testing

Our proposed program of sediment sampling and testing is designed to address the chemical quality concerns of the regulatory agencies as well as our design concerns related to the structural stability of the floating dock anchor piling and the shoreline bulkhead systems. The following paragraphs outline our proposed sediment sampling and testing program.

Sediment Quality Sampling

Tetra Tech proposes to collect the sediment samples through use of a vibracore sampling rig. In vibracore sampling, high frequency vibrations transfer energy to the sediment, greatly reducing wall friction both inside and outside of the core sampling tube. The result is a core sample that is representative of the actual sediment deposit. Vibracoring will yield a continuous sample of the full depth of the sediment within the proposed dredging prism plus a two foot additional increment that captures the characteristics of the sediment layer that will become exposed to the water column after dredging.

The sediment quality program will consist of two sample stations within the Las Olas Marina, four sample stations within the Bahia Mar Marina as well as a common background sample station between the two marinas. We will complete sediment sampling in triplicate at each sample station. Upon recovery of each core, we will photograph and visually classify the sediment layers that may exist and document the observations in a core log. Tetra Tech will then sample each core at the sediment-water interface to satisfy the needs of the regulatory agency required elutriate testing¹. Elutriate testing measures potential changes in contaminants as a result of the disturbance and resuspension of the sediments into the water column during dredging operations. Tetra Tech will concurrently collect samples of the site water that are required for the elutriate tests. We will take additional samples for bulk chemistry testing any sediment layer horizon or other representative locations within the vertical extent of the core. The samples will be packaged and shipped to a certified laboratory for testing.

¹ US Environmental Protection Agency, (1998). "Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual", Feb 1998.

Sediment Quality Testing

The sediment quality testing will follow FDEP guidelines². The suite of laboratory tests will include heavy metals (aluminum, copper, lead, zinc, arsenic, cadmium, and mercury) and polycyclic aromatic hydrocarbons.

Tetra Tech will submit a data report containing the following information:

- dates of analysis;
- a statement describing the methods used in handling, storage and analysis of the samples;
- a statement by the individual responsible for implementation of the analysis concerning the authenticity, precision, limits of detection and accuracy of the data;
- chain of custody forms;
- documentation that the laboratory performing the analyses has an approved quality assurance plan on file with DEP; and
- the MDL and PQL for each analytical method.

Based upon these data, Tetra Tech will prepare and include the data deliverables using FDEP's Automated Data Processing Tool (ADaPT).

- We will include a laboratory testing verification section that includes the following:
- preparation logs including history of preparation, spike level, and the time the sample was spiked relative to digestion;
- absorbencies or responses for calibration curves, analytical samples, and quality control samples;
- quality control samples will include preparation blanks, calibration blanks, field blanks, and independent reference samples.

Having this information readily available may eliminate the need for additional sampling. Our evaluation of the sediment chemistry results will utilize two different guidance criterions: Sediment Quality Assessment Guidelines (SQAGs)³ to evaluate the potential water quality impacts to marine organisms, and Chapter 62-777, F.A.C, Florida State Soil Cleanup Target Levels (SCTLs) to evaluate potential impacts to upland receptors. This comparison determines the dredged material's suitability for beneficial reuse.

5.2.3 Biological Habitat Characterization

In 2011, Tetra Tech was subcontracted by URS to perform a benthic survey and biological habitat characterization of the Las Olas marina. The resulting report was titled, "*Report Benthic and Bathymetric Surveys Atlantic Intracoastal Waterway Marina Dredging Project.*" Tetra Tech will perform additional benthic resource surveys, as needed, to produce an updated report including identification and reconnaissance mapping of existing estuarine habitats for State and federally listed species and an essential fish habitat (EFH) assessment. The assessment of potential effects on EFH will serve as the basis for consultation with the NMFS in accordance with the Magnuson-Stevens Fishery Conservation and Management Act of 1996. Field surveys will be performed in order to collect all data necessary to

² Florida Department of Environmental Protection, (1984). *Deepwater Ports Maintenance Dredging and Disposal Manual*, Part III

³ Florida Department of Environmental Protection, (2005). *Approach to the Assessment of Sediment Quality in Florida Coastal Waters*

(ultimately) support preparation of the BCEPGMD, FDEP and USACE permit applications, as well as impact analysis for federal and state commenting agencies.

Benthic biological surveys will be conducted within the active Johnson's Seagrass (*Halophila johnsonii*) growing season recognized by all resource agencies (June 1 to September 30). The survey will identify and delineate sensitive bottom habitats and results will be used to evaluate opportunities to avoid or minimize, to the extent possible, impacts on sensitive bottom habitats. A reconnaissance/baseline survey and an impact analysis will be developed to assess any potential impact caused during construction. The biological and physical data collected for the project will be analyzed and incorporated into a "Benthic Habitat Characterization Report" suitable for submittal to the regulatory agencies.

5.2.4 Bathymetric Survey

The Tetra Tech Team, with its survey consultant SDI (Sea Diversified, Inc.), will complete bathymetric surveys of the project area(s), as needed, with all work performed under the responsible charge of a Professional Surveyor and Mapper registered in the State of Florida. All survey work will meet or exceed the Minimal Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers in the Florida Administrative Code.

Prior to the survey, SDI will recover and verify appropriate horizontal and vertical control points using either differential leveling or Real-Time Kinematic Differential Global Positioning (RTK GPS). SDI will conduct the bathymetric survey using an automated hydrographic system consisting of a survey vessel equipped with a marine grade multibeam sounder, Differential Global Positioning System (DGPS) and a computer-based navigation/data collection system.

The planform extent of the survey will encompass submerged bottom of both marinas and extend out into the AIWW to overlap with planning surveys for FIND's AIWW dredging project. The survey vessel will collect data as close as practical to the existing shoreline and/or existing structures (docks, bulkheads, bridge piers).

5.2.5 Preliminary Engineering & Design

Dredging Limits

The overall limits of dredging within the two marina basins will be within the sovereign submerged land leases for each facility. Tetra Tech will coordinate with FIND to determine the limits of their dredging project to assure continuity between the marinas and the AIWW. Additional dredging may be required outside of the existing lease boundaries to properly tie into the FIND dredging project in the AIWW. Should the project expand outside of the marinas' current submerged land leases, Tetra Tech will assist the City in gaining approval from the State to modify the existing sovereign submerged land leases and create a new public easements for the channels if required.

Setback Requirements

Setbacks of the proposed dredging limits from structures or other water related facilities may be required for structural stability and/or avoidance reasons. Such structures may include docks, bulkheads, utility easements and the Las Olas Bridge piers. Installations/infrastructure that require specific setbacks from

the project will be identified and appropriate distances will be established based upon sediment stability factors, property limits, and/or discussions with the applicable government entity or upland owner as appropriate.

Proposed Dredging Plans

Tetra Tech will produce a preliminary project dredging plan for each marina that depicts the areas within the overall limits of the proposed project that are suitable for dredging without interfering with the above-listed exclusion areas. The map will be a 3-dimensional digital terrain model that will allow the quantification of in-place sediment that can be removed by the proposed dredging. The mapping will also provide figures suitable for presentation and discussion with regulatory agencies in a pre-application meeting.

Dredged Material Characteristics and Handling

Connecting the City's project with the FIND dredging program will require that the dredged materials from the marina basins are of comparable physical and chemical characteristics with the material dredged from the AIWW channel. To demonstrate this consistency in dredged materials, we will sample and test the sediment physical and chemical characteristics and the supernatant waters of the project areas as described under Section 5.2.2 of Tetra Tech's proposed scope of work. This task reviews the data, documents the testing program results, interprets the findings, and develops recommendations for the handling, dewatering, and ultimate disposition of the resulting dredged material.

Dredged Material Management Areas (DMMA)

FIND dredging projects in the Dania Cutoff Canal used a temporary DMMA site located in the southwest corner of the Port Everglades property. FIND negotiated for the use of the site with Broward County in exchange for the inclusion of the County's specification for required maintenance dredging at Berths 31/32 in FIND's competitive solicitation for a dredging contractor. Usable DMMA sites are limited in Broward County. FIND does have an undeveloped site near Pompano Beach. In February 2014, FIND led a contract for the clearing and landscape buffering of the site. Further improvements to the site to enable it to accommodate dredged materials could be the subject of negotiations between the City of Fort Lauderdale and FIND. Tetra Tech will provide technical support to the City as may be required on this or other related discussions with FIND on the proposed combined dredging projects.

Opinion of the Probable Cost of Construction

Tetra Tech will develop an estimate of the probable cost of executing the proposed project in both marinas as well as the mitigation project. The cost estimates will include all design, permitting, and construction-related costs and will include a contingency allowance appropriate to the preliminary nature of the design. Tetra Tech will coordinate with FIND and the City of Fort Lauderdale to identify applicable costs in order to avoid duplicative costs that may not be necessary due to the unified nature of the proposed project.

5.2.6 Regulatory Permitting and Submerged Lands Approval **Pre-application Meetings**

Tetra Tech will schedule at least three pre-application meetings with the regulatory agencies for final

discussions regarding the project. These meetings are a second opportunity to meet with the agency representatives and determine if they require supplemental information to make their permitting decisions. During the meetings, we will present the results of our studies, share the proposed project plans and demonstrate how we plan to avoid and minimize impacts to environment resources. We believe that early coordination with permitting agency staff promotes a team approach and reduces the time that an application is under review.

Permit Applications

Tetra Tech shall serve as the City's agent for the regulatory process and will prepare and submit all permit applications and supporting information/documentation to the Broward County EPGMD, Florida DEP and the USACE in compliance with their respective requirements. Tetra Tech will pay all permit application fees on the City's behalf. Tetra Tech shall be reimbursed by the City for all application fee expended as part of our service provision contract.

Supporting Documents

The regulatory agencies review proposed permit requests for avoidance and minimization of environmental impacts. The application package must describe how the applicant will provide reasonable assurances that the dredging and operation of the reconfigured marinas will not cause unacceptable direct, secondary, and cumulative impacts to natural and water resources. In order to demonstrate that the project(s) will have the least environmental impacts possible, the application package will include the following reports and plans:

Sediment and Soil Data Analysis and Report

Tetra Tech will compile all data related to soils and sediments and produce an analysis report for submittal to the regulatory agencies. The results of the sampling and laboratory testing of sediments and site water performed in Phase II will be subjected to a data validation process that determines if the data is of acceptable quality as defined by the project's data quality objectives. This task will fully document the laboratory test results and the validation in a report suitable for delivery to the regulatory agencies for their information and evaluation of the proposed dredging programs.

Spoil Material Handling & Disposal Plan

Tetra Tech will prepare a detailed spoil management plan that explains how the dredged spoils will be managed from the in-water work, upland transportation, and to the final disposition location. The plan will describe all measures taken to prevent water quality violations and for safe disposal. The plan will be closely coordinated with the work of the FIND.

Water Quality Protection Plan

Tetra Tech will include in our design, details on how turbidity controls such as curtains and booms or other BMP's will be used to protect water quality during dredging activities and use of berms, barriers, and fences to protect water quality at the spoil handling sites.

Environmental Impact Analysis

The Tetra Tech Team will evaluate environmental constraints and quantify environmental resource impacts in the project areas and will evaluate and design mitigative solutions and cursory cost estimates that may be required to offset unavoidable environmental resource impacts. These solutions will be fully vetted through the City for approval prior to submittal of formal permit applications.

Mitigation Plan

Our team will review the City's existing mitigation plans and associated agency comments. Tetra Tech is prepared to make design modifications to the existing plans in response to the agency comments or work with the City to identify other mitigation opportunities / strategies to offset unavoidable project impacts. Tetra Tech will use the FDEP approved Uniform Mitigation Assessment Method (UMAM) to assess the project and mitigation alternatives. The UMAM provides a standardized procedure for assessing the ecological functions provided by wetlands and other surface waters, the amount that those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset that loss. We will work with the agencies to develop a mitigation monitoring plan, a list of success criteria for the proposed mitigation as well as short term and long term adaptive management plans.

Requests for Additional Information

Tetra Tech will make every effort to supply the necessary information to the regulatory agencies with the original application submittals. Considering the unified approach and unique nature of this complex project, Tetra Tech envisions that we will be required to respond to some agency questions regarding the original application package. We are prepared to provide supplemental data that the agencies may request via a Request for Additional Information (RAI) during their application reviews. This is likely to require some coordination meetings with the Tetra Tech Team and the City, possible design modifications to the preliminary design plans, and supplemental information that the agencies deem necessary to evaluate the proposed project and render a permit decision. The agencies may request as many RAI's as they feel necessary until all of their questions have been answered to their satisfaction. We anticipate that we will need to provide responses to at least two (2) RAIs per agency (6 total) and at least two (2) modifications to design plans.

Sovereignty Submerged Lands Survey

Once it is understood that the project will be approved and permitted by all of the agencies, Tetra Tech will conduct a sovereignty submerged lands survey at each project site. The surveys will depict both existing leases and any proposed modifications and new easements and will be used as supporting documents to obtain the FDEP's "proprietary" authorizations.

Trustees of the Internal Improvement Trust Fund

Tetra Tech will support the City of Ft. Lauderdale with presentations in Tallahassee should the project be required to obtain proprietary approval from the Governor and Cabinet sitting as the Board of Trustees of

the Internal Improvement Trust Fund. We will support the City with one (1) meeting with the Cabinet Aides and a second meeting with the Trustees which typically are scheduled weeks apart.

5.3 Phase III Construction Plans & Specifications/Construction Bids

The preliminary design for the dredging project and mitigation plan developed in Phase II represents a nominal 60% design development package. The design will be further developed under this phase of the project. Also included in this project implementation phase is a further detailed estimate of construction costs, assistance with identifying and obtaining additional funding opportunities, and support during the construction procurement process.

5.3.1 Preparation of Plans and Specifications

Tetra Tech will finalize the design drawings and develop the technical specifications for the dredging construction and mitigation plan document packages. We assume that the contractual and administrative sections of the project specifications will be developed by the City based upon its standard construction contract requirements.

Tetra Tech will submit packages to the City for review and comment:

- 90% design drawings and draft technical specifications based upon City comments on the preliminary design package of Phase II;
- 100% signed and sealed design drawings and final specifications that incorporate the City review comments on the 90% design package and draft technical specifications; and
- Schedules for the construction and mitigation projects.

5.3.2 Revised Opinion of Probable Construction Costs

Finalization of the project design will also allow Tetra Tech to refine the estimate of probable construction and mitigation costs. Revised cost estimates will be submitted to the City with the 90% and 100% design deliverable packages.

5.3.3 Grant Funding Assistance

Tetra Tech will support the City by researching grant opportunities in an effort to find supplemental funding for the project. We will support the City in the preparation of the grant applications and Tetra Tech staff will participate in oral presentations, if needed, to secure supplemental funding on the City's behalf.

5.3.4 Construction Bid Phase Support

Tetra Tech will provide the following services in support of the City during the construction bid phase of the project:

- assistance in the preparation of the bid notice and associated documentation
- assistance in preparing City responses to bid questions
- assistance in preparing addenda to the bid notice
- participation in a pre-bid meeting
- assistance in the evaluation of submitted bids

The attached RFQ Response only addresses the Tasks listed in the City's Scope of Work. Please know that Tetra Tech is available and qualified to assist the City with further tasks such as: environmental resource and water quality monitoring during construction; permit compliance and coordination; mitigation construction and subsequent short-term/ long-term environmental monitoring requirements and construction support services.

6.0 REFERENCES

Tetra Tech is pleased to submit to the City three letters of references from past and present clients. The letters are related to the representative projects we submitted under Section 2.3 – Relevant Project Descriptions. The client contacts are listed below followed by their letters of recommendation.

Manatee Pocket Dredging and Environmental Enhancement Project

Martin County Board of County Commissioners
Ms. Kathy FitzPatrick, County Coastal Engineer
2401 S.E. Monterey Road
Stuart, FL 34996
(772) 288-5429
kfitzpat@martin.fl.us

Fort Pierce Marina Reconstruction and Expansion Project

Mr. Edward Seissiger, Fort Pierce Engineering Department
1 Avenue A
Fort Pierce, FL34954
(772) 467-3780
eseissiger@city-ftpierce.com

Miami Harbor Phase III Deepening Project Environmental Management

Mr. Russell F. Zimmerman
Vice President – Area Manager, South Atlantic
Great Lakes Dredge and Dock Company, LLC
2122 York Road
Oak Brook, IL 60523
KZimmerman@glld.com



MARTIN COUNTY
BOARD OF COUNTY COMMISSIONERS
2401 S.E. MONTEREY ROAD • STUART, FL 34996

Telephone: 772-463-2892
Fax: 772-288-5955
Email: pknott@martin.fl.us

DOUG SMITH
Commissioner, District 1

ED FIELDING
Commissioner, District 2

ANNE SCOTT
Commissioner, District 3

SARAH HEARD
Commissioner, District 4

JOHN HADDOX
Commissioner, District 5

TARYN KRYZDA, CPM
County Administrator

MICHAEL D. DURHAM
County Attorney

September 16, 2014

City of Fort Lauderdale
Procurement Services Division
Ronald Archey, Procurement Specialist
Fort Lauderdale City Hall
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

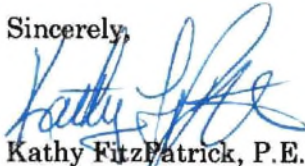
Subject: RFQ – Civil/Environmental Engineering Services
City of Fort Lauderdale Intracoastal Waterway-Las Olas Marina Dredging
Project

Dear Mr. Archey:

I am pleased to follow-up with information concerning the service performance over the course of the Manatee Pocket Enhancement Project. For this project, Tetra Tech was responsible for the design, sediment / water sampling and testing, permitting, geophysical surveying, shoreline structural inspections, public participation, grant writing and support during construction for this \$13 million dredging project. During the process of selection, negotiation and throughout the project I found the individuals associated with Tetra Tech to be very accessible, professional and experts in each area of responsibility. The scope of the project was comprehensive allowing contact with a number of disciplines within the Tetra Tech organization. I found each contact to be quality focused and service minded. The project team was cost competitive and willing to work within our budget.

Tetra Tech successfully worked with county staff, other consultants and the public. Without hesitation I would recommend the team that was assembled for the Manatee Pocket Enhancement Project.

Sincerely,



Kathy FitzPatrick, P.E.
Coastal Engineer

TELEPHONE
772-288-5400
WEB ADDRESS
<http://www.martin.fl.us>



CITY OF FORT PIERCE DEPARTMENT OF ENGINEERING

*Roadway Design, Engineering Reviews, Stormwater Utility Management,
Project Management, Traffic Control and Maintenance*

City of Fort Lauderdale
Procurement Services Division
Ronald Archey, Procurement Specialist
Fort Lauderdale City Hall
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

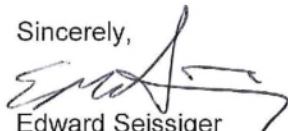
Subject: RFQ – Civil/Environmental Engineering Services
City of Fort Lauderdale Intracoastal Waterway-Las Olas Marina Dredging Project

Dear Mr. Archey:

I am pleased to follow-up with information concerning the service performance over the course of the Fort Pierce Marina Reconstruction / Expansion. For this project, Tetra Tech was responsible for the design, permitting, field investigation, construction administration, mitigation measures and environmental monitoring for the construction of a 15 acre complex of constructed breakwater islands with environmental enhancements and reconstruction of floating docks with 137 slips at the City Marina in the Indian River Lagoon. During the process of selection, negotiation and throughout the project I found the individuals associated with Tetra Tech to be professional and experts in each area of responsibility. The scope of the project was comprehensive allowing contact with a number of disciplines within the Tetra Tech organization. I found each contact to be quality focused and service minded. The project team was cost competitive and willing to work within our budget.

Without hesitation I would recommend the team that was assembled for the Fort Pierce Marina Reconstruction / Expansion.

Sincerely,



Edward Seissiger
Engineering Project Manager



**Great Lakes
Dredge & Dock
Company, LLC**

2122 York Road
Oak Brook, Illinois 60523
630.574.3000

September 25, 2014

Mr. Ronald Archey
Procurement Specialist
Fort Lauderdale City Hall
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

Subject: Environmental and Construction Services Associated with Dredging Recommendation

Dear Mr. Archey,

As the Vice President and South Atlantic Area Manager for the Great Lakes Dredge and Dock Company (GLDD), it is my pleasure to recommend Tetra Tech for professional services..

Currently, Tetra Tech is supporting GLDD on the 2-year, \$206 million widening and deepening of Miami Harbor. Tetra Tech is serving as GLDD's environmental manager providing oversight of the project environmental monitoring plan, which includes mitigation and monitoring of coral and hardbottom resources, seagrass communities, water quality and listed species, quality control of coral and seagrass harvesting and transplanting, construction of 9.28 acres of artificial reefs, and construction of the 'select fill' portion of the Julia Tuttle seagrass mitigation site.

I have found individuals working at Tetra Tech to be accessible and professional in their approach to the project. Their experience coordinating with agencies including Florida Department of Environmental Protection, the U.S. Army Corps of Engineers, Miami-Dade County officials and others has made a significant contribution to this project.

I would recommend Tetra Tech for other dredging related projects because of their wide range of trained professionals and expertise in this area.

Sincerely,

Russell F.
Zimmerman

Digitally signed by Russell F. Zimmerman
DN: cn=Russell F. Zimmerman, o=Great
Lakes Dredge & Dock Company, LLC, ou,
email=RFZimmerman@gldd.com, c=US
Date: 2014.09.25 14:02:53 -0500

Russell F. Zimmerman
Vice President
Area Manager – South Atlantic

7.0 MINORITY/WOMEN (M/WBE) PARTICIPATION

Tetra Tech, Inc. does not qualify as an M/WBE business; however, our sub-consultant, Sea Diversified, Inc., is certified as a small business entity.

8.0 LOCAL BUSINESS PREFERENCE (LBP)

Tetra Tech, Inc. does not meet the requirements for Local Business Preference consideration; however, the proposed project team works in our Boynton Beach office which is located approximately 30 minutes from the Fort Lauderdale City Hall. In addition, we have an office located within the City of Fort Lauderdale boundaries from which the project team would be able to work during the course of the project and conduct project team meetings when needed.

Tetra Tech's Fort Lauderdale office contact information is:

Tetra Tech, Inc.
1401 E Broward Blvd
Fort Lauderdale, FL
(954) 308-3511

Tetra Boynton Beach office contact information is:

Tetra Tech, Inc.
1901 S. Congress Avenue, Suite 200
Boynton Beach, FL
(561) 735-0482

Tetra Tech's Florida Office Locations





9.0 SAMPLE INSURANCE CERTIFICATE



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
10/02/2013

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Insurance Services West, Inc. Los Angeles CA Office 707 Wilshire Boulevard Suite 2600 Los Angeles CA 90017-0460 USA		CONTACT NAME: PHONE (A/C. No. Ext): (866) 283-7122 FAX (A/C. No.): (800) 363-0105 E-MAIL ADDRESS:															
INSURED Tetra Tech, Inc. 10306 Eaton Place, Suite 340 Fairfax VA 22030 USA		<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A: National Union Fire Ins Co of Pittsburgh</td> <td>19445</td> </tr> <tr> <td>INSURER B: Insurance Co of the State of PA</td> <td>19429</td> </tr> <tr> <td>INSURER C: AIG Europe Limited</td> <td>AA1120841</td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>		INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: National Union Fire Ins Co of Pittsburgh	19445	INSURER B: Insurance Co of the State of PA	19429	INSURER C: AIG Europe Limited	AA1120841	INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #																
INSURER A: National Union Fire Ins Co of Pittsburgh	19445																
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INSURER C: AIG Europe Limited	AA1120841																
INSURER D:																	
INSURER E:																	
INSURER F:																	

Holder Identifier :

COVERAGES **CERTIFICATE NUMBER: 570051590188** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. **Limits shown are as requested**

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> X,C,U Coverage GEN'L AGGREGATE LIMIT APPLIES PER: POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC			GL5142623	10/01/2013	10/01/2014	EACH OCCURRENCE \$2,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$1,000,000 MED EXP (Any one person) \$10,000 PERSONAL & ADV INJURY \$2,000,000 GENERAL AGGREGATE \$4,000,000 PRODUCTS - COMP/DP AGG \$4,000,000
A	AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS			CA 327 52 65	10/01/2013	10/01/2014	COMBINED SINGLE LIMIT (Ea accident) \$1,000,000 BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> EXCESS LIAB CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$100,000			TH1300027	10/01/2013	10/01/2014	EACH OCCURRENCE \$5,000,000 AGGREGATE \$5,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N If yes, describe under DESCRIPTION OF OPERATIONS below		N/A	WC15656017 WC15656011 WC15656012	10/01/2013 10/01/2013 10/01/2013	10/01/2014 10/01/2014 10/01/2014	<input checked="" type="checkbox"/> WC STATUTORY LIMITS <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-EA EMPLOYEE \$1,000,000 E.L. DISEASE-POLICY LIMIT \$1,000,000

Certificate No : 570051590188

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)
 Evidence of Insurance. Stop Gap Coverage for the following states: OH, ND, WA, WY.

CERTIFICATE HOLDER Tetra Tech, Inc. 10306 Eaton Place, Suite 340 Fairfax VA 22030 USA	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Aon Risk Insurance Services West Inc</i>
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CITY OF FORT LAUDERDALE, FLORIDA
INTRACOASTAL WATERWAY – LAS OLAS MARINA DREDGING PROJECT
RFQ 946-11484



OCEAN-3 OP ID: SC

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
06/23/14

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Corkhill Insurance Agency, LLC 20 South Bumby Avenue Orlando, FL 32803 Scott Corkhill, AAI #A054965	Phone: 407-898-8891 Fax: 407-898-8813	CONTACT NAME: PHONE (A/C, No, Ext): E-MAIL ADDRESS: FAX (A/C, No):													
	<table border="1"> <tr> <th>INSURER(S) AFFORDING COVERAGE</th> <th>NAIC #</th> </tr> <tr> <td>INSURER A : Southern Owners Ins Company</td> <td>10190</td> </tr> <tr> <td>INSURER B : Markel Insurance Company</td> <td></td> </tr> <tr> <td>INSURER C : New Hampshire Insurance Co</td> <td></td> </tr> <tr> <td>INSURER D :</td> <td></td> </tr> <tr> <td>INSURER E :</td> <td></td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </table>		INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Southern Owners Ins Company	10190	INSURER B : Markel Insurance Company		INSURER C : New Hampshire Insurance Co		INSURER D :		INSURER E :		INSURER F :
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A : Southern Owners Ins Company	10190														
INSURER B : Markel Insurance Company															
INSURER C : New Hampshire Insurance Co															
INSURER D :															
INSURER E :															
INSURER F :															
INSURED Oceanside Solutions LLC 1700 N. Orange Ave Ste 200 Orlando, FL 32804															

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> GENERAL LIABILITY			72728011	02/01/14	02/01/15	EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 300,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						MED EXP (Any one person) \$ 10,000
A	<input checked="" type="checkbox"/> Hired & Non Owned			72728011	02/01/14	02/01/15	PERSONAL & ADV INJURY \$ 1,000,000
	<input type="checkbox"/> GENL AGGREGATE LIMIT APPLIES PER						GENERAL AGGREGATE \$ 2,000,000
	<input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG \$ 2,000,000
	<input type="checkbox"/> AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident) \$
	<input type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> ALL OWNED AUTOS						BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS						PROPERTY DAMAGE (Per accident) \$
	<input type="checkbox"/> SCHEDULED AUTOS						\$
	<input type="checkbox"/> NON-OWNED AUTOS						\$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB			4830274300	02/01/14	02/01/15	EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> EXCESS LIAB						AGGREGATE \$
	<input type="checkbox"/> OCCUR						\$
	<input type="checkbox"/> CLAIMS-MADE						\$
	<input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 5000						\$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			MWC0030444-02	04/16/13	04/16/14	WC STATU-TORY LIMITS
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y/N	N/A				E L EACH ACCIDENT \$ 500,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E L DISEASE - EA EMPLOYEE \$ 500,000
							E L DISEASE - POLICY LIMIT \$ 500,000
C	Professional Liab			4426907803	02/03/14	02/03/15	E&O 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (Attach ACORD 101, Additional Remarks Schedule, if more space is required)

CERTIFICATE HOLDER Tetra Tech Inc. 1901 S. Congress Ave Ste 200 Boynton Beach, FL 33426	TETRETC	CANCELLATION SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE <i>Scott Corkhill</i>
---	----------------	---

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ACORD 25 (2010/05)

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10.0 JOINT VENTURES


Tetra Tech is responding to this solicitation as the prime contractor. We are not proposing a joint venture for this work.

11.0 SUB-CONSULTANTS

Tetra Tech is pleased to team with Sea Diversified, Inc. (SDI) in carrying out the hydrographic / bathymetric surveys for the project areas. SDI is a large-scale surveying and mapping company that specializes in topographic and hydrographic surveying. SDI is unique to the industry in that the firm specializes in surveys on land and in water including operations in some of the most remote and difficult terrain in Florida, Puerto Rico, the Caribbean, Bahamas, Virgin Islands and many other foreign regions. The firm is fully licensed and insured, and all work is performed under the direct supervision of Florida Licensed Surveyors & Mappers.

In 2011 and 2012, SDI conducted hydrographic (bathymetric) surveys of the AIWW marina deepening areas, which included the Las Olas Marina, Fort Lauderdale Aquatic Complex and Bahia Mar sites with the survey limits extending from the existing marina to the limits of the Intracoastal Waterway. These studies were conducted through URS Corporation for the City of Fort Lauderdale.

11.1 Sub-consultants Résumés

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT <i>(Complete one Section E for each key person.)</i>		
12. NAME William T. Sadler, Jr, PSM, PE	13. ROLE IN THIS CONTRACT Hydrographic Surveyor	14. YEARS EXPERIENCE a. TOTAL: 30 b. WITH CURRENT FIRM: 10
15. FIRM NAME AND LOCATION (City and State) Sea Diversified, Inc. (Delray Beach, Florida) 		
16. EDUCATION (DEGREE AND SPECIALIZATION) Florida Atlantic University B.S.: Ocean Engineering 1984		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) Professional Surveyor, Florida - 1998 Professional Engineer, Florida - 1989 Building Contractor, Florida - 1987
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Professional Affiliations: ~American Congress on Surveying and Mapping ~American Society of Civil Engineers ~Florida Surveyors & Mappers Society ~Florida Shores & Beaches Preservation Association		

19. RELEVANT PROJECTS		
(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED	
ICWW Deepening Project & Las Olas Marina Expansion Fort Lauderdale, Broward County, Florida	PROFESSIONAL SERVICES 2012	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for: ~ Hydrographic (bathymetric) surveys of the ICWW marina deepening areas, which included the Las Olas Marina, Fort Lauderdale Aquatic Complex and Bahia Mar sites with the survey limits extending from the existing marina to the limits of the Intracoastal Waterway similar to the surveys conducted by Sea Diversified in 2011 ~Additionally, SDI conducted a bathymetric survey of the area inside the Las Olas Marina area and provided estimates of dredge volumes based on proposed design dredge information provided by URS ~Diver-support for benthic (seagrass) mapping ~Conducted with URS Corporation for the City of Fort Lauderdale <input checked="" type="checkbox"/> Check if project performed with current firm		
Riviera Beach Municipal Marina Redevelopment, City of Riviera Beach, Florida	PROFESSIONAL SERVICES 2014	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for: ~Planning and design of infrastructure improvements and related enhancements to City Marina, which will facilitate and preserve public access, including new floating docks, new bulkhead, related electrical and sanitary infrastructure improvements ~Pre- and post- dredge hydrographic surveys, including volumetric calculations and final certifications ~Construction layout / stake-out of docks, piers and submerged utility locations ~Conducted for City of Riviera Beach <input checked="" type="checkbox"/> Check if project performed with current firm		
Port of Miami Area 3 (Seaboard Yard) Bulkhead, Pre- & Post-Dredge Hydrographic Survey Events, Project Number 2008.033 Port of Miami, Florida	PROFESSIONAL SERVICES 2010	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for: ~Pre- & Post-Dredge single-beam bathymetric surveys associated with the new bulkhead construction of Area 3 at the Port of Miami, Florida ~Conducted for Misener Marine & Port of Miami <input checked="" type="checkbox"/> Check if project performed with current firm		
FDEP Environmental Services for the Ecosystem Management and Restoration Project, Ft. Lauderdale, FL	PROFESSIONAL SERVICES 2013	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for: ~Offshore hydrographic (bathymetric) multi-beam survey and side scan sonar investigation at two (2) ship grounding sites located approximately 1.6 nautical miles north of Port Everglades Inlet in Broward County, Florida The two (2) sites pertain to the groundings of the M/V Spar Orion and the M/V Clipper Lasco and were being considered for physical and biological restoration by Florida Department of Environmental Protection (FDEP) ~Conducted for FDEP Coral Reef Conservation Program <input checked="" type="checkbox"/> Check if project performed with current firm		
Fort Lauderdale Floating Day Dockage, City of Fort Lauderdale, Florida	PROFESSIONAL SERVICES 2010	CONSTRUCTION (If Applicable)
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Project Manager responsible for: ~Design and construction administration of floating docks along the New River in Downtown Fort Lauderdale, encompassing four (4) sites along the river with approximately 6000 square feet of floating docks plus access piers and gangways ~Environmental permitting, State Submerged Lands Lease processing, engineering analysis, construction plans and specifications, construction administration services, and topographic and bathymetric surveying ~Worked closely with City staff, the Marine Advisory Board and the Riverwalk Committee in developing the specifications for the floating docks with an ultimate goal of ensuring consistency with the Downtown Riverwalk theme ~Conducted for the City of Fort Lauderdale <input checked="" type="checkbox"/> Check if project performed with current firm		



E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT <i>(Complete one Section E for each key person.)</i>		
12. NAME Ron W. Ball	13. ROLE IN THIS CONTRACT Hydrographic Survey Manager	14. YEARS EXPERIENCE a. TOTAL: 29 b. WITH CURRENT FIRM: 10
15. FIRM NAME AND LOCATION (City and State) Sea Diversified, Inc. (Delray Beach, Florida)		
16. EDUCATION (DEGREE AND SPECIALIZATION) University of Puerto Rico, Computer Automated Drafting		17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Mr. Ball has over 29 years of surveying experience throughout the State of Florida, U.S. Virgin Islands, Caribbean, and various regions of South America. He has specific expertise in hydrographic surveying, topographic surveying, geodetic control surveying and remote sensing investigations. He has been involved with numerous large-scale mapping projects encompassing dredging projects, design and construction surveys, bridge scour investigations, submerged utility investigations, beach and nearshore surveys, charting and volumetric evaluations for numerous agencies such as the U.S. Army Corps of Engineers – Jacksonville District, Florida Department of Transportation, and many other government entities. Mr. Ball brings a high-level of detail to our firm, offering professional on-site assessments in addition to coordination of field technicians and data collection methodologies.		

19. RELEVANT PROJECTS		
a.	(1) TITLE AND LOCATION (City and State) USACE Sandy O & M Supplemental ICWW Dredging 10-Foot Project, Vicinity of Bakers Haulover Inlet, and 11-Foot Project Vicinity of Jupiter Inlet, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2014 CONSTRUCTION (If Applicable):
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Survey Manager responsible for: ~Pre- and post-dredge hydrographic (bathymetric) single-beam surveys of the Intracoastal Waterway (ICWW) in the vicinity of Bakers Haulover Inlet in Miami-Dade County and Jupiter Inlet in Palm Beach County, Florida ~Pre- and post-construction onshore and nearshore beach profile surveys of the fill-area ~Conducted with Southwind Construction for US Army Corps of Engineers, Jacksonville District (USACE)	<input checked="" type="checkbox"/> Check if project performed with current firm
b.	(1) TITLE AND LOCATION (City and State) Florida Inland Navigation District (F.I.N.D.) Crossroads Maintenance Dredging, Martin County, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2013 CONSTRUCTION (If Applicable):
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Survey Manager responsible for: ~Pre- and interim/post-dredge single-beam hydrographic (bathymetric) surveys at Cut-1 of the Okeechobee Waterway (OCWW) and Cut-4 through Cut-6 of the Intracoastal Waterway (ICWW) ~Per environmental permit requirements, data was extended 500-feet beyond the toe-of-channel in each direction of centerline ~Conducted with Southwind Construction for Florida Inland Navigation District (FIND)	<input checked="" type="checkbox"/> Check if project performed with current firm
c.	(1) TITLE AND LOCATION (City and State) C-51 Sediment Monitoring Surveys, Palm Beach County, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2010 CONSTRUCTION (If Applicable):
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Survey Manager responsible for: ~Hydrographic (single-beam bathymetric) surveys of C-51 canal at Southern Blvd south to Summit Blvd, Summit Blvd south to Forest Hill Blvd, Forest Hill Blvd south and east I-95, I-95 east to S-155 ~Annual surveys, from 2007 through 2010, to monitor the sediment within the C-51 Canal, between Forest Hill Blvd southerly and easterly to the S-155 structure following the 2007 dredging activities ~Conducted with CB&I for Palm Beach County Department of Environmental Resources Management (DERM)	<input checked="" type="checkbox"/> Check if project performed with current firm
d.	(1) TITLE AND LOCATION (City and State) Florida Inland Navigation District (FIND) New River Study, PD&E Bathymetric / Sub-Bottom Profile Surveys, Broward County, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES: 2008 CONSTRUCTION (If Applicable):
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Survey Manager responsible for: ~Hydrographic (bathymetric) and sub-bottom profile survey throughout 7.9 miles of the New River in support of a study pertaining to the proposed deepening (dredging) of this segment of waterway ~Two-month tide study to determine the mean low water datum for the South Fork of the New River ~Bathymetric (single-beam) data collected along cross sections perpendicular to the centerline of the river, with additional cross-sections at bends in the river and confluences with other waterbodies ~Sub-bottom profile data collected along longitudinal transects to map the sediment characteristics within the proposed dredge cut with specific focus on the upper layer of rock strata that may exist ~Groundtruthing the results of the remote sensing study encompassed sediment probes along the 1000-foot interval cross-sections established for the bathymetric survey ~Conducted with Taylor Engineering for Florida Inland Navigation District (FIND)	<input checked="" type="checkbox"/> Check if project performed with current firm



12.0 NON-COLLUSION STATEMENT

NON-COLLUSION STATEMENT:

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g. ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

<u>NAME</u>	<u>RELATIONSHIPS</u>
N/A	N/A
_____	_____
_____	_____
_____	_____
_____	_____

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.



Tetra Tech, Inc.
Eric Dohner, Vice President



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