

City of Fort Lauderdale
Civil/Environmental Engineering Services
for Intracoastal Waterway - Las Olas Marina **Dredging Project** 



September 29, 2014 Date:

2:00 pm Time:

Сору



## City of Fort Lauderdale Intracoastal Waterway Las Olas Marina Dredging Project

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### 2000 East Edgewood Drive, Suite 215, Lakeland, Florida 33803 m 863.667.2345 m amec.com

September 29, 2014

Mr. Ronald Archey Fort Lauderdale City Hall Division of Procurement Services 100 N. Andrews Avenue, Room 619 Fort Lauderdale, FL 33301

Re: City of Fort Lauderdale Intracoastal Waterway - Las Olas Marina Dredging Project

Dear Mr. Archey:

AMEC Environment & Infrastructure, Inc. (AMEC) is pleased to submit our qualifications to provide services for the Las Olas Marina Dredging Project for the City of Fort Lauderdale. We are confident that you will find that the AMEC Team provides an exceptional group of experts with extensive Florida dredging, spoil management, and water treatment expertise. Our team is comprised of two highly respected and experienced firms including AMEC and Dredging and Marine Consultants (DMC), a State of Florida MBE firm.

Our team is excited to have the opportunity to play a role and provide a meaningful contribution in the design and permitting services for the City's dredging project. Why select the AMEC team? AMEC is uniquely qualified to provide the City with the needed consultant services. We have unmatched project experience in Florida dredging. Our corporate expertise covers three decades of continuous experience, beginning with the first full lake restoration project ever completed in Florida. Additionally, we have assembled a project team with expertise in all disciplines and services anticipated for this project and who have direct experience with the exact services sought for this project. Our team has experience working together collaboratively on past successful projects.

Our project team will be led by **Mr. Scott Wuitschick**, **PE**. Mr. Wuitschick has extensive experience in dredging projects including serving in a similar capacity for all of AMEC's recent and ongoing projects including Lake Beauclair and Lake Seminole (Pinellas County). He has provided expert witness testimony in permitting related hearings in the areas of hydrology, hydrologic modeling, permitting, materials management, and construction stormwater control. His expertise also includes directing large-scale permitting efforts. Mr. Wuitschick will be supported by individuals who are recognized experts in their fields who are equally familiar with the issues generally associated with these types of projects.

Mr. Wuitschick will be assisted in project management by **Mr. Gary Nemeth**. Mr. Nemeth has extensive past experience with the project and with the City of Fort Lauderdale. Gary's primary role in managing the project will be in project coordination and outreach. Gary's past experience with the project and knowledge of regional stakeholders and conditions will help to ensure that the project is well conceived and that all institutional knowledge of the project is incorporated in AMEC's evaluation and design work.

Walter Reigner, PE, CPESC will serve as Principal in Charge of this opportunity. Walt is authorized to negotiate on behalf of the AMEC team. He is a veteran employee of AMEC and has been intimately involved with all of the firm's dredging projects in Florida. Walt will ensure that our corporate resources are properly utilized to successfully complete this project. In summary, Walt will ensure that AMEC:

- Optimizes our services and keep things as simple as possible providing outstanding value for the City's dollars spent
- Provides exceptional client service equaling personal attention and frequent communication
- Delivers products on time and within budget
- Is proactive and avoids risk
- Provides a positive and safe work environment on all jobs at all times

We offer the personal commitment and availability of all project team members throughout the duration of this contract and are ready to begin work immediately upon receiving a notice to proceed. We thank you for the opportunity to submit our proposal and invite your detailed review. If you have any questions or require additional information, please contact us at your convenience.

Sincerely,

Scott Wuitschick, PE Project Manager

863.944.0910/Email: scott.wuitschick@amec.com

Walter Reigner, PE, CPESC

Principal-in-Charge

863.607.2054/Email: walter.reigner@amec.com

### **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: With Scugner	September 29, 2014
(signature)	(date)
Name (printed) Walter Reigner, PE, CPESC	Fitle: Principal-In-Charge/Vice President
Company: (Legal Registration) AMEC Environment & In	frastructure, Inc.
CONTRACTOR, IF FOREIGN CORPORATION, MAY E AUTHORITY FROM THE DEPARTMENT OF STATE, IN A (visit http://www.dos.state.fl.us/).	
Address: 2000 East Edgewood Drive, Suite 215	
CityLakeland	_State: Florida _Zip_ 33803
Telephone No. 863.667.2345 FAX No. 863.667.2662	Email: walter.reigner@amec.com
Delivery: Calendar days after receipt of Purchase Order (sect	ion 1.02 of General Conditions):
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): <u>ADDENDUM ACKNOWLEDGEMENT</u> - Proposer acknowledgare included in the proposal:	* Teaming with MBE - DMC
Addendum No.	Date Issued
Q/A - 3 questions and answers acknowledged	September 15, 2014
VARIANCES: State any variations to specifications, terms at in the space provided below all variances contained on other or exceptions by the Proposer will be deemed to be part of listed and contained within the bid documents and reference contained in the below space, it is hereby implied that you solicitation. HAVE YOU STATED ANY VARIANCES OR EXCEPTION LINK IF ANY VARIATION OR EXCEPTION I CONDITIONS. If this section does not apply to your bid, simply Variances:	pages of bid, attachments or bid pages. No variations the bid submitted unless such variation or exception is ced in the space provided below. If no statement is our bid/proposal complies with the full scope of this EXCEPTIONS BELOW? BIDDER MUST CLICK THE S TAKEN TO THE SPECIFICATIONS, TERMS AND



Section 1
Qualifications of Firm and
Project Team





### ARCHITECT / ENGINEER QUALIFICATIONS PART I - CONTRACT SPECIFIC QUALIFICATIONS

A. C	A. Contract Information							
	1. Title						tion <i>(City and State)</i>	
City of Fort Lauderdale Intracoastal Waterway – Las Olas Marina Dredging Project		Fort Lauderdale, Florida						
				2. Public Notice Date			3. Solicit	ation or Project Number
				September 2014				
			ngine	er Point of Contact	E Name	6 F:		
4. N	ame/Ti	itie		Scott Wuitschick, PE	5. Nam	e of Firm	vironmo	nt 9 Infractructure Inc
6 Te	elepho	ne Nui	mber	Scott Wuitschick, FL	7. Fax Number		E-Mail Ad	nt & Infrastructure, Inc.
0	313 <b>p</b> 113			53.667.2345	863.667.2662			ott.wuitschick@amec.com
0.5		. 17						
C. F	<b>ropos</b> cular bra	se <b>a</b> Te anch off	eam Co ice(s) pr	omplete this section for the prime contractor oposed for the contract.	or and all other firms proposed fo	r this contract. If a fi	irm has brar	nch offices, complete this section for the
	Prime Chec	ck one	Sub	9. Firm Name / Business Status	10. Add	lress		11. Role in Contract
a.				AMEC Environment & Infrastructure, Inc. [x] CHECK IF BRANCH OFFICE	2000 E. Edgewood Drivi Suite 215 Lakeland, Florida 33803			<ul> <li>Project Management</li> <li>QA/QC</li> <li>Geotechnical Evaluation</li> <li>Permitting and Public Education</li> <li>Survey, Sampling &amp; Characterization</li> <li>Dredge Design</li> <li>Support Services</li> </ul>
b.				AMEC Environment & Infrastructure, Inc. [X] CHECK IF BRANCH OFFICE	75 E. Amelia Street Suite 200 Orlando, Florida 32801			<ul> <li>Permitting and Public Education</li> <li>Survey, Sampling &amp; Characterization</li> </ul>
C.				AMEC Environment & Infrastructure, Inc. [X] CHECK IF BRANCH OFFICE	2580 MetroCentre Blvd. Suite No. 6 West Palm Beach, Florid	da 33407		Geotechnical Evaluation     Survey, Sampling &     Characterization
d.				AMEC Environment & Infrastructure, Inc. [X] CHECK IF BRANCH OFFICE	5845 NW 158th Street Miami Lakes, Florida 33	014		<ul> <li>Permitting and Public Education</li> </ul>
e.				AMEC Environment & Infrastructure, Inc. [X] CHECK IF BRANCH OFFICE	404 SW 140 <sup>th</sup> Terrace Newberry, Florida 3266 <sup>c</sup>	)		<ul> <li>Permitting and Public Education</li> <li>Survey, Sampling &amp; Characterization</li> <li>Dredge Design</li> </ul>
f.				AMEC Environment & Infrastructure, Inc. [X] CHECK IF BRANCH OFFICE	4919 W. Laurel Street Tampa, Florida 33607			<ul> <li>Permitting and Public Education</li> </ul>
g.				Dredging & Marine Consultants, LLC [X] CHECK IF BRANCH OFFICE	4643 S. Clyde Morris Bl Port Orange, Florida 32			<ul> <li>Permitting and Public Education</li> <li>Survey, Sampling &amp; Characterization</li> </ul>



E. Resumes of Key Personnel Proposed for this Contract

Scott Wuitschick, PE

AMEC, Lakeland, Florida

Project Manager/Permitting/ **Public Education** 

14. YEARS EXPERIENCE 22 Total / 8 Current Firm

16. EDUCATION (DEGREE AND SPECIALIZATION) 15. FIRM NAME AND LOCATION (City and State)

M.E. Environmental Engineering **B.S. Mining Engineering** 

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

### Professional Engineer, Florida No. 54648

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Scott Wuitschick's unique blend of education, experience, and technical skill allows him to make significant contributions to large, complex projects. Mr. Wuitschick's project expertise includes dredge process design, material handling design, process engineering, mine planning, hydrologic modeling, watershed management plans, ecological restoration and mitigation design, regulatory monitoring and compliance, and permitting (local, state, and federal). Mr. Wuitschick is the Central Florida Water Resources Engineering Manager responsible for oversight of the department. Drawing on his former experiences as a client of the professional services industry, Mr. Wuitschick clearly realizes the importance of understanding project goals, expectations, and challenges in order to provide outstanding products and overall value to the client. His client service focus, experience, and strong project management skills in conjunction with the outstanding technical strength of AMEC's Water Resources group results in the team being called upon repeatedly by public and private clients to assist with their most difficult challenges. Mr. Wuitschick's software proficiency includes: ICPR, VADOSE/W, SEEP/W, and GIS.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED

Lake Beauclair Aquatic Enhancement, Tavares, Florida

Professional: 2013 / Construction: Ongoing

Project Manager/Technical Advisor: AMEC was selected to design a project to enhance navigability, habitat, and water quality of 1,100acre Lake Beauclair through removal of more than 1.2 million cubic yards of organic sediment. Provided senior level QA/QC of the overall project design with specific emphasis on the dredging design, operating plan, equipment performance specifications, disposal site evaluations, and permitting assistance. (Cost: \$10 million)

(1) TITLE AND LOCATION (City and State)

Lake Seminole Sediment Removal Project, Pinellas County, Florida

Professional: Ongoing / Construction: N/A

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

Project Manager: Managed the evaluation, design, and permitting aspects of a project designated to remove and dispose of nearly 1,000,000 cubic yards of sediment from within Lake Seminole. AMEC is providing full service evaluation, design, permitting, and construction management assistance services to Pinellas County pertaining to the removal and disposal of sediments from Lake Seminole. AMEC's services have included review and compilation of historic data, bathymetric and terrestrial surveys, sediment sampling and analysis (physical and chemical), evaluation of dredging and dewatering/disposal alternatives, cost estimating, permitting, development of construction plans and specifications, and public outreach. As part of this project, AMEC evaluated the feasibility of utilizing dredged sediments to cap a historic landfill owned by the City of Largo. This evaluation included GPR surveys of the landfill, perimeter monitoring of groundwater quality, geotechnical evaluations of the anticipated compaction of landfill waste materials, and impacts to surrounding water quality. Final permit approvals for the project are pending. (Cost: \$850,000)

(1) TITLE AND LOCATION (City and State)

Waterways Management Program, Tampa, Florida

Professional: Ongoing / Construction: N/A

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

Project Manager: AMEC was retained to provide professional engineering services in support of the City of Tampa's Waterways project. This project included design of dredging projects at various locations throughout the City including but not limited to residential canals in the Westshore area and Davis Islands. The project entailed evaluation of multiple dredging scenarios and upland disposal sites as well as several aqueous disposal and restoration options. Residential participation in the project plan was assessed and included in the project design through continuous public outreach and coordination efforts. The project included bathymetric surveying, physical and chemical characterization of sediment contaminants, design of dredging and disposal plans, evaluation of water quality impacts, preparation of permit applications, and coordination of stakeholder education and participation efforts. (Cost: \$615,000)

(1) TITLE AND LOCATION (City and State)

Lake May Organic Sediment Removal

Professional: Ongoing / Construction: N/A

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

Project Manager: AMEC is providing evaluation, design, and permitting services to the City of Winter Haven related to the removal of organic sediments from Lake May in Polk County, FL. AMEC's services include sampling, testing, and characterization of lake sediments, preparation of conceptual dredging and sediment management plans, and assessment of project alternatives under the first phase of the project.

(1) TITLE AND LOCATION (City and State)

FDEP Upper Peace River Watershed Restoration, Polk County, Florida

Professional: Ongoing / Construction: N/A

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

Check if project performed with current firm

Project Manager: Responsible for managing the design, permitting, and construction of multiple ecological and hydrological restoration projects at the Tenoroc Fish Management Area (TFMA) within the framework of a comprehensive strategy for restoration of the Upper Peace River. Overlying project goals include improvement of flows and water quality to the Peace River, increasing the overall ecological and recreational value of the TFMA, and providing wetland mitigation for impacts associated with the construction of the Polk Parkway. (Cost: \$2 million)

E. Resumes of Key Personnel Proposed for this Contract					
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE			
Walter R. Reigner, PE, CPESC	Principal-in-Charge	28 Total / 28 Current Firm			
15. FIRM NAME AND LOCATION (City and State)	16. EDUCATION (DEGREE AND SPECIALIZATION)  M.S.C. F. Water Poseures Engineering	(nonding thosis approval)			
AMEC, Lakeland, Florida	M.S.C.E. Water Resource Engineering, (pending thesis approval)				
Time of Editoralia, Florida	B.S. Civil Engineering				

Professional Engineer, Florida No. 44118, Michigan No. 6201055474, Alabama No. 29701-E, Georgia No. 034776 Certified Professional in Erosion and Sediment Control No. 1442

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Walter Reigner is responsible for operations management, business development, and client relations activities for AMEC's Central Florida area. In this capacity, he is responsible for overseeing the operational and financial performance of AMEC's Central Florida office locations while ensuring frequent interaction and communication between the firm's valued clients and technical team. He is also involved in strategic business planning; particularly as it relates to growing the business and developing new areas of service that compliment AMEC's core strengths. In addition, Mr. Reigner provides principal level oversight of AMEC civil, water, and ecological projects. Over the years, he has gained a wide range of experience in a broad array of project types including regulatory permitting, infrastructure design, land development and redevelopment, utilities engineering, mining and reclamation, dam design, comprehensive watershed and lake restoration, sediment removal, integrated surface and groundwater modeling, and construction administration and management. He has worked on projects requiring the collaboration of numerous government agencies and stakeholders including Florida Department of Environmental Protection (FDEP), USACE, FDOT, water management districts, county and municipal government, water authorities, special districts, mining companies, developers, and large land owners. The breadth of experience Mr. Reigner has accumulated in the environmental, civil, water resources, and earth sciences makes him uniquely qualified to lead large-scale, multifaceted projects. Mr. Reigner initiated his career with AMEC as a co-op student. This unique beginning has allowed him to work in virtually every facet of the consulting engineering business, from technician to business manager and Principal-in-Charge. His diverse background allows him to easily understand client needs and engage his project team in a manner that consistently results in successful projects and long-term client relationships.

(1) TITLE AND LOCATION (City and State)

Lake Maggiore Aquatic Enhancement, St. Petersburg, Florida

(2) YEAR COMPLETED

Professional: 2008 / Construction: N/A

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

Project Manager: AMEC conducted a feasibility study of Lake Maggiore for the City of St. Petersburg to determine the most effective method of removing organic sediment from the bottom of the 350-acre lake located in a highly urbanized area. The project's purpose was to improve highly impacted water quality, habitat, and navigation. It was determined that approximately 2.3 million cubic yards of sand and highly organic sediment would need to be removed to achieve optimum restoration. Studied sediment removal methods included hydraulic dredging and lake drawdown/mechanical excavation. (Cost: \$8 million)

(1) TITLE AND LOCATION (City and State)

Lake Hollingsworth Restoration, Lakeland, Florida

(2) YEAR COMPLETED

Professional: Ongoing / Construction: N/A

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

Engineer-of-Record: Ten million dollar restoration of Lake Hollingsworth. The project utilized experimental dewatering and disposal technology on three million cubic yards of dredged sediment and received 35 percent of its funding from the federal government as a demonstration project. (Cost: \$10 million)

(1) TITLE AND LOCATION (City and Sta

Master Engineering Consultant, Lake County Water Authority, Florida

(2) YEAR COMPLETED

Professional: 2009 / Construction: N/A

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

Principal-in-Charge: Lake County Water Authority (LCWA) projects under this contract included engineering services on Lake Beauclair, Lake Griffin, and the Clermont and Harris Chains of Lakes, Enhanced the navigability, habitat, and water quality of the 1,100-acre Lake Beauclair, Provided evaluation, design, and construction support services of Lake Griffin to remove sediments from more than 30 canals ringing the lake and place these sediments in a confined section of a subsided muck farm. Developed a systematic approach for managing signage for the waterbodies of the Clermont and Harris Chains of Lakes. (Cost: \$350,000)

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED Turkey Creek Restoration Dredging, St. Lucie County Port Authority, Florida

Professional: 2006 / Construction: N/A

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

Technical Advisor: Responsible for quality assurance of water balance calculations, receiving water impacts, and sediment characterization and disposal logistics. (Cost: \$372,000)

(1) TITLE AND LOCATION (City and State)

Crane Creek Sediment Removal and Restoration, City of Melbourne, Florida

(2) YEAR COMPLETED

Professional: 2004 / Construction: N/A

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

Project Manager: Responsible for quality assurance of water balance calculations, receiving water impacts, and sediment characterization and disposal logistics. (Cost: \$150,000)

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME Gary Nemeth	13. ROLE IN THIS CONTRACT  Project Coordinator	14. YEARS EXPERIENCE 35 Total / 0 Current Firm		
15. FIRM NAME AND LOCATION (City and State) AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) BSOE, MSIE, MBA			

<sup>17.</sup> CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Over twenty-five years of engineering experience in business development, client maintenance, program, project, administrative and construction management, feasibility studies, design development, geotechnical, geohydrology, coastal, offshore and environmental field investigations, environmental impact assessment, human-health and ecological risk assessment, coastal sustainability studies, permitting and regulatory compliance.

Responsible areas of expertise include business development, client management and program execution related to design development, permitting, regulatory compliance and construction services to the regulated, non-regulated, municipal electric utilities and independent power producers in Florida including: Florida Power & Light, NextEra Energy Inc., Tampa Electric Company, Nautilus Energy, Orlando Utilities Corporation and Nautilus Solar Energy LLC. Principal in Charge responsible for design development of 5 MW Hatch Concentrated Solar PV Energy Center, siting studies for Nautilus Energy 100 MW solar PV energy plant, habitat surveys and critical issues assessments for numerous 10 MW Solar PV sites, certification activities for 5 MW Solar PV facilities, technical design and consulting support for utility-scale solar PV distributed generation program.

Principal, Marine and Coastal Practice – responsible for business development, client management, consulting and program and project execution related to design development, permitting, regulatory compliance and value engineering for marine and coastal projects in Florida, Texas, Washington, Bahamas and the Caribbean. Technical Consultant responsible for beach sustainability planning, design development and permitting for emergency beach nourishment, and conceptual design development and permitting associated with Atlantic ICWW deepening, marina expansion, compensatory seagrass mitigation programs and emergency sand back passing. Program and project management, technical consulting, and construction management for commercial, residential, resort and marina developments in the Caribbean and throughout the Commonwealth of the Bahamas. Technical consulting to Nuclear Power Generation Concern regarding IPCC modeling, coastal geomorphology, shoreline recession and sea level rise projections in the United Kingdom and engineering assessments of storm surge, wave and flood impacts at IOU generation and fuel storage facilities in the US. Technical Consultant responsible for beach sustainability planning for local and county governments and post-storm data collection for post-Hurricane Katrina wave and surge height assessments.

19.	19. Relevant Projects					
	(1) TITLE AND LOCATION (City and State)  NOAA DARPP, Nationwide	(2) YEAR COMPLETED Professional: 2013 / Construction: N/A				
a. On BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm  Program Manager: Program Manager for NOAA's Damage Assessment Restoration and Remediation Program Joint Venture. Project included coastal ecosystem restoration, seagrass restoration in the northern Gulf of Mexico associated with BP spill, oyster reef design a construction, economic evaluation of listing right whale and small tooth sawfish, design development for navigation aides Looe Key.						
	(Cost: \$1.2 million) (1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED				
	Storm Surge Screening Analysis, Tampa and Canaveral, Florida	Professional: 2013 / Construction: N/A				
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE					
	<b>Project Manager:</b> Assessment of storm surge, wave height and flood inundation and and fuel storage facilities. (Cost: \$60,000)	Project Manager: Assessment of storm surge, wave height and flood inundation and identification of remedial options for power generation and fuel storage facilities (Cost: \$60,000)				
	(1) TITLE AND LOCATION (City and State) CERP Biscayne Bay Coastal Wetlands Phase 1, Miami-Dade County, Florida	(2) YEAR COMPLETED Professional: 2013 / Construction: N/A				
C.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Manager: Design development, permit support, agency coordination, cost estimating, biological assessments, field studies, marine excavation, development of plans and specifications, bid and contractor selection support, construction surveillance for large scale coastal ecosystem restoration projects associated with Comprehensive Everglades Restoration Plan. (Cost: \$2.5 million)					
	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED				
	Hatch 5MW Solar Energy Plant, Hatch, New Mexico	Professional: 2010 / Construction: N/A				
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Manager: Design development, permit support, agency coordination, cost est plans and specifications for 5 MW concentrated solar energy plant. (Cost: \$425,000)	timating, field studies and preparation of construction				

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME Michael Phelps, PE	13. ROLE IN THIS CONTRACT  OA/OC Manager	14. YEARS EXPERIENCE 20 Total / 2 Current Firm		
15. FIRM NAME AND LOCATION (City and State)  AMEC, Lakeland, Florida  16. EDUCATION (DEGREE AND SPECIALIZATION)  M.S. Water Resources  B.S. Civil Engineering				
43 AUDDELT PROFESSIONAL PROJECTION (AT AT A 140 STORIC LIFE)				

### Professional Engineer, Florida No. 53315

(1) TITLE AND LOCATION (City and State)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Michael Phelps has more than 20 years of experience with a wide variety of civil engineering projects. He has completed transportation projects, intersection improvements, utility system design, parks and recreational facility projects, and civil engineering for public facilities. Mr. Phelps is experienced in cost estimation, preparation of contract documents and specifications, project management, and field inspections. He has managed several continuing contracts for engineering services for counties and cities. In that role, he has successfully prepared team management plans to properly staff multiple, concurrent task assignments to maintain schedules and budgets to meet client needs. He is highly experienced in managing the overall contract as well as individual task assignments for municipal continuing services contracts.

Mr. Phelps is a member of the following professional organizations: American Society of Civil Engineers, Florida Engineering Society, Florida Floodplain Managers Association, American Water Resources Association, Lakes Education Action Drive, and National Society of Professional Engineers.

19. Relevant Projects (1) TITLE AND LOCATION (City and State) Professional: Ongoing / Construction: Ongoing Polk County Transportation Division, Polk County, Florida (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Contract/Project Manager: Responsible for several projects including stormwater management projects for roadways throughout Polk County. Projects include Garden Grove Feasibility Study, West Hancock Street Drainage Improvements, Experiment Station Road Improvements, and Crystal Lake Drive Improvements. (Cost: Engineering: \$1 million; Construction: \$1.8 million) Professional: Ongoing / Construction: Ongoing City of Auburndale Continuing Engineering Services, Auburndale, Florida (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Contract/Project Manager: Responsible for capital improvements and municipal services for the City of Auburndale. Recent projects include the Main Street

Streetscape and the Signalization Improvements for Main Street at Bridgers Avenue. The signalization improvements project included development of plans to replace the existing concrete poles with mast arm assemblies. The project also required FDOT approval for the design and Polk County Transportation approval for the operation and maintenance aspects. (Cost: \$92,300)

(2) YEAR COMPLETED

Professional: Ongoing / Construction: Ongoing

Professional: Ongoing / Construction: Ongoing

Polk County Utilities Division, Polk County, Florida

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Project Manager: Involved with utility system design and rehabilitation projects throughout Polk County. Completed several water main projects including the Polk County Utilities and Haines City Water Main Interconnect, Lily Lake Water and Wastewater Transmission System Design, Waverly Water Transmission System Design, Frostproof Water Main Extension, U.S. 27 Water System Improvements, SR 540 Water Main Extension, Moore Road Water Main Extension,

and Pine Glen Subdivision Water Service Retrofit. (Cost: \$289,000) (1) TITLE AND LOCATION (City and State)

Professional: Ongoing / Construction: Ongoing City of Bartow Engineering Consultant, Bartow, Florida 3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm

Contract/Project Manager: Responsible for municipal services projects for the City. Recent projects included the US 98 Water Main Relocation and U.S. 17 Water Main Repair projects. Both projects were completed in accordance with FDOT Design Standards as well as the Standard Specifications for Road and Bridge Construction. The projects also required FDEP permitting and certifications. (Cost: Engineering: \$7,000; Construction: \$140,000)

(1) TITLE AND LOCATION (City and State) Professional: Ongoing / Construction: Ongoing City of Eagle Lake Engineering Services, Eagle Lake, Florida

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Project Manager: Responsible for municipal projects and on-call services. Recent projects include the Eagle Avenue Stormwater Improvements and the U.S. 17 Sidewalk Improvement projects. The U.S. 17 Sidewalk Improvements were completed in accordance to FDOT and ADA requirements. (Cost:

Engineering: \$44,000; Construction: \$145,000) (1) TITLE AND LOCATION (City and State)

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

Contract/Project Manager: Responsible for municipal projects including stormwater management, water quality projects, parking studies, and construction inspection services. Most recently completed the award winning project, Lake Hollingsworth Westside Stormwater Treatment Project. This project included the preliminary project development, design and permitting, and construction phase services for roadway, pedestrian trail, and stormwater improvements. (Cost: Engineering: \$128,000; Construction: \$1.2 million)

City of Lakeland Continuing Services, Lakeland, Florida

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE		
Michael Kelley, PE	Geotechnical Evaluation	19 Total / 11 Current Firm		
15. FIRM NAME AND LOCATION (City and State)  AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION)     M.S. Geotechnical Engineering     B.S. Civil Engineering			

Professional Engineer, Florida No. 71736, Idaho No. 14711

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Michael Kelley has more than 19 years of geotechnical engineering experience with significant expertise in management and design works for large scale civil infrastructure, site investigation, reservoirs and water impoundment structures, site development, construction monitoring and testing, geological hazard assessment, geo-environmental remediation, landfill closure and expansion, and mining and tailings related engineering, all within a variety of geological settings. Mr. Kelley's extensive knowledge and experience directing activities associated with geotechnical projects range from market development, technical reviews, engineering analyses and supervision, and organization of field and laboratory testing programs. His broad background and management experience allow him to efficiently plan and operate projects on time and within budget, sufficiently manage staff, and provide quality reviews of geotechnical design reports for public and private developments. More specifically, he has been involved with a wide range of geotechnical and mining related projects including investigation, design and construction of large-scale water management projects, reservoirs, levees, and tailings and process water impoundments. His key experience also includes annual dam safety inspections and assessment and repair of slope stability and seepage issues associated with earthen embankments. Mr. Kelley has also managed significant civil infrastructure projects including geotechnical assessments for major roads, rail, tunnel, water supply, and wastewater plant design and construction. Mr. Kelley also has significant experience in the phosphate mining industry where remnant mining operations throughout Central Florida present unique geotechnical issues.

# 19. Relevant Projects (1) TITLE AND LOCATION (City and State) Taylor Creek Restoration, St. Lucie County, Florida (2) YEAR COMPLETED Professional: 2009 / Construction: N/A

3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( \overline{\text{Deck if project performed with current firm} \)

a. Senior Geotechnical Engineer: Acted as lead consultant for a number of projects at the Brooksville limestone quarry including remediation

of slope instability along 50-to 75-foot high tailings embankments and design and construction of new 100 foot high tailings embankment.

Also completed annual dam safety inspections and environmental monitoring for FDEP permits. (Cost:\$380,000)

(1) TITLE AND LOCATION (City and State)

Turkey Creek Dredging, St. Johns River Water Management District, Florida

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

Senior Geotechnical Engineer: Responsible for completing over-water field surveys and complex lab testing to determine soft sediment volume and physical and chemical characteristics for harbor and creek restoration along the Indian River Lagoon. Designed and permitted dredging and disposal operations, including coordination with Florida Inland Navigation District to construct a disposal facility for this and future dredging projects including evaluation. Dewatering technologies were utilized to maximize dredged sediment disposal volumes and reclaim organic sediments for re-use in alternative applications throughout the local area. Monitored construction and dredging operations for environmental compliance including discharge water quality and wildlife protection. (Cost:\$380,000)

(1) TITLE AND LOCATION (City and State)

Crane Creek Dredging, St. Johns River Water Management District, Florida

(2) YEAR COMPLETED

(2) YEAR COMPLETED

Professional: 2004 / Construction: N/A

Professional: 2006 / Construction: N/A

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

Senior Geotechnical Engineer: Responsible for completing over-water field surveys and complex lab testing to determine soft sediment volume and physical and chemical characteristics. Designed and permitted dredging and disposal operations, including evaluation of flocculant and dewatering technologies to maximize dredged sediment disposal volumes in an existing disposal area at the adjacent wastewater treatment plant. Monitored construction and dredging operations for environmental compliance including discharge water quality and wildlife protection. (Cost:\$150,000)

(1) TITLE AND LOCATION (City and State)

Lake Seminole Sediment Removal, Pinellas County, Florida

(2) YEAR COMPLETED

Professional: Ongoing / Construction: 2001

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

Check if project performed with current firm

Senior Geotechnical Engineer: Assisted with geotechnical design aspects of the Lake Seminole Sediment Removal project. Tasks included geophysical and bathymetric sediment surveys, sediment characterization, disposal area evaluation and design, and dredge process evaluation and design. (Cost:\$850,000)

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED

Dredging and Sediment Disposal Design, Various Clients, Florida

Professional: Ongoing / Construction: N/A

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

Project Manager: Providing design and construction monitoring for maintenance and improvement of water management structures throughout SWFWMD areas. Recent work includes Potts Preserve and L-112 Tampa Bypass Canal. (Cost: Varies with client)

	E. Resumes of Key Personnel Proposed for this Contract					
Le	s Bromwell, ScD, PE	13. ROLE IN THIS CONTRACT  Geotechnical Evaluation		14. YEARS EXPERIENCE 48 Total / 40 Current Firm		
AM	16. EDUCATION (DEGREE AND SPECIALIZATION)  Sc.D. Civil Engineering, Massachusetts Institute of Technology, Boston, MA, 1966  B.S. Chemical Engineering, Massachusetts Institute of Technology, Boston, MA, 196					
Pro	urrent professional registration ( <i>STATE AND DISCIPLINE</i> )  ofessional Engineer, FL No. 18234, 1972  ofessional Engineer, ID No. 10525, 2001					
Dr. con and Floi imp	Professional Engineer, ID No. 10525, 2001  18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)  Dr. Bromwell has received registration as a Professional Engineer in eight states. He has represented industrial clients, government agencies, contractors, architects, and engineers on projects involving environmental and geotechnical problems and issues. He has served on consulting boards and task forces for the U.S. Army Corps of Engineers, the National Aeronautics and Space Administration (NASA), and agencies of the State of Florida. Dr. Bromwell has 50 years of professional experience in planning, design, construction, and performance monitoring of earth dams and impoundment facilities for multiple uses, including storage of phosphogypsum, mine tailings, chemical processing wastes, dredged materials management, and water supply.					
19.	Relevant Projects					
	(1) TITLE AND LOCATION (City and State)  Independent Technical Review of C-44 Reservoir  (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   Characteristics (City and State)		(2) YEAR COI	sional: 2010 / Construction: Ongoing		
a.	Peer Review: Reviewed Earth Dam Design details Tasks included review of earthwork material selectic determination and modeling erosion potential during Engineering: \$50,000 Construction: \$275 million.	and conducted Dam safety analys on and placement, seepage contro	ol measure ,000 cubic	es, wind and wave analyses for freeboard yards of soil-cement slope protection.		
	(1) TITLE AND LOCATION (City and State)  Loxahatchee L-8 Reservoir, South Florida Water (SFWMD), Palm Beach County, FL  (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   Characteristics (City and State)	<u> </u>	(2) YEAR COI Profess	MPLETED sional: 2004 / Construction: 2007		
b.	Engineer of Record: Responsible for all geotechnic reservoir in Florida. Project involved the design and reservoirs to be completed by the SFWMD as part of million.	cal work associated with the 1,000 construction of one of the first Co	mprehensi nitiatives. E	cive Everglades Restoration Plan (CERP) Engineering: \$3.5 million; Construction: \$210		
	(1) TITLE AND LOCATION (City and State)  Ten Mile Creek Reservoir Evaluation, SFWMD, F		(2) YEAR COI	MPLETED sional: 2006 / Construction: 2006		
C.	c. (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( \text{\text{ND}}\) Check if project performed with current firm  Project Manager: Performed dam safety evaluations of geotechnical, hydrologic and structural conditions at the site prior to reservoir first filling. The evaluations included embankment borings, review of design documents, project flood modeling and outlet/spillway hydraulics. The project scope also included developing a reservoir monitoring program. \$140,000					
	(1) TITLE AND LOCATION (City and State)  Section 24 Impoundment Design, Village of Well	ington, FL	(2) YEAR COI	sional: 2008 / Construction: 2010		
d.	prior to discharge into Everglades. Project was designed and submitted for bids in record time and was constructed in 2009 under budget and on time. Project delivery was subject to time schedule set by Federal Judge and complied with all court orders. Engineering: \$260,000; Construction: \$17 million.					
	(1) TITLE AND LOCATION (City and State)  Permitting for Lake Point Restoration Reservoir,  Florida		(2) YEAR COI Profess	MPLETED Sional: 2011 / Construction: 2011		
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Manager: Provided permitting for the project where SFWMD and Martin County, will construct the reservoir cells and following mining of portions of the property for high-grade limestone products. Discharge will be back to the Lake, or alternatively to the L-8 canal where it can flow to the L-8 Reservoir, the Loxahatchee River, or the West Palm Beach for reservoir states.			ill be back to the Lake, or the C-44, or			

disposal area, and evaluated alternative dredging and disposal options. (1) TITLE AND LOCATION (City and State) Professional: 2005 / Construction: 2008 East Coast Protective Levee, Broward County, Florida

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

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

Principal Engineer: Technical Evaluation of 38 miles of levees. Study assessed the levee system in accordance with FEMA requirements provided in 44 CFR 65.10. Evaluation included adequacy to retain a 100-year 72-hour storm event with hurricane winds. Geotechnical investigations and analyses of as-built sections for seepage, stability, and settlement were made.

Project Manager: Determined sediment characteristics, calculated dredging volumes, designed report and construction plans for upland

Taylor Creek Restoration Dredging, Fort Pierce, Florida

Professional: 2001 / Construction: 2009

E. Resumes of Key Personnel Proposed for this Contract		
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE
Glen Andersen, ScD, PE	Geotechnical Evaluation	29 Total / 1 Current Firm
15. FIRM NAME AND LOCATION (City and State) AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) Sc.D. Geotechnical Engineering M.S. Geotechnical Engineering B.S. Civil Engineering	

### Professional Engineer Florida (In Process), Michigan, Louisiana, New York, Texas

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Dr. Glen Andersen has more than 29 years of experience in engineering since his initial degree in Civil Engineering. This experience has involved a wide diversity of projects. While an engineer for the Chevron Oil Field Research Company, he developed engineering analysis models for offshore oil field production facilities at multiple locations in the northern hemisphere. He has managed large applied research projects for the Office of Naval Research (offshore pore water pressure measurement system), the National Science Foundation (dynamic behavior of retaining walls under seismic excitation), USACE (condition indexing for embankment dams), and Hydro-Quebec (condition indexing for spillways). Dr. Andersen's expertise includes the design of flood protection facilities, specifically geotechnical seepage and stability evaluations using USACE design methodologies for scores of flood protection facilities in the Gulf Coast Region and in the Upper Mississippi River Valley. These evaluations have been performed for hundreds of individual structures including levees, I-Walls, T-Walls, Pump Stations, Gates, and L-Walls. Several of these facilities have employed ground improvement technologies such as deep soil mixing and the use of geosynthetics. Dr. Andersen has received the Author's Award, Hyrdo Review - Development of Condition Assessment Methodologies for the Hydro Industry as well as the Hogentogler Award by the American Society for Testing & Materials - for Performance Analysis on Offshore Pore Pressure Monitoring System.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

Analysis and Design of Seepage Control Systems, Wood River, Illinois

Professional: 2010 / Construction: N/A

Senior Geotechnical Engineer: Engineering analysis and design support for reevaluation and upgrade of seepage control system along the Mississippi River and the Wood River in Southern Illinois. Modeling was based upon the SEEP/W finite element program and included estimating of aquifer geometry and seepage properties from soil borings laboratory grain size analyses. Used correlations between d10 and permeability (k) together with layered systems theory to estimate permeability. Analyzed a limited number of recent aquifer pump tests to calibrate d10 vs k correlation and extend the applicability of the correlation. Considered various seepage control alternatives including: pressure relief wells; well points; semi-permeable and permeable blankets and trenches.

(1) TITLE AND LOCATION (City and State)

Flood Protection Facilities, Southern Louisiana and Rio Grande River Valley

(2) YEAR COMPLETED

(2) YEAR COMPLETED

Professional: 2009 / Construction: N/A

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

Senior Geotechnical Engineer: Performance of geotechnical seepage and stability evaluations and the implementation of USACE design procedures for scores of flood protection facilities in Southern Louisiana and along the Rio Grande River in Texas and Southern New Mexico. Projects located in Southern Louisiana were associated with Hurricane Katrina Reconstruction and included: Algiers Canal and Pump Stations (Belle Chase I, Belle Chase II, Planters, SWB 11, and SWB 13); Bayou Segnette to Westwego Pump Station, Sector Gate, Reinforced Levee, and T-Walls; Cousins Pump Station; East of Harvey Projects (Contract 1, 2, and 3B); Highway 11 and Highway 90 T-Walls and Gates; IHNC East Reach II Gates, I-Walls and Levees; Lake Cataoutche Canal Closure and Levees; Lakefront Airport LPV-105 T-Walls; La Rose to Golden Meadow Pump Stations, T-Walls and Levees; LPV 107 I-Walls, T-Walls and Levees; Modifications to Task Order 1 Pump Stations (Cousins, Destrehan, New Estelle, Old Estelle); Whitney-Barrateria I-Walls and Sluice Gate; Modification to Tasks Order 2 Levees, Sector Gate and T-Walls; Task Order 3 Sluice Gates, Levees and T-Walls. Projects in the Rio Grande River Basin were associated with flood control facility upgrades by the USIBWC and included the following projects: Canutillo II Drainage Structures, T-Walls and Levees; Courschesne Levees; Donna Pump to Brownsville Levees; Nemexas Levees; North Floodway Levees; Paisano Phase II Levees, I-Walls and T-Wallsy; Presidio Levee; Riverside to Fabens Levees and Drainage Structures; and Vado Levees. Several of these facilities have required the use of ground improvement technologies such as deep soil mixing and the use of geosynthetics.

(1) TITLE AND LOCATION (City and State)

Slope Stability Reevaluation for Large Landslide on the Cuyahoga River Shipping Channel, Cleveland, Ohio

(2) YEAR COMPLETED

Professional: 2008 / Construction: N/A

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

Check if project performed with current firm

Senior Geotechnical Engineer: Analysis of prior geotechnical engineering reports and historical data to identify the apparent causes of the instability and to propose a more cost-effective means of slope stabilization. The proposed stabilization was based upon a recharacterization of the geometry and orientation of the failure surface and its interaction with a much older ancient slide plane that was apparent but not properly identified in prior geotechnical engineering reports.

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE		
Roberto Fernandez, PE	Geotechnical Evaluation	14 Total / 1 Current Firm		
	16. EDUCATION (DEGREE AND SPECIALIZATION)			
15. FIRM NAME AND LOCATION (City and State)	M.S. Financial Economics			
AMEC, West Palm Beach, Florida	M.E. Geotechnical Engineering			
	B.S. Civil Engineering			
17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)				
Professional Engineer, Florida No. 60070	CTQP Aggregate Base Testing Technician			
ACI Aggregate Base Testing Technician	CTQP Qualified Sampler Technician			
CTQP Pile Driving Inspection	CTQP LBR Technician			
CTQP Asphalt Paving Technician - Level 1	n - Level 1 CPN Nuclear Gauge User and Radiation Safety			

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Roberto Fernandez is a licensed professional engineer with more than 13 years of experience in the geotechnical and materials testing consulting industry. Mr. Fernandez has managed and provided engineering services for numerous projects of varying size and scope, including roadways and bridges, water and wastewater treatment facilities, and stormwater impoundment and drainage facilities. Mr. Fernandez responsibilities include cost estimating, project management, coordination and supervision of field and laboratory work, quality assurance, engineering analyses and report preparation. Mr. Fernandez is intimately familiar with most widely used subsurface exploration and soil/rock laboratory testing methods; as well as destructive and non-destructive field and laboratory testing of construction materials. Mr. Fernandez has a broad experience in the geotechnical design of shallow and deep foundation systems, earthen embankments and earth retention systems, and in the preparation of technical specifications for earthwork and soil improvement methods. Mr. Fernandez also has extensive experience in the inspection of diverse soil improvement methods such as Vibro-Compaction, Vibro-Replacement, Dynamic Compaction, Deep Soil Mixing, Jet Grouting, Chemical Grouting and preloading/surcharging; and the installation of deep foundation systems including driven piles, augercast (ACIP) piles and drilled shafts, as well as micropiles and helical piers. Involved with Section F Projects: 8.

9. Relevant Projects

(1) TITLE AND LOCATION (City and State)

C-51 Reservoir, Palm Beach Aggregates, LLC, Florida

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

Senior Engineer: The project involves the construction of an above-grade and below-grade reservoir with a storage capacity of approximately 62,000 acre-feet. The reservoir and associated conveyance structures will be constructed in two phases. The site is located immediately west of the L-8 Reservoir off State Road 80 (Southern Boulevard) in Loxahatchee, Central Palm Beach County. Provided coordination and supervision of the subsurface exploration and laboratory testing program for the initial phase of the project. (Cost: \$400,000)

Lake Manatee Dam Improvements, Manatee County Utilities Department, Florida

Professional: Ongoing / Construction: Ongoing

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

Senior Engineer: The project involves various improvements to an existing 3,600 feet long earthen dam with associated concrete spillway. The dam is located along the west edge of Lake Manatee, near Bradenton, Manatee County. The proposed improvements include the installation of a soil-cement seepage cutoff wall throughout the length of the dam. Provided coordination and supervision of the laboratory testing program to aid in the classification and characterization of the soil samples collected during the subsurface exploration. In addition, tasked with the preparation of the Technical Specifications for the construction phase of the project. (Cost: \$800,000)

(1) TITLE AND LOCATION (City and State)

Compartment C Buildout, South Florida Water Management District, Florida

Professional: 2011 / Construction: 2011

Professional: 2013 / Construction: 2013

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

Check if project performed with current firm

Project Manager/Senior Engineer: The Compartment C Buildout Project comprised the construction of an approximately 6,500-acre Stormwater Treatment Area (STA). This facility is part of a network of man-made wetlands designed to naturally reduce stormwater runoff pollution levels flowing from the Everglades Agricultural Area before entering the Everglades. The project involved the construction of approximately 24 miles of perimeter and internal levees with numerous associated canals and water control features (weirs, culverts and pumping stations). Rresponsible for the preparation of the cost proposal, project management, the coordination and supervision of field and laboratory testing services to ensure conformance with the project plans and specifications, the preparation of technical reports and providing incidental geotechnical engineering services. (Cost: \$500,000)

(1) TITLE AND LOCATION (City and State)

L-8 Reservoir, South Florida Water Management District, Florida

Senior Geotechnical Engineer: This project involves improvements to an approximately 950-acre former rock quarry site converted into a man-made reservoir. This reservoir will function as a Flow Equalization Basin, providing 99,000 acre-feet of storage for delivery of consistent flows needed to optimize performance of the region's Stormwater Treatment Areas (STAs). The main improvements include erosion prevention features (roller compacted concrete revetments and turf reinforced mats) along the perimeter reservoir levees, the construction of a gated gravity fed inflow structure with associated conveyance channel, and a multi-stage pumping station with associated culverts discharging into the adjacent L-8 Canal. Coordinated and supervised the subsurface exploration program and prepared geotechnical engineering recommendations for the construction of the inflow structure and pump station, the conveyance canal with associated vehicular bridge, and various minor appurtenances; designed anchored and cantilevered sheet piling structures for several project features; and was in charge of the laboratory testing associated to the preliminary mix design for the roller compacted concrete revetment. (Cost: \$100,000)

E. Resumes of Key Personnel Proposed for this Contract

12. NAME
Lance Lumbard, CLP

13. ROLE IN THIS CONTRACT
Permitting and Public
Education

14. YEARS EXPERIENCE
19 Total / 3 Current Firm

15. FIRM NAME AND LOCATION (City and State)

AMEC, Orlando, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)
M.B.A. Business Administration
M.S. Fisheries Science
B.S. Biological Science

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

### **Certified Lake Professional**

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Professional organizations: North American Lake Management Society, Florida Lake Management Society

### 19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED

Permitting Services, All Aboard Florida, Florida

Professional: Ongoing / Construction: N/A

Permitting Team Lead: Currently directing a team of scientists and engineers responsible for preparation of local, state, and federal permit applications required for construction of a high speed rail passenger transit system. Permitting services include wetland delineation and function (UMAM), T&E species assessments, cultural resource assessments, essential fish habitat determination, habitat mapping, vegetation surveys, avoidance and minimization measures, mitigation determination, hydrologic modeling, geotechnical assessments, survey, project design and engineering, sovereign submerged lands determination, and GIS analyses including land use and soil types. Due to the expansive multi-jurisdictional nature of the project and its potential regional economic impacts, AMEC worked with the regulatory agencies to develop a fast-track "Tiger Team" approach. In addition to a multitude of permits associated with the State ERP or Federal Dredge and Fill application [404(b)], also involved with the EIS required for this project. (Confidential Cost)

(1) TITLE AND LOCATION (City and State)

Mosaic AEIS Support and 404 Permitting Services, Various Locations, Florida

(2) YEAR COMPLETED

Professional: 2012 / Construction: N/A

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

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

Project Manager: Provided services related to development of the Areawide Environmental Impact Study (AEIS) including public scoping, preparation of background documentation for scoping, NEPA advising, and prepared various white papers for NEPA purposes. Concurrently provided scheduling and program coordination of simultaneous development and on-time delivery of three 404 Dredge and Fill permit applications submitted to USACE. This intensive effort required the coordination and participation of more than thirty permit team members from eight different companies. Developed and managed a customized task tracking matrix that satisfied the client's needs for both functionality and ease of use. Established and maintained a centralized file repository to verify completion of deliverables and provided all team members with access to the database. Provided meeting facilitation support as well as recording and dissemination of meeting minutes. Ongoing services include the preparation of additional 404 permit components including habitat mapping, vegetation surveys, fish and stream assessments (including benthos), alternatives assessments for various infrastructure needs, and addressing public comments. (Cost:

### (1) TITLE AND LOCATION (City and State)

Lake Griffin Canal Dredging, Leesburg, Florida

(2) YEAR COMPLETED

Professional: 2007 / Construction: 2007

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

Check if project performed with current firm

LCWA Assistant Project Manager: In an effort to improve the water quality in Lake Griffin, the LCWA undertook a \$7 million canal dredging project to allow residential access to the lake during periods of artificial drawdown. Assisted with obtaining Dredge and Fill permits from the USACE and the ERP from the FDEP. Project challenges included pumping dredge material up to 12 miles, contamination at the disposal site, and nearby bald eagle nests. Performed routine monitoring of contractor progress and water quality within the disposal area. Conducted public information meetings for the project. Managed appropriate monitoring for T&E species. Conducted post-construction surveys and verified contractor progress. (Cost: \$7.1 million)

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED

Cooperative Stormwater Grant, Lake County Water Authority, Florida

Professional: 2010 / Construction: N/A

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

Check if project performed with current firm

LCWA Project Manager: Completed more than \$12.5 million in stormwater retrofit projects with cooperative agencies throughout Lake

County. Projects including dry retention, wet detention, exfiltration, and sediment box configurations. Total nutrient removal for program for combined projects is estimated at 150 pounds per year. (Cost: \$12.5 million)

(1) TITLE AND LOCATION (City and State

Lake Beauclair Aquatic Enhancement Project, Lake County Water Authority, Florida

Professional: 2013 / Construction: N/A

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

Project Manager: Developed and managed this project as a companion project to the Nutrient Reduction Facility in an effort to restore approximately 50,000 acres of surface waters downstream of Lake Apopka. This project targets in-lake nutrient loading and navigational issues and involves the strategic removal of approximately 1.4 million cubic yards of anthropogenic sediments deposited in Lake Beauclair. This \$10 million project is the largest project undertaken by LCWA and required nearly 10 years of planning and permitting to initiate construction. Challenges to the project included location of a suitable disposal site, consolidation of dredge material, and potential heavy metal contaminants in the dredge material. Coordinated several site alternatives with the SJRWMD and ultimately selected one that would provide a beneficial use of the dredge material by capping contaminated sediments within a restored agricultural property. Provided expert witness testimony and successfully defended LCWA against a challenge to the ERP alleging that the Lake Beauclair sediments contained excessive arsenic levels. Managed the Dredge and Fill permit for the USACE and the ERP for FDEP. Successfully negotiated a no-cost mitigation strategy with FDEP for any disturbance to lake vegetation at the time of dredging. Worked with FWC to secure \$1 million in cooperative funding. (Cost: \$420,000)

E. Resumes of Key Personnel Proposed for this Contract		
12. NAME Kevin Shelton	Permitting and Public Education	14. YEARS EXPERIENCE 19 Total / 2 Current Firm
15. FIRM NAME AND LOCATION (City and State) AMEC, Tampa, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Zoology	

United States Coast Guard Licensed Captain 50 Gross Ton Master

**SCUBA Diver** 

GPS/GIS

Commercial Pesticide Applicator – Natural Areas, Aquatic

Florida Fish and Wildlife Conservation Commission Authorized Gopher Tortoise Agent #GTA-12-00032

Mr. Kevin Shelton has 19 years of ecological experience with a focus on wildlife in both captive and wild populations. His experience includes 16 years of zoo and aquarium design and operation, wildlife surveys for development permitting, and species specific behavioural surveys – including time spent as a Zookeeper II for Lowry Park Zoo in 1993/1994 and as Associate Curator/Senior Biologist and Registrar at Florida Aquarium in 2004. His work in incorporating public education and recreation in his wetland mitigation designs has resulted in improved mitigation success as well as cost savings to his clients. Mr. Shelton also has extensive experience with underground utility design and permitting. During his career in the zoological field, Mr. Shelton was a facility accreditation inspector for the

Association of Zoos and Aquariums (AZA).				
19. Relevant Projects				
	(1) TITLE AND LOCATION (City and State)  Lake Audrey Stormwater Improvements, Groveland, Florida	(2) YEAR COMPLETED Professional: 2012 / Construction: N/A		
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Scientist: Conducted wetland delineation of lake and shoreline habitats in preparation for environmental permitting for proposed stormwater improvements. Performed a wetland delineation based on 62-340, F.A.C. (Cost: \$50,000)			
	(1) TITLE AND LOCATION (City and State)  Lake Seminole Sediment Removal, Pinellas County, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Check if project performed with current firm  Project Scientist: Provided professional environmental resource permitting services in support of County's Lake Seminole Sediment Removal Project involving dredging of one million cubic yards of nutrient laden sediments, dewatering and disposal. Conducted data collection and interpretation, environmental resource permitting, and construction design services.			
	(1) TITLE AND LOCATION (City and State)  Waterways Management Program, Tampa, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
<b>c</b> .	involving dredging of several residential canals. Conducted extensive existing data collection and interpretation, compilation of Preliminary Design Report, and environmental resource permitting services. Navigated through very contentious public involvement and negotiated atypical permitting methods for expedited processing.			
	(1) TITLE AND LOCATION (City and State)	(2) YEAR COMPLETED		
	All Aboard Florida Rail Expansion Project, Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, Indian River, Brevard, and Orange Counties, Florida	Professional: Ongoing / Construction: N/A		

Martin, St. Lucie, Indian River, Brevard, and Orange Counties, Florida

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

Project Scientist/Manager: Managed field biologists and conducted wetland delineation and evaluation, as well as an ecological survey in preparation for environmental permitting for proposed rail service expansion project. Project included 52 miles of additional track in existing rail right-of-way and 40 miles of new track within FDOT right-of-way. Performed wetland determination based on 62-340, F.A.C. Surveyed project areas for presence of T&E species involving literature searches, mapping, and on-site surveys. Ecological constraints documentation, UMAM, and alternatives analysis were developed including narratives, maps, figures, and photographs. Assisted in preparation of biological assessment and in securing all required environmental resource permits from federal, state, and local agencies.

MacDill Air Force Base Mangrove/Mosquito Ditch Restoration Masterplan, Tampa, Florida

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

Project Scientist/Manager: Conducted background research, performed field reconnaissance, and negotiated with the permitting agencies to develop innovative methods to restore mosquito ditched mangrove swamp and other disturbed areas. Developed plans for mangrove swamps, salterns, tidal creeks, freshwater ponds, and salt marsh habitats. Proposed methods of construction included hydroblasting of dredge spoil mounds, plugging of drainage canals, limited earthwork, invasive species eradication, and replanting with native Florida wetland plant species. Produced comprehensive Ecosystem Restoration Conceptual Masterplan as a 20-year adaptive management strategy to be implemented in discreet phases along the southern shoreline of the base.

**Environmental Resource Permitting for Overhead and Underground Utility** Installations, Various Clients, Florida

(2) YEAR COMPLETED

Professional: 2007 / Construction: N/A

Professional: 2012 / Construction: N/A

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

Project Manager/Scientist: Provided regulatory and proprietary permitting for dozens of underground utility installations through USACE, FDEP, WMDs, and special local districts. Installations included direct bury, trenching, and horizontal direction drill. HDD installations ranged from 50 feet to more than 3,000 feet. Clients included: TECO, Progress Energy, Tampa Electric, FDOT, Verizon, Florida Gas Transmission, Gasparilla Island Water Association, and more.

E. Resumes of Key Personnel Proposed for this Contract 14. YEARS EXPERIENCE Permitting and Public Jeremy Paris, PWS 7 Total / 5 Current Firm Education 16. EDUCATION (DEGREE AND SPECIALIZATION) 15. FIRM NAME AND LOCATION (City and State) M.S. Wetland Ecology AMEC, Miami Lakes, Florida **B.S. Plant Science** 

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

**USACE-approved Indigo Snake Monitor** 

**USACE-approved Bird Monitor** 

Mr. Paris has experience with NRCS WRP projects. He has six years of professional experience in the areas of wetland ecology and habitat restoration with four years experience in South Florida wetland, coastal, estuarine, mangrove, and lake ecosystems. As a Staff Scientist with AMEC, Mr. Paris is a valuable resource for a range of environmental services, biological assessments, and wetland delineations. Mr. Paris has a portfolio of wetland biology and environmental sciences for the South Florida and Southwest Florida Water Management Districts, US Department of Defense and the National Parks Service. As a wetland biologist, Mr. Paris' responsibilities include technical writing, NEPA documentation, research and review of regulatory statutes, vegetative restoration, wetland determinations, species identification, and mangrove protection. Serving as an environmental scientist, Mr. Paris participates in stormwater, groundwater, effluent and soil sampling. Involved with Section F Projects: 1 and 3.

b.

19. Relevant Projects
(1) TITLE AND LOCATION (City and State) (2) YEAR COMPLETED Professional: Ongoing / Construction: N/A Wetlands Reserve Program Fisheating Creek Site, Florida

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

Staff Scientist: Mr. Paris evaluated wetlands within the FEC easement. The aforementioned evaluation included a survey of threatened and endangered species in addition to identifying invasive and exotic species within the easement limits. The Fisheating Creek Wetlands Reserve Program (WRP) project is the largest contiguous private lands project (34,122 acres) in the country involving four (4) landowners and seven (7) individual tracts of land and approximately 8 miles of channelized Fisheating Creek located in Highlands County, Florida. AMEC has conducted assessment of the ecological health and hydrologic regime of the project area and is developing solutions for restoration of the area to a more historic condition. To meet success criteria, AMEC has conducted surveying, modeling and a biological assessment of the site. Modeling includes development of an existing model and 3 alternatives. As a field team member, Mr. Paris played an integral part in the assessment of wetlands and uplands on the FEC site; he also assisted with rewriting portions of the WRPO. (Cost: \$1.3 million)

(1) TITLE AND LOCATION (City and State)

Wetlands Reserve Program-Kissimmee Oaks & Oxbow, Okeechobee, Florida

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

Wetlands Specialist. Mr. Paris was responsible for the ecological surveys at the site. This included extensive data collection on quality of habitats, vegetation classification, identifying protected species habitats, and identifying presence of invasive species. He was the prime author of the report sections dedicated to ecological surveys and conservation practices. AMEC developed a WRPO conservation plan that identified how wetland functions and values will be restored, enhanced, protected, maintained and managed to accomplish the goals of the USDA NRCS WRP. Project efforts included assessment of the general health and condition of the various habitats, identification of the presence of exotic and invasive species, and evaluation of current site hydrology. Project goals included development of alternatives for the restoration of historical habitats, based on proper hydrology and vegetation community structure. (Cost: \$89,000)

(1) TITLE AND LOCATION (City and State)

AFCEE-MacDill Air Force Base (AFB), Tampa, Florida

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

Field Scientist: Mr. Paris performed wetland delineation and T&E species surveys within the installation. The ecological services included migratory bird surveys within beach and coastal ecosystems. Additional services included nesting surveys for bald eagles as well as the delineation of mangrove and assessment of mangrove wetlands for restoration purposes. AMEC was tasked with conducting T&E surveys on the Base to determine population trends and habitats; preparing a T&E report; delineating wetlands in the mangroves; and providing permit assistance related to mangrove restoration projects. The protected species, gopher tortoise and burrowing owl, were also monitored. The data collected will also be utilized in support of an Environmental Assessment (EA) AMEC is preparing for AFCEE. (Cost: \$166,000)

(1) TITLE AND LOCATION (City and State)

Jack Creek Hydrologic and Wetland Restoration, Sebring, Florida

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

Wetlands Specialist: Mr. Paris performed a wetland assessment for the Jack Creek wetland project site located within the Jack Creek floodplain. During the assessment process, Mr. Paris completed a UMAM determination of the current site conditions and potential benefits of hydrologic restoration. Mr. Paris' responsibilities as part of the UMAM procedure was to perform a desktop review of the documented occurrences of FNAI threatened and endangered species as well as performing an on-site survey of threatened and endangered species. This project consists of design and permitting for the hydrologic and natural systems restoration of impacted wetlands on the Jack Creek Tract. (Cost: \$205,000)

Professional: 2012 / Construction: N/A

Professional: 2012 / Construction: N/A

Professional: 2012 / Construction: N/A

E. Resumes of Key Personnel Proposed for this Contract			
Wendy C. Blondin, PG	Permitting and Public Education	14. YEARS EXPERIENCE 27 Total / 12 Current Firm	
	16. EDUCATION (DEGREE AND SPECIALIZATION) M.S. Geology/Hydrogeology B.S. Soil Science		
2. CUDDENT DOCESCIONAL DECISTRATION (CTATE AND DISCIPLINE)			

### Professional Geologist, Florida No. PG1888

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Wendy Blondin is a Principal Geologist with 27 years of experience in environmental consulting with expertise in contamination assessments and remediation, drinking water quality evaluations, and all types of environment permitting. Ms. Blondin has experience in both management and technical areas.

As a senior project manager, she is responsible for work scope development and costing, implementation of work scopes, budget tracking, customer communication, and regulatory negotiations. As a professional geologist she has experience in surface water and groundwater hydrology, water quality sampling and characterization, and wetland and stormwater management system permitting. She has expertise in identifying potential source areas and areas of environmental concern; designing sampling plans; delineating contaminant plumes; determining pathways of migration; and designing and installing surface water, groundwater, and soil remediation systems. Ms. Blondin has extensive experience in evaluating risks relating to environmental impacts and in cost/benefit analysis of options.

### (1) TITLE AND LOCATION (City and State 2) YEAR COMPLETED Professional: Ongoing / Construction: N/A State School QQQ-1 Wetland and StormWater Permitting, Oleta River Recreation Area, Miami-Dade County Public Schools, Florida

Project Hydrogeologist: Part of the environmental permitting services provided to Miami-Dade County Public Schools. Provided permitting and ecological services required to obtain the permits to construct a school on a property that contains coastal wetlands that are part of the Oleta River Recreation Area. The scope of services included wetland delineation, off-site mitigation for indirect impacts of construction, preparation of a wetland maintenance and monitoring plan, protection of the wetlands during construction, development of a conservation easement for long-term preservation of the wetlands and associated buffer, documentation of permit compliance, and long term monitoring and maintenance of the wetlands. (Cost: \$68,000)

2) YEAR COMPLETED State School TT-1 On-site Wetlands Design, Miami-Dade County Public Professional: Ongoing / Construction: N/A Schools, Florida

TION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Project Hydrogeologist: Part of the environmental permitting services provided to Miami-Dade County Public Schools. Managed the design and construction of an on-site wetland mitigation area to meet the requirements of a USACE dredge and fill permit. An existing canal and poor functional value wetlands were replaced with an engineered mitigation area. The services included preparing cut and fill drawings, proposed topography detail, technical specifications, planting plans, construction oversight, and long-term monitoring and maintenance. Additionally, designed an educational overlook with signage to be utilized in the school curriculum. (Cost: \$18,445)

Project Development and Environment Reports for SR 836 Widening, Miami-Professional: 2011 / Construction: N/A Dade Expressway Authority, Florida

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

Project Manager/Project Geologist: Managed a team of scientists who prepared the wetland evaluation report, endangered species biological assessment, and sociocultural effects evaluation for the PD&E study along a 4.89 mile corridor of SR 836/Dolphin Expressway in Miami Dade County. Completed a contamination screening evaluation which included over 200 contaminated sites that required ranking and evaluation. Completed the final report with recommendations limited Level 2 Contamination Assessments. Attended meetings with the MDX team and assisted with the State environmental impact report preparation. (Cost: \$290,000)

Monroe County Canal Bathymetry and Sediment Characterization, Monroe Professional: Ongoing / Construction: N/A County Engineering Services, Florida

N (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 
☐ Check if project performed with current firm

Project Manager: This project consists of performing bathymetric surveys to determine the average depths of all residential canals in the Keys. The surveys are being performed using automated hydrographic survey equipment consisting of a dual frequency echo sounder used in conjunction with a GPS positioning system located on a survey boat. This survey will provide information on the total depth of the canals and the accumulated sediment in the canals. Additionally, ten samples of the unconsolidated materials are being collected utilizing a piston tube sampler and submitted for physical and chemical characterization to assist in refining the design for removal and disposal of the material from

the canal bottoms. (Cost: \$100,000) (1) TITLE AND LOCATION (City and State Professional: 2010 / Construction: N/A West Dade Soccer Field, Miami-Dade County, Florida

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

Project Manager/Project Hydrogeologist: Performed an assessment at an existing landfill site of the type of refuse, methane concentrations, thickness of cover material, and soil and groundwater concentrations. Assessment results were utilized to determine the design requirements for construction of a soccer field with associated bathrooms, utilities, and other amenities. (Cost: \$18,783)

E. Resumes of Key Personnel Proposed for this Contract			
12. NAME Jennifer Sagan, MS	Permitting and Public Education	14. YEARS EXPERIENCE 27 Total / 5 Current Firm	
15. FIRM NAME AND LOCATION (City and State) AMEC, Gainesville, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) M.S. Microbiology B.S. Zoology		

FDEP Certified Freshwater Stream Habitat Assessor

FDEP Surface and Groundwater Monitoring

FDEP Stormwater Erosion and Sedimentation Control Inspector

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Jennifer Sagan has over a decade of experience conducting monitoring and providing technical input on water management issues for water quality, water quantity and aquatic habitat restoration as related to the establishment of Total Maximum Daily Loads (TMDLS), water withdrawal impacts including Minimum Flows and Levels (MFLs) and in support of National Pollutant Discharge Elimination System (NPDES) compliance monitoring. Ms Sagan currently acts as AMEC's Biology-Toxicology Laboratory project manager. Ms. Sagan has acted as a member of a multi-agency technical advisory committee to address issues related to water quality, aquatic organism habitat restoration, and establishment of TMDLs for the Lower St. Johns River. Ms. Sagan has been responsible not only for environmental project design and statistical analyses but also has often been called upon to report related findings to board members, media representatives, the general public, and technical conference attendees.

19. Relevant Projects
(1) TITLE AND LOCATION (City and State)

Minimum Flows and Levels, Middle Suwannee River, Suwannee River Water Management District (SRWMD), North Florida

Project Coordinator: AMEC was contracted to develop the full scope of services to establish MFLs for an 80-mile segment of this large, iconic Florida river. This scope is fully inter-disciplinary including hydrology, water resources, geology, in-stream biology, soils, and floodplain community assessments.

(2) YEAR COMPLETED

Professional: 2011 / Construction: N/A

Professional: 2009 / Construction: 2008

Professional: 2011 / Construction: N/A

Professional: 2011 / Construction: N/A

2013

Because of the direct riverine and groundwater interactions in a karst terrain, this project will also establish MFLs for more than 15 springs. (Cost: 76,000)

(1) TITLE AND LOCATION (City and State)

Scientific, Technical, and Field Support Services, St Johns River Water Management District, Florida

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

Project Manager: Managed the 20 full-time, AMEC staff provided to the SJRWMD for Districtwide technical and field support services. Provided supervisory and contract management support to 15 SJRWMD project managers. AMEC on-site personnel supported the District's Core Mission throughout District lands. Project support included Alternative Water Source Impact Evaluation, MFLs, the Lake Apopka Restoration Project, TMDLs establishment, and the Surface Water Quality Monitoring program. Personnel performed biological and water quality data collection, project design and data analysis, hydrologic and hydraulic modeling, database management, GIS support, and programming. (Cost: \$13 million)

Submerged Aquatic Vegetation and Water Quality Monitoring

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

Project Manager: Conducted bimonthly SAV and water quality monitoring associated with seven sites within the Caloosahatchee Estuary in support of SFWMD's Comprehensive Everglades Restoration Plan (CERP). Performed analyses of the five-year monitoring project data that resulted in the Northern Estuaries Module Draft System Status Report for SFWMD. (Cost: \$300,000)

Surface Water Quality Monitoring Network, St Johns River Water Management District, Glades and Lee Counties, Florida

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

Project Manager: AMEC provided field, laboratory, and database management services in support of surface water quality monitoring for two monitoring networks for the St. Johns River Water Management District (SJRWMD) and FDEP: Integrated Water Resources Monitoring (IWRM) Tier 1 Status Network and Fixed-Station Trend Network. Fixed sites were sampled monthly and enabled FDEP to obtain chemistry, discharge, and loading data at the point that integrates the land use activities of the watershed over a ten year period. AMEC was responsible for documenting water and sediment quality and biological conditions to characterize the environmental conditions of Florida's fresh water resources to determine how these conditions change over time, both at a basin level and Statewide. AMEC staff adhered to the FDEP Standard Operating Procedures (SOPs) for sampling and field work and "Status and Temporal Variability Monitoring Network Sampling Manual." AMEC performed the following specific tasks in support of this project: (Cost: \$320,000 annually)

Sediment Bioaccumulation and Toxicity Study, Tampa Bay Estuary Program, Tampa, Florida

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

Toxicology Laboratory Project Manager: The Tampa Bay Estuary Program (TBEP) Sediment Quality Advisory Group (SQAG) proposes management actions in areas of the bay with poor sediment and benthic habitat quality. McKay Bay has been extensively sampled to identify localized sediment contaminant "hot spots". The purpose of this project was to provide data on the acute toxicity of sediments from selected portions of the bay, and ability of sediment toxicants in those areas to bioaccumulate in the tissues of test organisms. AMEC conducted a 10-day whole sediment acute toxicity test and 28-day bioaccumulation test on sediment samples. Organism tissue was analyzed for organochlorine pesticides, PAHs, and PCB Aroclors.

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME Mark Jones	13. ROLE IN THIS CONTRACT  CAD Services	14. YEARS EXPERIENCE 20 Total / 5 Current Firm		
15. FIRM NAME AND LOCATION (City and State) AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION)  A.S. Engineering Technology — Drafting & Design			

<sup>17.</sup> CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Mark Jones has 20 years experience in stormwater, water, and wastewater design. He has also been responsible for all aspects of municipal engineering including utility system improvements, stormwater management system design, roadway design, and other special projects. Mr. Jones

	relops and maintains CAD standards, schedules projects, and estimates budgets.	ii, todaway designi, and other special projects. Wil. Solies		
19.	Relevant Projects			
	(1) TITLE AND LOCATION (City and State) Hillsborough County Stormwater & Environmental Engineering Services, Hillsborough County, Florida	Professional: Ongoing / Construction: N/A		
а.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE (Check if project performed with current firm Senior CAD Designer: Providing CAD services for stormwater and environmental engineering capital improvement projects in Hillsborough County. AMEC's primary role is to perform PD&E studies and final designs for capital improvement projects and retrofit stormwater projects. Also contributing design and construction plan services for neighborhood drainage projects to prevent flooding. (Cost varies per project)			
	(1) TITLE AND LOCATION (City and State)  Plant City Master Engineering Services, Plant City, Florida	Professional: Ongoing / Construction: Ongoing		
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm  Senior CAD Designer: Responsible for design of the streetscaping and minor drainage improvement for the softball complex stormwater management system retrofit. (\$160,000 for 2 jobs)			
	(1) TITLE AND LOCATION (City and State)  Citrus County Master Engineering Services, Citrus County, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
C.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm Senior CAD Designer: Providing comprehensive engineering support services to Citrus Count design of a multi-stage, 3-acre dry retention stormwater pond and the design of a stormwater s residents are experiencing flooding during large storm events. Also performing specific-purpos problems in a subdivision where a number of homes were experiencing nuisance flooding during	ystem to serve an area in Northeast Citrus County where se engineering assessment of isolated flooding and erosion ag extensive rainfall events. (Cost varies per project)		
	(i) TITLE AND LOCATION (City and State)  Lake County Master Water Resource Consultant, Lake County, Florida	Professional: Ongoing / Construction: N/A		
d.	3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Senior CAD Designer: AMEC provided engineering services on Lake Beauclair, Lake Griffin, and the Clermont and Harris Chain of Lakes as part of this consultation contract. Provided CAD services in support of evaluation, and design services for Lake Griffin to remove sediments from more than 30 canals ringing the lake and to place those sediments in a confined section of a subsided muck farm. (\$350,000)			
	(1) TITLE AND LOCATION (City and State) Haines City Watershed Management Plan, Haines City, Florida	(2) YEAR COMPLETED Professional: 2006 / Construction: N/A		
e.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm Senior CAD Designer: Created and designed plans that involved large water and force mains for the City's streetscape project. (\$400,000)	along the U.S. 27 FDOT corridor. Designed and created plans		
	(1) TITLE AND LOCATION (City and State)  Lake Maggiore Aquatic Enhancement, St. Petersburg, Florida	(2) YEAR COMPLETED Professional: 2008 Ongoing / Construction: N/A		
f.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm  Senior CAD Designer: Designed and created plans after a feasibility study was conducted on most effective method of removing organic sediments from the bottom of the 350-acre lake loc: improve highly impacted water quality, habitat, and navigation due. It was determined that appr sediment would need to be removed to achieve optimum restoration. (\$8 million)	ated in a highly urbanized area. The project's purpose was to roximately 2.3 million cubic yards of sand and highly organic		
	Waterways Management Program, Tampa, Florida	(2) YEAR COMPLETED Professional: 2009 / Construction: 2009		
g.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm  Senior CAD Designer: Contributed CAD services in support of the professional engineering so projects. This special assessment program includes design of dredging projects at various local Westshore area and Davis Islands. (\$615,000)  (1) TITLE AND LOCATION (City and State)	tions throughout the City including but not limited to the		
	(1) TITLE AND LOCATION (City and State)  Lake Beauclair Aquatic Enhancement, Florida	(2) YEAR COMPLETED Professional: 2013 / Construction: Ongoing		

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

Senior CAD Designer: Designed and created construction plans for Lake Beauclair. This project enhances the navigability, habitat, and water quality of the 1,100-acre Lake Beauclair by removing more than 1.2 million cubic yards of organic sediment and a partial lake pump-down and installation of aquatic vegetation. Used the dredge material to cap soils in a subsided muck farm near Lake Apopka at a sufficient elevation to support wetland restoration (emergent marsh). Completed the design of the disposal area embankments, alum treatment system for the supernatant, and the pipeline and pumping system for sediment management at a disposal location meeting the requirements of the St. John's River Water Management District and United States Fish and Wildlife Service. (\$10 million)

E. Resumes of Key Personnel Proposed for this Contract			
12. NAME Aziza Baan, GISP	13. ROLE IN THIS CONTRACT  GIS Services	14. YEARS EXPERIENCE  9 Total / 8 Current Firm	
15. FIRM NAME AND LOCATION (City and State)  AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Environmental Science Post Baccalaureate Certificate, GIS		

## Geographic Information Systems Professional

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Baan is proficient in working with GIS in environmental and water resources disciplines. Using her strong science and GIS expertise, she specializes in stream and wetland restoration planning and design, watershed modeling, floodplain mapping, land use planning, terrain processing, and spatial and volumetric analysis. Ms. Baan manages GIS tasks and performs data research, data compilation, database development, aerial interpretations, data interpolations, and QA/QC analysis. Her multidisciplinary background includes assisting with ecological and wetland site evaluations, delineations, and field assessments on various projects. Involved with Section F Projects: 3, 4, 5, 6, and 9

and spatial and volumetric analysis. Ms. Baan manages GIS tasks and performs data research, data compilation, database development, aerial interpretations, data interpolations, and QA/QC analysis. Her multidisciplinary background includes assisting with ecological and wetland site				
evaluations, delineations, and field assessments on various projects. <b>Involved with Section F Projects: 3, 4, 5, 6, and 9</b> 19. Relevant Projects				
19.1	(1) TITLE AND LOCATION (City and State) Waterways Management Program, Tampa Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
a.	a. GIS Specialist: Prepared draft volumetric cut calculations for proposed dredging along 14 Westshore canals. Produced existing and proposed DEMs highlighting the dredging areas and existing restoration areas for seagrass mitigation. Analyzed data to determine which property parcels will be affected by the proposed dredge. Also performed QA/QC analysis. (Cost: \$615,000)			
	(1) TITLE AND LOCATION (City and State)  Lake Rowell Aquatic Enhancement, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  GIS Specialist: Gathered, researched and performed analysis for a preliminary design for the proposed dredging of Lake Rowell. Analyzed land use, soils, floodplains, wildlife, utilities, roads, and property parcel data to determine viable site options for placing dredged material from Lake Rowell.			
	(i) TITLE AND LOCATION (City and State)  Gilshey Branch West Pisgah Wetland Design, Florida	(2) YEAR COMPLETED Professional: 2006 / Construction: 2010		
C.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  GIS Specialist: Provided geomorphology design recommendations for two herbaceous wetlands proposed for construction west of Mount Pisgah Road, Polk County, on a parcel of mined land. The wetlands were designed to be reclaimed higher than the nearby Peace River bottomlands to facilitate groundwater flow toward this system across the project area. A material balance and distribution of cut and fill depths provided a topographic solution using the available in-situ overburden materials. (Cost: \$57,000)			
	(1) TITLE AND LOCATION (City and State)  Watershed Management Plans, Florida	(2) YEAR COMPLETED Professional: 2011 / Construction: N/A		
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \) \) \\  \endowned ROLE \( \text{ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \) \\  \endowned ROLE \( \text{ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \( \text{ND SPECIFIC ROLE \\  \text{ND SPECIFIC ROLE \)			
	(1) TITLE AND LOCATION (City and State) All Aboard Florida, Multiple Cities, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
e. GIS Task Leader: Responsible for managing all GIS tasks and support for the environmental permitting and drainage design engineeri services for the project area from Miami to Orlando. Responsible for the GIS data collection, GIS analysis, field data conversions, Lid analysis, ecological mapping and other map generation for numerous types of permits required for this project. (Confidential Cost)				
	(1) TITLE AND LOCATION (City and State)  Natural Channel Design for Florida Streams, Florida	(2) YEAR COMPLETED Professional: 2014 / Construction: N/A		
f.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( \bar{\text{NOE}}\) Check if project performed with current firm  Water Resource Scientist/GIS Specialist: Assisted in a four-year study by interpretations, and other data analysis. Developed detailed DEMs from stream			

Water Resource Scientist/GIS Specialist: Assisted in a four-year study by providing GIS analysis, calculations, LiDAR, aerial interpretations, and other data analysis. Developed detailed DEMs from stream survey points to help visually portray the different classifications of streams for the Florida specific channel design and characterization manual. (Cost: \$385,000)

(1) TITLE AND LOCATION (City and State) (2) YEAR COMPLETED

South Pasture Extension Hydrologic/Ecologic Restoration Design & Permitting, CF Industries, Inc., Hardee County, Florida

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

Water Resource Scientist/GIS Specialist: Assisted in the design and restoration of 10 miles of streams and several hundred acres of interconnected wetland systems. Developed topographic and vegetative reclamation designs based on hydrologic modeling of pre- and post-development conditions. (Cost: \$2 million)

Professional: Ongoing / Construction: N/A

E. K	E. Resumes of Key Personnel Proposed for this Contract  13. ROLE IN THIS CONTRACT				
R. Michael Jones, PLS, CFedS		Characterization 36 T		14. YEARS EXPERIENCE 36 Total / 26 Current Firm	
ΑM	15. FIRM NAME AND LOCATION (City and State)  AMEC, Orlando, Florida  16. EDUCATION (DEGREE AND SPECIALIZATION)  A.S. Civil Engineering, Central Florida Community College  A.S. Land Surveying and Mapping, Central Florida Community College				
Pro Mis	urrent professional registration ( <i>state and discipline</i> )  ofessional Land Surveyor, Florida No. LS4201, Geo  ssissippi No. LS3172, Texas No. LS6231, California  rtified BLM Federal Surveyor, No. 1486  other Professional Qualifications (Publications, Organizations, Training, Awards)	No. LS8707	S16447,		
Mr. dec incl sur gov SJF Ge	ITHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards Michael Jones is a Senior Principal Surveyor and Projected of Central Florida professional experience in surfluding project planning, estimating, and implementation veys, subsurface utility surveys, bathymetric surveys, a vernment agencies at the local, regional, and state lever RWMD, SFWMD, Tampa Bay Water, and FDEP. Mr. Judetic Surveying, National Society of Professional Survelevant Pr	ect Manager as well as a registere veying and mapping. He is extrem n. He has specific expertise in the and boundary determinations. He less, including the City of Orlando, Cones is a member of the following	ely proficion areas of go has manago Drange Co profession	ent in all aspects of survey management, eodetic control surveys, engineering design ged surveying and mapping projects for unty, Greater Orlando Aviation Authority, ial organizations: American Association for	
19.	(1) TITLE AND LOCATION (City and State)		(2) YEAR CO		
	City of Orlando Continuing Surveying Services C		Profess	ional: Ongoing / Construction: N/A	
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Cher Project Manager: Responsible for project managem Work under these contracts involved supporting varion Capital Projects, and Drainage. Assignment included and control surveys. (Cost: varies per project)	ent from 1993 to 1999, 2001 to 20 ous City departments, including Pu	ublic Work nic surveys	s, Engineering, Legal, Parks and Recreation, , subsurface utility designation and location,	
	(1) TITLE AND LOCATION (City and State)  Orange County Continuing Surveying Services, (	Orange County, Florida	(2) YEAR CO Profess	MPLETED ional: Ongoing / Construction: N/A	
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Cher Project Manager: Has served as a Project Manager Improvements, Public Works, Parks and Recreation, geodetic control densifications, topographic surveys, legal descriptions, and GIS inventory mapping. (Cos	to the County since 1999 in supp Real Estate, and Roads and Drai utility route surveys, photogramm	nage. Rep etric surve	resentative assignments have included by control, lift station surveys, preparation of	
	(1) TITLE AND LOCATION (City and State)  Orange County School Board Continuing Survey  Orange County, Florida  (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   Check Continuing City Continuing City Cost, etc.) AND SPECIFIC ROLE   Check Cost, etc.   Check Cost, etc.) AND SPECIFIC ROLE   Check Cost, etc.   Chec		(2) YEAR CO Profess	MPLETED ional: Ongoing / Construction: N/A	
C.	Project Manager: Has served as Project Manager s boundary, topographic, and subsurface utility survey \$200,000)	ince 2007 in support of capital imp	rt site reha	bilitation design and construction. (Cost:	
	(1) TITLE AND LOCATION (City and State)  City of Ocoee Continuing Surveying Services, Oc	coee, Florida	(2) YEAR CO Profess	ional: Ongoing / Construction: N/A	
d.	d. Project Manager: Has served as Project Manager on this contract to the City from 1999 to present. Projects have included boundary surveys, construction layout and as-built surveys, specific purpose surveys, topographic surveys, subsurface utility line surveys to include designation and excavation, preparation of legal descriptions, and platting and plat review for conformance with Chapter 177, Florida Statutes. (Cost: \$175,000)			ace utility line surveys to include designation with Chapter 177, Florida Statutes. (Cost:	
	(1) TITLE AND LOCATION (City and State)  Survey Support Services Naval Training Center, (	Orlando, Florida	(2) YEAR CO Profess	ional: 2010 / Construction: N/A	
e.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( \text{\text{MC Check if project performed with current firm} \)  Project Manager: For 13 years, AMEC served the U.S. Navy and the City of Orlando as the survey and mapping consultant to facilitate the disposition of four properties making up the Naval Training Center (NTC). Responsible for surveying management, resource allocation, technical review, and QA/QC. Relevant tasks included topographic and boundary surveys, mapping of underground utilities, photogrammetric mapping, and GIS activities. Managed several subcontractors and successfully deployed specialists as needed to execute the needs of the contract. Resulting surveys were reviewed and approved by Naval Engineering Command on behalf of the Secretary of the Navy for disposition of the properties to the City of Orlando. (Cost: \$1.2 million)				
	(1) TITLE AND LOCATION (City and State)  Lake Apopka Restoration Surveys, Lake Apopka,	Florida	(2) YEAR CO Profess	ional: 2010 / Construction: N/A	
f.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE (A) Chee Project Manager: Provided boundary surveys for ac prepared for 11 properties totaling more than 10,000 control and assurance. (Cost: Varied per survey)	ck if project performed with current firm equisition of property along one of	ogram man	nagement, resource allocation, and quality	
g.	(1) TITLE AND LOCATION (City and State)  Chassahowitzka Springs Topographic Survey, So  Management District, Citrus County, Florida  (3) RPIEF DESCRIPTION (Ridd scrope, size, cost, atc.) AND SPECIFIC POLE M Chee		(2) YEAR COM Profession	onal: 2014 / Construction: N/A	
g.	(3) BRIEF DESCRIPTION (Bilef scope, size, cost, etc.) AND SPECIFIC ROLE IN Check if project performed with current firm  Principal Surveyor: Responsible for all surveying activities needed to support planning and design of new public facilities. Tasks included bathymetric survey of springs and topographic survey of adjacent land. (Cost: \$151,000)				

E. Resumes of Key Personnel Proposed for this Contract 13. ROLE IN THIS CONTRAC 14. YEARS EXPERIENCE Survey, Sampling & Charles Gardiner, PLS, CFedS 20 Total / 16 Current Firm Characterization 16. EDUCATION (DEGREE AND SPECIALIZATION) 15. FIRM NAME AND LOCATION (City and State) B.S. Surveying & Mapping AMEC. Orlando, Florida A.S. Civil Engineering

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

Professional Land Surveyor, FL, No. LS5046; SC, No. 27735; MO, No. 2011017289; LA, No. 5077; NC, No. L-4598 Certified BLM Federal Surveyor, No.1475

ns, Organizations, Training, Awards, etc.)

Mr. Gardiner is a Principal Surveyor and Project Manager with over two decades of experience in a wide range of surveying and mapping activities, including management and execution of projects for both private and public sector clients. His extensive technical background accentuates his ability to manage personnel and projects effectively. He has specific expertise in geodetic surveying (conventional and global positioning system (GPS)], route/design surveying and mapping, boundary surveying. Mr. Gardiner places an emphasis on new technologies. including GIS, being developed for the surveying and engineering professions. Involved with Section F Projects: 1, 3, and 6.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

Wetlands Reserve Plan-Kissimmee Oaks and Oxbow, Okeechobee, Florida

Professional: 2012 / Construction: N/A

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

Project Surveyor: Supervised Phase II surveying services associated with WRPO development and engineering design. Tasks included establishing and densification of NAD83/07 and NAVD88 control, topographic survey of portions of site, wetland profiles, surveys of existing drainage structures, and cross section surveys of canals, ditches, dikes, roads and areas of planned construction. Produced both hard copy and CAD deliverable final products. AMEC developed a conservation plan that identified how wetland functions and values will be restored, enhanced, protected, maintained and managed to accomplish the goals of the USDA NRCS WRP. Project efforts included assessment of the general health and condition of the various habitats, identification of the presence of exotic and invasive species, and evaluation of current site hydrology. Project goals included development of alternatives for the restoration of historical habitats, based on proper hydrology and vegetation community structure. (Cost: \$89,000)

(1) TITLE AND LOCATION (City and State)

Wetlands Reserve Program Lott Wetland Restoration, Sebring, Florida

Professional: 2012 / Construction: N/A

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🛮 Check if project performed with current firm Project Surveyor: Responsible for successful completion of Phase II surveying services associated with WRPO development and engineering design. Tasks included establishing and densification of NAD83/07 and NAVD88 control, topographic survey of specific portions of site, surveys of water wells, wetland profiles, surveys of existing drainage structures, and cross section surveys of canals, ditches, dikes, roads and areas of planned construction. Produced both hard copy and CAD deliverable final products. AMEC developed a conservation plan that identified how wetland functions and values will be restored, enhanced, protected, maintained and managed to accomplish the goals of the USDA NRCS WRP. Project efforts included assessment of the general health and condition of the various habitats, identification of the presence of exotic and invasive species, and evaluation of current site hydrology. Project goals included development of alternatives for the restoration of historical habitats, based on proper hydrology and vegetation community structure. (Cost: \$119,000)

Flying Eagle Shinn Ditch Hydrologic and Wetlands Restoration, Inverness,

Professional: 2009 / Construction: 2009

TION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm

Project Surveyor: Responsible for successful completion of surveying services associated with wetlands restoration engineering design over this 10,950 acre parcel. Tasks included establishing and densification of NAD83/07 and NAVD88 control, topographic survey of specific portions of site, wetland profiles, surveys of existing drainage structures, cross section surveys of canals, ditches, roads and areas of planned construction and as-built surveys. Produced both hard copy and CAD deliverable final products. Overall project included the design, construction and environmental permitting services as part of hydraulic and wetlands restoration plan for Shinn Ditch wetlands system within 3,500-acre rural Flying Eagle tract in Citrus County. Environmental and ecologic conditions degraded over decades due to unfavorable historic land use. Services to restore natural hydrologic functions of storage and conveyance and ecologic value of wildlife habitat diversity within system. (Cost: \$205,000)

Chassahowitzka Springs Topographic Survey, Southwest Florida Water

(2) YEAR COMPLETED

Professional: 2014 / Construction: N/A

Management District, Citrus County, Florida

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🗵 Check if project performed with current firm Project Surveyor: Responsible for all surveying activities needed to support planning and design of new public facilities. Tasks included bathymetric survey of springs and topographic survey of adjacent land. (Cost: \$151,000)

(1) TITLE AND LOCATION (City and State

Colt Creek State Park Hydrologic Restoration, Southwest Florida Water Management District, Florida

Professional: 2012 / Construction: N/A

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

Project Surveyor: Responsible for establishing NAD83/2007 and NAVD88 control at this site in Polk County utilizing a combination of GNSS height modernization techniques and traditional differential leveling as well as collecting topographic survey data relating to existing drainage structures and areas of proposed improvements to support AMEC engineering efforts in designing the hydrological restoration of the site. (Cost: \$205.000)

E. Resumes of Key Personnel Proposed for this Contract  12. NAME  Chris J. Lindstedt, PSM	13. ROLE IN THIS CONTRACT Survey, Sampling & Characterization	14. YEARS EXPERIENCE 20 Total / 18 Current Firm
15. FIRM NAME AND LOCATION (City and State) AMEC, Orlando, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Geomatics	

### Professional Land Surveyor, Florida No. LS6372

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

For the past 15 years, Mr. Lindstedt has focused his efforts on using the latest methods in Global Positioning Systems (GPS) to specialize in hydrographic surveying. His responsibilities as a registered Professional Surveyor and Mapper have included vector processing, network adjustment computations in conjunction with the Project Surveyor, and providing technical support for all GPS services, including Static, Fast-Static RTK and DGPS

Static, RTK, and DGPS.				
19. Relevant Projects				
	(1) TITLE AND LOCATION (City and State) SFWMD Canal Conveyance Hydrographic Surveys, Florida	(2) YEAR COMPLETED Professional: 2008 / Construction: N/A		
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm Project Surveyor: Responsible for hydrographic surveys of 90-miles of existing can. District. Automated bathymetric surveys were conducted in conjunction with real-bottoms. This was coupled with topographic surveys of banks and near shore areas areas. (Cost: \$312,000)	time navigation and positioning system to map canal to provide complete topographic coverage of the project		
	(1) TITLE AND LOCATION (City and State) SJRWMD Automated Bathymetric Surveys of Lakes Monroe and Harney, Seminole and Volusia County, Florida	(2) YEAR COMPLETED Professional: 2004 / Construction: N/A		
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Surveyor: Responsible for performing bathymetric surveys for lakes Harney (4000 ac) and Monroe (6000ac) and connecting portions of the St. Johns River to support District Minimum Flows and Levels studies. Used Dual Frequency Echo Sounder in conjunction with GPS navigation and positioning systems to develop bottom profiles and sediment thickness maps for subsequent scientific and construction activities. Processed and delivered survey data as ESRI shape files created in ARCGIS. (Cost: \$185,000)			
	(1) TITLE AND LOCATION (City and State) SFWMD Hydrographic Surveys of Canal C-31, Osceola County, Florida	(2) YEAR COMPLETED Professional: 2007/ Construction: N/A		
C.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Surveyor: Responsible for performing six miles of hydrographic surveys at canal C-31 to support engineering design and subsequent dredging. This effort also included detailed topographic surveys of two control structures along the route and three bridge detail surveys.  (Cost: \$31,000)			
	(1) TITLE AND LOCATION (City and State) SJRWMD GPS Static Network, Florida	(2) YEAR COMPLETED Professional: 2005/ Construction: N/A		
d.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Project Surveyor: Provided field supervision for this project that entailed performing a GPS Static Network across remote portions of the St.  Johns River marsh in Brevard and Orange Counties in order to establish three-dimensional geodetic control and support subsequent real-time  GPS data collection and mapping. (Cost:\$85,000)  (1) TITLE AND LOCATION (City and State)			
e.	(1) TITLE AND LOCATION (City and State)  Chassahowitzka Springs Topographic Survey, Southwest Florida Water  Management District, Citrus County, Florida  (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   Check if project performed with current firm	(2) YEAR COMPLETED Professional: 2014 / Construction: N/A		
	(a) DNLL DESCRIPTION (Diter scope, size, cost, etc.) AND SELCTION OLD CHECK II project performed with current little			

Project Surveyor: Responsible for all surveying activities needed to support planning and design of new public facilities. Tasks included

bathymetric survey of springs and topographic survey of adjacent land. (Cost: \$151,000)

E. Resumes of Key Personnel Proposed for this Contract

Mary L. Szafraniec, PhD, PWS

Survey, Sampling & Characterization

14. YEARS EXPERIENCE 12 Total / <1 Current Firm

Ph.D. Environmental Engineering Sciences Graduate Certificate in Wetlands Science M.S. Environmental Engineering Sciences B.S. Biology

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

Professional Wetland Scientist #2182, 2011

FDEP BioRecon, 2004

FDEP Lake Condition Index, 2004

FDEP Boating Safety, 2004

15. FIRM NAME AND LOCATION (City and State)

AMEC, Lakeland, Florida

FDEP Stream Condition Index, 2010

FDEP Lake Vegetation Index, 2013

FDEP Habitat Assessment, 2014

S (Publications, Organizations, Training, Awards, etc.)

Dr. Mary Szafraniec's extensive ecological assessment and restoration background includes design and implementation of marine and freshwater ecological monitoring and assessments, watershed and springshed pollutant evaluation and restoration, and within-system ecological restoration such as sediment removal or inactivation, hydrologic alteration, invasive vegetation or algae removal, and native vegetation planting. Dr. Szafraniec has more than a decade of experience designing ecological studies analyzing and characterizing water quality, hydrologic regime, and biological community structure to determine the effectiveness of restoration activities and to improve the ability of resource managers to better manage impaired water resources. Her watershed and springshed approach to ecosystem restoration includes investigations of source, cycling, removal and legacy effects of nutrients to help determine cost-effective alternatives to meet TMDLs for Florida waterbodies. She recently served as one of only six springs experts at the Southwest Florida Water Management District.

Ecological Assessments of Springs: Water Quality, Water Clarity Monitoring and Assessments, Spectral Optical Model Development, and Stream Metabolism Calculations on Rainbow and Weeki Wachee Rivers, Southwest Florida Water Management District, University of Florida, Florida

Professional: 2014 / Construction: N/A

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

Lead Scientist: Responsible for designing and conducting an expansive ecological study on Rainbow and Weeki Wachee Rivers that evaluated the effects of environmental factors such as nutrients, spectral light attenuation (water clarity) and factors causing light attenuation, sediment, and velocity on submerged aquatic vegetation (SAV) and algal biomass, abundance and distribution. Optical water quality data (inherent and apparent optical properties) were collected at high spatial and temporal resolution in both systems and analyzed on a dualbeam mass spectrophotometer in the laboratory for the development and calibration of site-specific spectral light attenuation (optical) models to determine if native SAV that dominate these spring systems are light or nutrient limited. Results from the study and modeling effort revealed a minimum blue light threshold limitation for Sagittaria kurziana, a keystone springs SAV species, at which below the light threshold, it is unlikely the species will recruit or survive. Following extensive data analyses on the optical characteristics related to chromatic dissolved organic matter (CDOM) in the water column, results showed that the two systems receive carbon from different sources. Carbon quality investigations resulted in the finding that carbon is more labile (more readily available) in Rainbow, with a more autochthonous carbon source, and Weeki Wachee's carbon source is more allochthonous (recalcitrant or less available). The link between in-stream nutrient reduction rates and levels of carbon quality (CDOM) are suggestive of biogeochemical processes that may be controlling nutrient removal rates within these and possibly other spring systems and streams. Stream metabolism characteristics such as gross primary productivity, community respiration, and net ecosystem productivity were also measured and calculated in these two systems to establish relationships between spectral light attenuation and controls on stream metabolism.

Lower Hillsborough River and Sulphur Spring Recovery Strategy Implementation Projects, Florida

(2) YEAR COMPLETED

Professional: 2014 / Construction: N/A

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

Check if project performed with current firm

Task Manager and Technical Advisor: Responsible for designing and conducting an ecological study on Sulphur Spring and spring-run that evaluated the effects of environmental factors such as nutrients, sediment, stream flow and velocity on submerged aquatic vegetation (SAV) and filamentous algal biomass, biovolume, abundance and distribution. Additional tasks include processing and analysis of biological samples in the laboratory and statistical data analysis. As required by statute, if the actual flow of a water course is below the proposed minimum flow or is projected to fall below the proposed minimum flow (MFL) over the next 20 years, a "recovery strategy" is developed as part of the minimum flow development process. In the case of the Lower Hillsborough River (LHR), a recovery strategy was needed. As part of the recovery strategy, and dependent on hydrologic conditions, water to help meet the MFLs for the LHR is supplied by diverting flows from Sulphur Springs to the base of the dam on the Hillsborough River. A component of the overall project was to determine the cause of ecological imbalance in Sulphur Springs run and implement a restoration project to restore aquatic habitat and remove filamentous algae in Sulphur Springs run. (Cost: \$75,000)

E. Resumes of Key Personnel Proposed for this Contract

12. NAME
Katherine Y. Deliz Quiñones, PhD

13. ROLE IN THIS CONTRACT
Survey, Sampling &
Characterization

14. YEARS EXPERIENCE
1 Total / 1 Current Firm

15. FIRM NAME AND LOCATION (City and State)
AMEC, Newberry, Florida

16. EDUCATION (DEGREE AND SPECIALIZATION)
M.S., Ecology/Limnology
B.S., Biology

17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Dr. Katherine Y. Deliz Quiñones has over five years of professional experience as an Environmental and Remediation Scientist, with expertise in management of water and soil resources, ecology and biogeochemistry of wetlands and soils, environmental entomology, biogeochemistry of trace metals, nutrient cycling and remediation. Her experience in these fields focus in providing lasting and integrated solutions to current and potential environmental problems and include: environmental monitoring and site assessment for aquatic and soil environments; development of water quality indices; use of aquatic entomology as a tool to evaluate ecosystem function; control of sediment and runoff; control of invasive species; effects of anthropogenic disturbances; fate and transport of toxic contaminants and their environmental impacts; pollution prevention and remediation of contaminated sites with emphasis on trace metals and nutrients; design, review and implementation of feasible, reliable and innovative management programs for restoration; and rehabilitation of contaminated soil, watersheds, surface and ground water.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

All Aboard Florida Rail Expansion Project, Miami-Dade, Broward, Palm Beach, Martin, St. Lucie, Indian River, Brevard, and Orange Counties, Florida

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

Environmental Scientist: Dr. Deliz worked primarily as an environmental scientist and consultant addressing questions for FAA, USACE, and USCG and as a technical writer assisting in the development of the EIS according to NEPA requirements and FRA, FAA, USACE, and USCG guidelines. She also assisted in the development of a new screening analysis for the identification and selection of best alternatives for the AAF Railroad Project from Orlando to Miami, pursuing NEPA guidelines. In addition Dr. Deliz prepared a supplementary environmental impact and boat traffic impact on railroad bridges for USCG permitting, investigated vertical clearances for existing and proposed bridges, researched potential tidal influence of waterways, and determined mean and high water levels. All Aboard Florida, a subsidiary of Florida East Coast Industries (FECI), is developing a privately owned, operated, and maintained high speed passenger rail that will connect south Florida to Orlando. AMEC was selected to provide NEPA, environmental permitting, and civil engineering services. The project is composed of two distinct segments; a 200-mile north-south segment of the existing Florida East Coast Railroad right-of-way (ROW), from Cocoa to Miami, and a 40-mile east-west segment along State Road 528 that connects Orlando to the FECI mainline. (Cost: \$4.6 million)

(1) TITLE AND LOCATION (City and State)

US Department of Agriculture / Natural Resources Conservation Service Wetland Restoration Plan(s) of Operations, WRP Program, Fisheating Creek Environmental Assessment (EA)

(2) YEAR COMPLETED

Professional: Ongoing / Construction: N/A

Professional: Ongoing / Construction: N/A

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

Environmental Scientist: Dr. Deliz worked as an environmental scientist and consultant addressing questions for the client regarding the environmental impacts of the proposed restoration practices for the Fisheating Creek EA wetlands. She also worked as a technical writer assisting in the preparation of the Environmental Assessment Report for restoration of wetlands on the Fisheating Creek EA. The Fisheating Creek Wetland Reserve Program (WRP) project is the largest contiguous private lands project (26,225 acres) in the country involving four (4) landowners and five (5) individual tracts of land and approximately 8 miles of channelized Fisheating Creek located in Highlands County, Florida. AMEC has conducted the assessment of the ecological health and hydrologic regime of the project area. In addition to writing the EA, AMEC developed solutions for the restoration of the area to more historic conditions. To meet success criteria, AMEC has conducted surveying, modelling and a Biological Assessment of the site.

University of Florida, Gainesville, FL/ Fate of Mercury in Contaminated Soils Treated with Aluminum Based Drinking Water Treatment Residuals (Al-WTRs)

2) YEAR COMPLETED

Professional: 2013 / Construction: N/A

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

Project Manager/Environmental Remediation Scientist: Dr. Deliz worked on the development of an innovative and sustainable remediation technique using drinking water treatment residuals (WTRs) to immobilize the leachable mercury fraction of contaminated soils. In the process Dr. Deliz designed and performed laboratory experiments to evaluate the efficiency of Al-WTRs at different application rates and schemes, and analyzed the data using a combination of statistical analysis. In addition, Dr. Deliz used a combination of analytical techniques including chemical selective sequential extraction (SSE), scanning electron microscopy combined with X-ray energy dispersive spectrometer (SEM-EDS), X-ray diffraction (XRD) and X-ray photoelectron spectroscopy (XPS) to determine the physicochemical mechanisms involved in the immobilization processes and asses the long term stability of the formed Hg-WTR complexes. This data was used to determine the long term efficiency of the treatment and best management practices for treated soils. Two peer review publications have been submitted from this project and a third publication is expected shortly.

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME William A. Tucker, PhD	Survey, Sampling & Characterization	14. YEARS EXPERIENCE 39 Total / 30 Current Firm		
15. FIRM NAME AND LOCATION (City and State) AMEC, Newberry, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION)  Doctor of Philosophy, Ocean Science, University of Michigan  Master of Science, Ocean Science, University of Michigan  Bachelor of Science, Physics, West Virginia University			

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Dr. William Tucker is a Senior Principal Scientist with more than three decades of experience in the assessment of risk from environmental contamination. In evaluating the fate and transport of toxic chemicals in environmental systems, Dr. Tucker's expertise has encompassed soils, air, surface water, sediments, terrestrial and aquatic biota, and groundwater media. He has applied this expertise to exposure and risk assessment of contaminated sites, especially Superfund sites and petroleum-contaminated sites. Dr. Tucker has managed complex projects exceeding \$1 million, including remedial response planning (CERCLA), estuarine monitoring programs involving a major field bioaccumulation study, wetland restoration and water quality analysis projects, and compliance support. He has developed, verified and applied contaminant fate and transport models of multimedia systems, including soil / groundwater and air / surface water models.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

Bay Lake, Lake Christie, Lake Condel, and Lake Gandy Watershed and Water Quality Evaluations, Orange County, Florida

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

Senior Principal Scientist: Responsible for overall project QA/QC, and model loading review and consultation. Scope: AMEC was hired by Orange County Environmental Protection Division (OCEPD) under four individual contracts to develop a basin and water quality evaluation for each lake, and to provide recommendations for future BMP installations. Work efforts performed for basin evaluations included subbasin delineations and drainage basin characterizations. Factors such as size, impervious surface, soil characteristics and existing drainage infrastructure were taken into account, and used to develop hydrologic and nutrient loading estimates to the lake, including annual runoff inputs of phosphorus, nitrogen and TSS. The nutrient and hydrologic budgets were used to develop nutrient limitation water quality models for the lakes, as well as to isolate areas within the drainage basin that were contributing most to the impairment. Based on these results, various combinations of BMP alternatives were recommended for each subbasin. BMP alternatives were evaluated based on cost, nutrient removal capacity, and ease of implementation. (Cost: \$316,230)

(1) TITLE AND LOCATION (City and State)

City of Naples Stormwater Lakes Quality Assessment, Naples, Florida

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

Check if project performed with current firm

Project Manager: Project planning, resource management, and technical review. Scope included monitoring of stormwater conveyances, stormwater lakes, source identification, and stormwater loading model development. Stormwater lakes were prioritized for potential improvement for amenity values and stormwater treatment. Scope: AMEC has been under several contracts with the City of Naples since 2009 to perform water quality monitoring and assessment of their 27 publicly owned stormwater lakes. Impairment of receiving waters for bacteria, dissolved oxygen and metals has caused the City to take a pro-active approach to improving the quality of the stormwater discharged from the highly developed City watershed. AMEC has assisted in water quality improvement efforts through regular water quality monitoring, tracking of "hotspot" pollutant sources, analysis of reclaimed water system and end-user practices, and development of a City-specific ranking index for each of the 27 stormwater lakes based on a number of factors including existing water quality, calculated pollutant loadings to the lakes, calculated pollutant loading from the lake to downstream waterbodies, lake morphology and pollutant removal capacity. The ranking index is continually being refined based on ongoing monitoring, and is being used to target upcoming BMP implementations to those areas that would result in the most cost effective pollutant reduction. AMEC was recently awarded a directly related project to restore one of the city's lakes by dredging contaminated sediments, wetland plantings and lakeshore public amenities. (Cost: > \$200,000)

(1) TITLE AND LOCATION (City and State)

Wekiva River Basin and Floridan Aquifer, Nitrate Sourcing Study, St. Johns River Water Management District, Apopka, Florida

(2) YEAR COMPLETED

2) YEAR COMPLETED

Professional: 2012 / Construction: N/A

Professional: 2014 / Construction: N/A

2012

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

**Project Manager:** Estimation of all sources of nitrate to waters of the basin, including ground and surface water. Estimates were based on extensive technical literature review, model development and application using GIS, and installation and monitoring of 30 wells in residential areas. Study area covers 820,000 acres within five-county area. **(Cost: \$249,661)** 

(1) TITLE AND LOCATION (City and State)

Chassahowitzka Headspring Restoration Project, Homosassa, Florida

(2) YEAR COMPLETED
Professional: 2009 / Construction: N/A

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

Principal Scientist: This project consists of design and permitting for the dredging of the Chassahowitzka Headspring in Citrus County. Evaluated chemical and physical test data for the proposed dredged material; consultation and review of toxicity testing requirements; reviewed results from toxicity tests; evaluated polymer dosing rate to meet discharge requirements for Outstanding Florida Waters; reviewed dredging operations water quality monitoring plan; designed and reviewed bench scale polymer dosing tests; coordinated with Florida Department of Environmental Protection (FDEP) to define the scope of testing required to demonstrate feasibility of beneficial re-use of dredged material, reviewed and interpreted test results and submitted same to FDEP.

E. Resumes of Key Personnel Proposed for this Contract				
12. NAME Brian Hathaway, PE	Survey, Sampling & Characterization	14. YEARS EXPERIENCE 14 Total / 13 Current Firm		
15. FIRM NAME AND LOCATION (City and State)  AMEC, West Palm Beach, Florida  16. EDUCATION (DEGREE AND SPECIALIZATION)  Master of Engineering, Civil Engineering  BS, Civil Engineering		g		

Professional Engineer, Florida No. 60724 ACI, Field Technician, Concrete, Florida

ACI Lab Testing, Strength Testing Technician, Concrete, Florida

Certified Diver, Florida

Certified Pile Dynamic Analysis User, Intermediate, Pile Driving Installation, Florida

FL DOT CTQP Certified, Field Technician, Earthwork Construction

FL DOT CTQP Limerock Bearing Ratio, Laboratory Technician, Aggregate

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Hathaway is a licensed Professional Engineer with over 14 years of professional experience with primary emphasis in Geo/Civil Engineering, subsurface exploration techniques, site characterization, Construction Engineering Inspections (CEI), QA/QC Construction Materials and laboratory testing (CMT), heavy civil construction, and Construction Management disciplines. Mr. Hathaway has managed and provided professional engineering services for various geotechnical and engineered construction related projects throughout Florida, Alabama, and Georgia. These projects have ranged from residential structures, commercial developments to state roadways, highways and bridges, office buildings, new schools and facilities improvements, hospitality structures, tower structures, parking garages, marine and port facilities, power and process facilities, heavy civil construction, stormwater drainage, earthen impoundment structures, filter marshes and wetland restorations, park facilities, and landfills. The services provided by Mr. Hathaway involve all aspects of the project lifecycle including scope development, cost estimating, subcontractor selection, project management, resource management, planning, execution, cost controls, scheduling, risk assessment, contract reviews, engineering analysis, design, and reporting. Involved with Section F Projects: 3 and 8.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

Geotechnical Engineering and Laboratory Services Contract, City of Fort Lauderdale, Florida

Contract Manager/Senior Geotechnical Engineer: AMEC was selected by the City of Fort Lauderdale as a professional consultant to provide geotechnical, construction materials, and laboratory testing services. The projects performed under this contract are performed on a task work order basis. Responsibilities include contract and Task Order Project Management, subcontractor selection, technical lead during field and testing services, engineering evaluations and technical reporting. The services provided under this contract consist of site exploration studies, geotechnical engineering design, laboratory testing services, construction inspection, materials testing and construction quality control (QC) and quality assurance (QA). AMEC's primary role is to act as an extension to the City's available staff and resources. Under this task order contract, AMEC provides engineering and construction support services for the City's work programs. The projects consist of site development for building structures and facility upgrades, roadways, sidewalks and streetscape improvements, bridge structures, drainage systems, utilities, and airport facilities.

Professional: 2012 / Construction: N/A

Professional: 2013 / Construction: N/A

Professional: 2012 / Construction: N/A

(2) YEAR COMPLETED

(1) TITLE AND LOCATION (City and State)

Wharves Strengthening Program, (Wharves I to VII), HDR and Port of Miami,

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

Senior Geotechnical Engineer/Project Manager: AMÉC teamed with HDR as the geotechnical engineer-of-record (EOR) responsible for the development of design alternatives and analyses for the Port of Miami's Wharf Strengthening Program. The dredging improvements program demanded structural integrity review of the current cargo bulkhead capacity and the stability evaluation following the future dredge of Wharves I through VII (more than 6,000 linear feet of bulkhead) located adjacent to the South Ship Channel (Fisherman's Channel). AMEC performed 18 soil/rock core borings to depths up to 110 feet and dilatometer (DMT) insitu testing in order to develop site characterization for foundation stability analysis and design. Laboratory classification, index and strength tests were performed on recovered soil/rock samples. Geotechnical evaluations included lateral stability analysis and axial capacities for various deep foundation systems (prestressed concrete piles, steel pipe piles, augercast-in-place piling, drilled caissons, and soil and rock tie back anchors). The results of our analysis were presented in an engineering design report. Responsibilities included project management, geotechnical lead, resource management, and serving as technical supervisor during field and laboratory services, engineering analyses, and reporting. (Cost: \$303,462)

(1) TITLE AND LOCATION (City and State)

South Lake Conine Watershed Restoration and Stormwater Treatment Services, Winter Park, Florida

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

Principal Geotechnical Engineer: Responsible for the geotechnical scope development, proposal preparation, and management of the geotechnical design services. Performed field exploration services, was technical lead of laboratory studies, site characterization and responsible for the development of engineering design parameters. Performed engineering design analysis inclusive slope stability, settlement, and erosion control and prepared an engineering design report with construction recommendations for the performance of nearly 7,000 If of earthen embankments, two stormwater ponds, five filter marshes, six overflow weir structures, and one pavement access area constructed over organic soils and fibrous peat. Overall project included the design and permitting services for development / restoration of (Cost: \$218,000)

Qualifications of Firm and Project Team

E. Resumes of Key Personnel Proposed for this Contract			
12. NAME Kyle Compton	Survey, Sampling & Characterization	14. YEARS EXPERIENCE 8 Total / 8 Current Firm	
15. FIRM NAME AND LOCATION (City and State)  AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) A.S., Architectural Design & Construction Technology		

<sup>17.</sup> CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

### Stormwater Management Inspector #18538

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Kyle Compton serves as a Senior Environmental Technician within AMEC's Environmental group. He is responsible for FDEP Standard Operating Procedures (SOP) surface water discharge sampling, groundwater sampling, and water quality data analysis. Mr. Compton performs field inspections, wildlife and fish surveys, construction monitoring, biological monitoring, drilling and soil classifications, and database management and reporting for several ongoing remediation and reclamation projects. Mr. Compton also assists in subsidence investigations, grouting and monitoring for subsidence stabilization.

Mr. Compton is proficient with the following technical resources and equipment: various electronic submersible pumps, peristaltic pumps, electric water level indicators, YSI 556 multi-parameter meter, turbidity meters, piston tube samplers, Ponar mini dredge, hand augers, cone penetrometer, GPS (hand-held and TRIMBLE), Laser Level and Total Station survey equipment, Secchi disks, Ground Penetrating Radar (GPR), Electro-Fisher and boats with depth finders.

with	n depth finders.			
19.	Relevant Projects			
	(1) TITLE AND LOCATION (City and State)  Lake Beauclair Aquatic Enhancement, Tavares, Florida	(2) YEAR COMPLETED Professional: 2013 / Construction: Ongoing		
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE IN Corporations. Senior Field Technician: Performed manual bathymetry on shallow lake. Monitored bald eagle nests and activity prior to dredging operations. Performed dredge operation oversight and water quality monitoring during operations. (Cost: \$10 million)			
	(1) TITLE AND LOCATION (City and State)  Exxon-Mobil Land Management, Mulberry, Florida	(2) YEAR COMPLETED Professional: 2012 / Construction: N/A		
b.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   ☐ Check if project performed with current firm  Field Technician: Performed routine environmental monitoring with tasks including g maintenance, and field inspections.	Ç		
	Gilshey Branch Stream and Wetland Design, Polk County, Florida	(2) YEAR COMPLETED Professional: 2012 / Construction: N/A		
C.	c. (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Field Technician: Performed construction monitoring, wetland revegetation maintenance, and wildlife surveys to include gopher tortoise and kestrels. (Cost: \$65,000)			
	(1) TITLE AND LOCATION (City and State)  Chemical Plant Site Rehabilitation and Closure, Polk County, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
d.	d. (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE IZ Check if project performed with current firm  Field Technician: Performed monitoring compliance at surface water and groundwater locations.			
	(1) TITLE AND LOCATION (City and State)  Greenbay Chemical Plant, Mosaic Fertilizer, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
e.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE   Check if project performed with current firm   Field Technician: Monitored compliance at surface water and groundwater locations	. (Cost: \$98,000)		
	(1) TITLE AND LOCATION (City and State)  Wingate Mine Sampling, Mosaic Fertilizer, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
f.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE 🛛 Check if project performed with current firm			
g.	(i) TITLE AND LOCATION (City and State)  Reclaimed Phosphatic Clay Settling Area, Florida Institute of Phosphate  Research, Central/Northern, Florida	(2) YEAR COMPLETED Professional: 2006 / Construction: N/A		
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm  Field Technician: Monitored groundwater wells for research purposes and maintained FDEP SOP compliance.				

E. Resumes of Key Personnel Proposed for this Contract			
12. NAME Leon Seale, III, PE	13. ROLE IN THIS CONTRACT  Dredge Design	14. YEARS EXPERIENCE 32 Total / 8 Current Firm	
15. FIRM NAME AND LOCATION (City and State) AMEC, Lakeland, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) B.S. Mineral Engineering		

### Professional Engineer, Florida No. 72344, MSHA

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Mr. Leon Seale is a Professional Engineer registered in the state of Florida, and has 25 years of experience in the areas of process engineering, extractive metallurgy, and operations management in the phosphate mining industry, followed by 8 years of industry support in a consulting capacity. His background includes plant operations and cost management, maintenance planning and coordination, plant process development and optimization, and reclamation planning. Mr. Seale also has strong and varied computer experience including application development, database management, and statistical analysis and design related to process modeling and control. In addition, Mr. Seale has performed numerous dredge and disposal system studies related to both phosphatic clays and lake restoration, with progression to project design, development, and implementation.

	development, and implementation.			
19. Relevant Projects				
	(1) TITLE AND LOCATION (City and State)  Lake Beauclair Aquatic Enhancement, Tavares, Florida	(2) YEAR COMPLETED Professional: 2013/Construction: N/A		
a.	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE  Check if project performed with current firm  Design Engineer: Responsible for preliminary to final dredge and transport system design including volumetric analysis, dredge type and rate modeling, dredged slurry transport system design to include pipe size and routing logistics, power requirements and spacing for the removal of approximately 1.35 million cubic yards of sediment. Evaluated sediment, dewatering and disposal design options including mechanical, chemical, physical, and passive methodologies, and evaluated sediment disposal design based upon sediment settling properties and detailed mass and material balance calculations. Managed the two-year construction/dredging and disposal operations of the project to completion. (Cost: \$420,000)			
	(1) TITLE AND LOCATION (City and State) Ringling Bros. Barnum & Bailey Center for Elephant Conservation, Polk City, Florida	(2) YEAR COMPLETED Ongoing		
b. (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE				
	(1) TITLE AND LOCATION (City and State)  Lake Rowell Aquatic Enhancement, Bradford County, Florida	(2) YEAR COMPLETED 2009		
С.	characterization and overall components material balance, sediment dewatering process evaluation, and disposal system design for the removal of approximately 1.5 million cubic yards of sediment to restore the aquatic habitat of Lake Rowell.(Cost: \$150,000)			
	(1) TITLE AND LOCATION (City and State)  Lake Seminole Sediment Removal Project, Pinellas County, Florida	(2) YEAR COMPLETED Professional: Ongoing / Construction: N/A		
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE ☑ Check if project performed with current firm  Project Engineer: Assisted with the evaluation, design, and permitting aspects of a project designated to remove and dispose 1,000,000 cubic yards of sediment from within Lake Seminole. The project included monitoring and evaluation of the existing groundwater quality in and around the former landfill as well as an assessment of the potential impacts to the groundwater dy				
	site associated with loading of the former landfill cell with dredged sediments. (Cost: \$850,000)  (1) TITLE AND LOCATION (City and State)  (2) YEAR COMPLETED			
	Surface Water Discharge and Groundwater Compliance Monitoring, Dam Inspection, and General Engineering Support, Polk County, Florida	Professional: Ongoing		
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE IN Check if project performed with current firm  Project Manager: Monitor, sample, and analyze surface water and groundwater for Florid permit compliance. Prepare monthly, quarterly, and annual discharge and groundwater moundate permit renewal applications, annual phosphogypsum stack operating and continged Management Practice (BMP) plans, and oversee weekly and annual dam inspections. Pro		er monitor reports for submission to FDEP. Prepare and ingency plans, and periodically update Best		

Chassahowitzka Springhead Restoration, Homosassa, Florida

phosphate mining on leased property. (Cost: \$250,000 annually)

(1) TITLE AND LOCATION (City and State)

(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE \( \text{ Check if project performed with current firm} \) **Design Engineer:** Performed dredging feasibility assessment and prepared preliminary design report for design, permitting, construction, and dredging management services under a master engineering services contract for the removal of 3,000 cubic yards of sediment and woody debris from the Chassahowitzka headspring.

Professional: 2014 / Construction: N/A

E. Resumes of Key Personnel Proposed for this Contract			
12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
Charlene Stroehlen, PE	Dredge Design	34 Total / 5 Current Firm	
15. FIRM NAME AND LOCATION (City and State) AMEC, Newberry, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) M.B.A. Business Administration B.S. Mining Engineering		

### Professional Engineer, Florida No. 58774

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Ms. Stroehlen is a Senior Associate Engineer with professional experience in wetland restoration design; environmental resource permitting; wetland water budget modeling; construction bid package plans and specifications; preparation and construction management; stormwater treatment design; pumping system design; permitting with Hillsborough County, SWFWMD, FDEP, Florida Department of Transportation (FDOT) and U.S. Army Corps of Engineers (USACE), and surface water modeling. She has managed many stormwater and wetland projects from the design and permitting stage through construction and final certification. Ms. Stroehlen has designed, modeled, and prepared permit applications and bid specifications as well as supervised construction for many pumping systems and thousands of acres of wetlands.

19	Rel	levant	Proi	erts
17.	IVC	cvani	FIU	CULS

(1) TITLE AND LOCATION (City and State) (2) YEAR COMPLI

NRCS Wetlands Reserve Program Fisheating Creek Site, Florida Professional: Ongoing / Construction: N/A

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

Project Manager: The Fisheating Creek Wetland Reserve Program (WRP) project is the largest contiguous private lands project (26,225 acres) in the country involving four landowners and five individual tracts of land and approximately 8 miles of channelized Fisheating Creek located in Highlands County, Florida. AMEC has conducted assessment of the ecological health and hydrologic regime of the project area. AMEC is developing solutions for restoration of the area to a more historic condition. To meet success criteria, AMEC has conducted surveying, modeling and a biological assessment of the site. Modeling includes development of an existing model and three alternatives. (Cost: \$1.4 million)

(1) TITLE AND LOCATION (City and State)

Dredging and Bank Stabilization Services for East Central Region Canal

Conveyance Capacity Program, Various East Region Locations, Florida

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

Check if project performed with current firm

Professional: Ongoing / Construction: N/A

Principal: Responsible for field investigation of 100 miles of canals in South Florida. Reported canal conditions, bathymetric survey, developed hydraulic models to determine % flow reduction and designed and costed canal repairs to return canals hydraulic flow capacity and repair erosional features. Engineering evaluation services in conjunction with dredging and bank stabilization projects for the East Central Region (Okeechobee and West Palm field stations) of the District's Canal Conveyance Capacity Program, a multi-phase program to identify and schedule / prioritize dredging and restoration services to canal system to restore capacity in locations affected by siltation, encroachments and other forms of blockage. Services include review of historic data and documentation research, topographic and

hydrographic surveys, field reconnaissance, and report of findings of recommendations.

(1) TITLE AND LOCATION (City and State)

Jack Creek Hydrologic and Wetland Restoration, Sebring, Florida

Professional: 2012 / Construction: N/A

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

Project Manager: Responsible for development of hydrologic restoration of the SWFWMD Jack Creek preserve. This project included ground water modeling, engineering design of a rehydration system, construction bid documents and permitting. This project consists of design and permitting for the hydrologic and natural systems restoration of impacted wetlands on the Jack Creek Tract. (Cost: \$205,000)

(1) TITLE AND LOCATION (City and State)
FEMA Flood Mapping Updates Peer Review, Southwest Florida Water

Professional: Ongoing / Construction: N/A

Management District, Florida

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

Project Manager: Technical peer review of updated FEMA floodplain mapping performed by other consultants for SWFWMD. The project included technical review of hydrologic, hydraulic, and percolation models for multiple thousand-acre watersheds. Currently thirteen watersheds have been reviewed and the project is still ongoing. Oversaw third party GIS and ICPR ground water and surface water modeling review of FEMA floodplain models. Reviewed input parameters and output results for reasonability and developed a geodatabase identifying areas of concern, for tracking results. (Cost: \$336,000)

(1) TITLE AND LOCATION (City and State)

(2) YEAR COMPLETED

Chassahowitzka Springhead Restoration, Homosassa, Florida

Professional: 2014 / Construction: N/A

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

**Project Manager:** This project consisted of design and permitting for the dredging of the Chassahowitzka Headspring in Citrus County. Responsible for development and construction plan development for removal of sediment from the spring head. Also permitted the dredging activities and oversaw construction.

E. Resumes of Key Personnel Proposed for this Contract  12. NAME  Gregory W. Corning, EIT	13. ROLE IN THIS CONTRACT  Dredge Design	14. YEARS EXPERIENCE 4 Total / 4 Current Firm
15. FIRM NAME AND LOCATION (City and State) AMEC, Miami, Florida	16. EDUCATION (DEGREE AND SPECIALIZATION) Bachelor of Civil Engineering	

### Engineer-in-Training, Florida No. 1100014080

18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

As a Staff Engineer, Mr. Corning provides technical input and engineering analysis to projects involving stormwater, hydrologic, and environmental investigations. Mr. Corning has participated in the analysis of surface water quality and stormwater pollutant loadings, treatment of agricultural runoff by wetland systems, design of wastewater and water supply systems, and analysis of stormwater structures and facilities. He has conducted field exploration and research on several environmental projects, such as surface water assessment and monitoring and wetland evaluations. Mr. Corning also has experience in the development of construction documents such as drawings, technical specifications, and cost estimates.

19. Relevant Projects

(1) TITLE AND LOCATION (City and State)

Florida Department of Environmental Protection, Ichetucknee Trace Mining

Reclamation and State Park Design, Lake City, Florida

(3) RPIEE DESCRIPTION (Rid scope size cost etc.) AND SPECIEC ROLE M. Check if project performed with current firm.

Staff Engineer: Responsible for the civil design of the infrastructure of the recreational park which included the stormwater system, on-site septic system, and potable water system. The purpose of this project is to design and permit the Ichetucknee Recreational Facility, which includes a swim beach, fishing platforms, boat ramp, trails, restroom facilities, maintenance building, entrance roadway with gatehouse, and a dive platform with loading area. The facilities are located on land owned by FDEP. (Cost: \$687,490)

) TITLE AND LOCATION (City and State) (2) YEAR COMPLETED

Marjorie Harris Carr Cross Florida Withlacoochee Bay Trail, O'Steen Brothers, Inc., Inglis, Florida Professional: 2012 / Construction: 2012

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

Staff Engineer: Assisted with the engineering and design of the stormwater system and construction drawings. Prepared the permit applications, technical specifications, and bid specifications. The project involved engineering design, permitting, and construction services for the installation of the Marjorie Harris Carr Cross Florida Greenway Withlacoochee Bay Trail. The project area, approximately 25-acres, included 3.2 miles of a 12 foot wide paved trail. An adjustable drop structure with headwall and 70 linear feet of 24-inch reinforced concrete pipe with a TF-1 TideFlex at the outlet to prevent backflow, 60 linear feet of 14-inch x 23-inch elliptical concrete pipe with mitered end sections, and 20 linear feet of 18-inch reinforced concrete pipe with mitered end sections.

(Cost: \$122,485)

(1) TITLE AND LOCATION (City and State)

City of Lakeland Master Services Agreement for Lakes and Watershed

(2) YEAR COMPLETED

Professional: 2012 / Construction: 2012

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

Civil Engineer: Used AutoCAD 2009 to design construction plans for permitting/construction. Pulled together ERP permit application information which required the use of GIS. Assisted with creating a cost estimate for bid process. Environmental and engineering services under a master services agreement, providing support for lakes and watershed management for the Lakes and Stormwater Division of the county public works, involving various lake, stream and watershed areas. Services have included water quality statistical trends analysis, hydrologic and hydraulic modeling, nutrient load estimates, Best Management Practices (BMP) nutrient reduction estimates, prioritization of BMPs, conceptual designs, land acquisition cost estimates and construction cost estimates. (Cost: \$316,234)

South Lake Conine Watershed Restoration and Stormwater Treatment Services, Winter Park, Florida

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

CAD Designer: Assisted with the design of the land use areas within the aforementioned project. Also assisted with creating cross-sections of the proposed turn lane for the aforementioned project. Design and permitting services for development / restoration of watershed facilities on 34-acre, city-owned lakefront parcel. Lake impaired with nutrient TMDL. Design includes regional stormwater pond and treatment train, finishing with polishing wetland before discharge into lake; design intended to improve lake water quality via nutrient load reductions. Design effort included wetlands delineation / assessments, geotechnical investigations, boundary and topographic survey, watershed modeling, stormwater pollutant load modeling, stormwater treatment train design, and park design. Services also included bidding and construction services and post-construction water quality monitoring. (Cost: \$218,160)

All Aboard Florida Highspeed Rail Environmental Permitting and Civil Engineering Services, Florida East Coast Industries, Florida

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

Staff Engineer: Assisted in preparing federal permits for a high speed railway. All Aboard Florida (AAF), a subsidiary of Florida East Coast Industries, Inc. (FECI), is developing a privately owned, operated, and maintained passenger rail that will connect south Florida to Orlando. AMEC was selected to provide environmental permitting and civil engineering services. The project is composed of two distinct segments; a 200-mile north-south segment of the existing Florida East Coast Railroad right-of-way (ROW), from Cocoa to Miami, and a 40-mile east-west segment along State Road 528 that connects Orlando to the FECI mainline. (Cost: Confidential)

Professional: 2013 / Construction: 2013

Professional: Ongoing / Construction: N/A

F. Example Projects Which Best Illustr	Project No. 1		
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)	
Lake Seminole Sediment Removal, Pinellas County, Florida		Ongoing	
23. PROJECT OWNER'S INFORMATION			
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number	
Pinellas County, Florida	Kelli Hammer Levy, CPM	727.464.4425	

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

Lake Seminole is a highly eutrophic lake located in Pinellas County, Florida, that is currently listed by FDEP and the EPA as an impaired waterbody pursuant to Section 393(d) of the federal Clean Water Act. The pollutants are nutrients (primarily phosphorus forms) that are present in elevated forms in water column and sediments.

This shallow, 684-acre, fresh water lake has been negatively impacted by nuisance sediments that impair water quality, cause habitat degradation, and impede recreational uses. The Lake Seminole Watershed Management Plan (2001) and The Lake Seminole Reasonable Assurance Plan (2007) recognize that the organic sediments are linked to the lake's nutrient-related impairment. The lake's approximately 3,500-acre watershed is highly urbanized, with commercial and residential land uses comprising most of the land service.

Prior to the mid-1940s Lake Seminole was an estuarine waterbody. It was converted to a freshwater system by the construction of a roadway which acted as a dam. This construction altered the lake's salinity regime from brackish to fresh, and the construction of the dam and several additional hydrologic modifications in the watershed have substantially reduced its flushing rate and increased its hydraulic residence time. The lake has also received discharges of untreated or minimally treated stormwater runoff from a variety of urban land uses for decades.



AMEC was retained in 2010 to provide professional environmental and engineering services requisite to the development of the Lake Seminole Dredging Project to remove approximately 1 million cubic yards of sediments from the lake. AMEC is providing assistance with the engineering, analytical, design, permitting, and administrative support services associated with the removal, processing, and disposal of the nuisance, nutrient rich sediments from within the lake.

AMEC's task assignments associated with this project, and currently in progress, include:

- Bathymetric and sediment surveys
- Physical, nutrient, and chemical characterizations of the sediment including moisture content and wet sieve analysis, specific gravity test, and total organic content analysis
- Geophysical and geotechnical site investigations
- Dredging and process design including prioritization of sediment laden areas; evaluation of sediment characteristics, volumes and material balance; and dredge and pumping system design
- Disposal area and structural foundation design
- Storm and sediment water management design
- Project plans/Design report
- Permitting including agency communication and coordination; ERP permit applications; and permit RAI responses
- Public outreach
- Construction operations oversight and technical guidance

### Key Staff:

Walter Reigner, PE, CPESC
Scott Wuitschick, PE
Kevin Shelton, GTA
Timothy Kelly, PE, CPSWQ, CPESC
Leon Seale, PE
Michael Kelley, PE

Project Cost: \$850,000

### 25. Firms From Section C Involved With This Project

. Firm Name / 2. Firm Location / 3. Role

AMEC / Lakeland / Civil Engineering, Stormwater and Stormwater Utilities

F. Example Projects Which Best Illustrate the Proposed Team's Qualifications for this Contract		Project No. 2
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)
Tampa Waterway Management Projects, Tampa, Florida		Ongoing / Ongoing
23. PROJECT OWNER'S INFORMATION		
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number
City of Tampa	Ben Koplin, Environmental Specialist	813.274.8371

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

AMEC was retained to provide professional engineering services in support of the City of Tampa's waterway management projects. This special assessment program includes design of dredging projects at various locations throughout the City including but not limited to the Westshore area and Davis Islands. The projects are partially funded by the United State Environmental Protection Agency (EPA) thereby requiring a substantial environmental enhancement element. Individual projects will typically be performed in three phases: project delineation and survey, preliminary design and permitting, and plans preparation and construction support services.

### Tasks included:

- Document preparation for compliance with the National Environmental Policy Act (NEPA)
- Preparation of an Environmental Impact Document (EID) in accordance with EPA Section 40 CFR 31.36
- Survey of the existing conditions
- Development of proposed dredging plans
- Exploration of alternative dredging methods/scenarios
- Identification and permitting of spoil disposal
- Methods and mechanisms to improve water circulation
- Estimates of project costs
- Development of design criteria for City or agency approval
- Public meetings and workshops
- Coordination with permitting agencies
- Construction plan production
- Project permitting
- Construction staging



AMEC has delineated and inventoried areas that currently do not meet the desired level of service of at least 3 feet of clearance at Mean Low Water (MLW) level within 15 canals in the Westshore area in order to apportion costs and facilitate volumetric calculations. AMEC has identified disposal sites suitable for NEPA and SWFWMD co-funding.

### Key Staff:

Walter Reigner, PE, CPESC
David Butcher, PE, LEED AP
Scott Wuitschick, PE
Les Bromwell, ScD, PE
Carl Christmann, PE
John Kiefer, PhD, PE, PWS
Leon Seale, PE
Kevin Shelton, GTA
Aziza Baan, GISP

### Project Cost:

Mark Jones

Engineering: \$615,000

### 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Role

AMEC / Tampa, Lakeland, Florida / General Engineering Consultant

F. Example Projects Which Best Illustr	Project No. 3			
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)		
Lake Hollingsworth Restoration Pr	2001 / 2001			
23. PROJECT OWNER'S INFORMATIO				
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number		
City of Lakeland Richard Lilyquist, PE – Director of Public Works		863.834.6040		
24 RDIEF DESCRIPTION OF DROJECT AND DELEVANCE TO THIS CONTRACT (include scope size and cost)				

Lake Hollingsworth is a 350-acre urban lake located in the City of Lakeland, Florida. The lake is a popular recreational area for city and county residents but suffered from sediment accumulation and poor water quality.

In 1996, AMEC was retained by the City of Lakeland Public Works Department to develop plans and provide CEI services for the removal of organic sediments that covered approximately 75 percent of the lake bottom. Muck deposits ranged in thickness from one foot to more than twenty feet.

Elements of the project involved the permitting and removal of 3.6 million cubic yards of sediment. Materials handling, location of sufficient spoil areas, and dewatering were major challenges for the project team.

Several key elements of the project included the development and design of flocculation methods, disposal area specifications and dredging. Prior to the start up of full scale operations, a pilot project was conducted to test new dewatering methodologies.

Original disposal plans were redesigned and enlarged due to unusually heavy precipitation (El Niño) in 1997 and 1998. As a result, dredge spoil was pumped a distance of five miles via an 18-inch diameter Plexco pipeline that was installed through the Cleveland Heights Golf Course.

The dredge was constructed to meet the requirements and construction constraints of the project. It was equipped with GPS equipment that allowed accurate positioning within the lake. Final cost for sediment removal at Lake Hollingsworth was approximately \$4 per cubic yard. Major grants from the U.S. Environmental Protection Agency (EPA) and Southwest Florida Water Management District (SWFWMD) were obtained to assist in project funding.

The EPA awarded AMEC \$3 million in grants to test the state-of-the-art dewatering technique.



Walter Reigner, PE, CPESC John Kiefer, PhD, PE, PWS Timothy Kelly, PE, CPSWQ, CPESC Mark Jones

**Project Cost:** 

Engineering: \$600,000 Construction: \$10 million





# 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Role

AMEC / Lakeland, Florida / Lake Restoration

F. Example Projects Which Best Illusti	Project No. 4				
21. TITLE AND LOCATION (CITY AND	22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)				
Lake Rowell Aquatic Enhancemen	2009 / N/A				
23. PROJECT OWNER'S INFORMATIO					
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number			
Florida Fish and Wildlife Conservation Commission  Bruce Jaggers - Biological Scientist  352.357.2398					
24 RRIFF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope size and cost)					

AMEC provided engineering design support for the removal of approximately 1.5 million cubic yards of sediment to restore the aquatic habitat of Lake Rowell on behalf of the Florida Fish and Wildlife Conservation Commission (FWC). The lake's popular fishery and avifaunal habitats have been adversely affected by artificially accumulated fibrous organic sediments and muck. The sediments, derived largely from previous humaninduced nutrient sources, have created excessive internal nutrient cycling that supports nuisance algal blooms and dense rafts of nuisance exotic vegetation (*hydrilla*) that limit native vegetation growth. The sediment condition of the lake is now affecting Lake Sampson immediately downstream, causing detrimental grass formation.



# AMEC performed tasks included:

- Preliminary dredge designed to demonstrate a few alternatives most likely to meet the objectives of the project and meet permitting requirements
- Data collection and review to include reports, maps, aerial photographs, design plans, etc.
- Sediment assessment, characterization and testing to facilitate cost-effective restoration design
- Determination of sediment volume increase and the settling and dewatering characteristics of sediments
- Assisted FWC with selection of dredge material disposal site alternatives based on environmental impacts, groundwater, wetlands, proximity to public resources, safety, site access, pipeline routes to dredge site, ease of construction, costs and schedule
- Cost estimates for three alternatives
- Preliminary Basis of Design Booklet
- Preliminary project plans

Preliminary regulatory consultation was initiated as part of this project, and alternative containment site evaluations included outreach to a variety of landholders and initiating dialogue with property owners and stakeholders on the potential beneficial use of sediments specific to each property.

# Key Staff:

Walter Reigner, PE, CPESC Leon Seale, PE

Les Bromwell, ScD, PE John Kiefer PhD, PE, PWS

Timothy Howard Aziza Baan
Carl Christmann, PE Jie Gao, PE, CFM

# **Project Cost:**

\$150,000

### 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Role

AMEC / Lakeland, Florida / Engineering design support, dredge design & sediment characterization

F. Example Projects Which Best Illustr	Project No. 5			
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)		
Chassahowitzka River Springhead	2009 / N/A			
23. PROJECT OWNER'S INFORMATIO				
a. Project Owner b. Point of Contact Name		c. Point of Contact Telephone Number		
Citrus County Public Works	352.527.5202			
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size and cost)				

AMEC is providing a dredging feasibility assessment, design and permitting, construction, and dredging management services under our master engineering services contract for the removal of 3,000 cubic yards of sediments and woody debris from the Chassahowitzka headspring.

Chassahowitzka Spring is a first-magnitude springs complex that feeds the Chassahowitzka River, a designated Outstanding Florida Waterway, famous regionally as a passive recreational destination. The majority of the Chassahowitzka River system is publicly-owned. Approximately 3,000 cubic yards of sediment have accumulated in and around the headspring, significantly reducing flow volume and visibility. Removal of these sediments will improve water quality within the Chassahowitzka headspring and near downstream area. Dredging soft sediments will provide a suitable substrate for the establishment and regeneration of desirable submerged aquatic vegetation and improve aquatic habitat.



The dredging design plan must have few to no restrictions on public access, boat launching, and navigation, and must also limit impacts to manatee feeding and migration. Specific AMEC project tasks include:

- Detailed site assessment including sediment surveys and dredging plan involving sediment core sampling using piston-tube sampler, estimate of removal volume, and sediment characterization and contaminant assessments
- Design and permitting of sediment removal including utility location and identification of sediment disposal area options
- Design and permitting of Best Management Practices (BMPs) to be implemented within the canals upstream of the headspring
- Public education plan to reduce pollutants within the canals and headspring
- Dredging and construction technical specifications
- Engineering cost estimate
- Construction/dredging management

# **Key Staff:**

Walter Reigner, PE, CPESC R.Michael Jones, PLS, CFedS

Carl Christmann, PE Chris Lindstedt, PSM

Leon Seale, PE Charles Gardiner, PLS, CFedS

Pavan Kolukula, El William Tucker, PhD

Charlene Stroehlen, PE

# Project Cost:

\$49,000

# 25. Firms From Section C Involved With This Project

I. Firm Name / 2. Firm Location / 3. Role

AMEC / Lakeland, Florida / Dredging feasibility assessment, design & permitting, construction, & dredging management

F. Example Projects Which Best Illustr	Project No. 6				
21. TITLE AND LOCATION (CITY AND	22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)				
Lake Griffin Canal Dredging and E Florida	20	004 / 2008			
23. PROJECT OWNER'S INFORMATIO					
a. Project Owner	b. Point of Contact Name	c. Point of Contact Tel	ephone Number		
Lake County Water Authority Ron Hart – Water Resources Manager					
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size and cost)					

Lake Griffin is a 9,300-acre lake at the headwaters of the Ocklawaha River in Lake County, Florida. AMEC provided evaluation, design, and construction support services of a project to remove sediments from more than 30 canals ringing

the lake and to place those sediments in a confined section of a subsided muck farm in order to restore wetlands.

This project required AMEC's expertise in:

Water resource engineering (disposal site impoundment water budget)

- Hydraulic system design (floating pipeline with booster pumps)
- Water quality treatment (alum and polymer feeds for turbidity control)
- Geotechnical engineering (slope stability, embankment design, settling and consolidation of mixed media slurry)
- Construction support services (bid specifications and plans, contractor screening and selection, engineering inspections, progress payment review, permit compliance review, landowner coordination)
- Wetland science

Unique components of the project included:

- Long transport distances (5 to 12 miles) from the canals to the disposal site
- Highly variable composition of the dredged sediments (unconsolidated sands, flocculent muck, consolidated muck & cohesive clay)
- A requirement for precise sediment deposition at a subsided muck farm to cap
  pesticide contamination hotspots while simultaneously maintaining several feet of water
  over the disposal site



The project was completed by the low bidder without change orders under AMEC's inspection and coordination program.

# Key Staff:

Walter Reigner, PE, CPESC John Kiefer, PhD, PE, PWS Carl Christmann, PE Mark Jones

# **Project Cost:**

Engineering: \$400,000 Construction: \$7.2 million

# 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Rol

AMEC / Lakeland, Florida / Evaluation, design, & construction support services

F. Example Projects Which Best Illustrate the Proposed Team's Qualifications for this Contract					
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)			
Lake Maggiore Aquatic Enhancem	2005 / 2008				
23. PROJECT OWNER'S INFORMATIO					
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number			
City of St. Petersburg Mike Connors – Administrator of Public Works		727.893.7841			
24 RDIFF DESCRIPTION OF DRO IECT AND DELEVANCE TO THIS CONTRACT (include scope size and cost)					

AMEC conducted a feasibility study on Lake Maggiore for the City of St. Petersburg to determine the most effective method of removing organic sediments from the bottom of the 350-acre lake located in a highly urbanized area. The project's purpose was to improve highly impacted water quality, habitat, and navigation due.

There were a number of components that made this project unique. AMEC worked with the governor and his cabinet to successfully obtain project permits because of Pinellas County's environmental designation as "Aquatic Preserve". It was determined that approximately 2.3 million cubic yards of sand and highly organic sediment would need to be removed to achieve optimum restoration. Sediment removal methods studied were hydraulic dredging and lake drawdown/mechanical excavation.

The method selected for bidding was hydraulic dredging. Sediment reuse options that were studied included in-lake disposal areas, remote disposal, and production of beneficial/usable products. AMEC designed and permitted a specialized de-sanding and dewatering system. A dredge contractor was selected, and project implementation concluded in 2008.



Walter Reigner, PE, CPESC John Kiefer, PhD, PE, PWS Mark Jones

# Project Cost:

Engineering: \$500,000 Construction: \$15 million





# 25. Firms From Section C Involved With This Project

AMEC / Lakeland, Florida / Dredging feasibility study

F. Example Projects Which Best Illustr	Project No. 8			
21. TITLE AND LOCATION (CITY AND STATE)		22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)		
Taylor Creek Restoration Dredging	2009 / 2009			
23. PROJECT OWNER'S INFORMATION				
a. Project Owner b. Point of Contact Name		c. Point of Contact Telephone Number		
St. Lucie County Donald West, PE – County Engineer		772.462.1485		
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size and cost)				

AMEC investigated and evaluated alternative upland disposal sites for three phases (sediment removal and management feasibility, design and permitting, and bid specification and contractor selection) of sediment removal and restoration of Taylor Creek, a coastal stream flowing into the Indian River Lagoon (IRL). AMEC's scope of work included preparation of permit applications; coordination with local, state, and federal agencies; sediment sampling and characterization; calculation of volume requirements for disposal; engineering design and construction monitoring of upland disposal area; and monitoring and testing during dredging and material placement.

The ultimate goal of this project was to hydraulically remove and temporarily store approximately 200,000 cubic yards of accumulated sediments in one of two temporary upland dredged material management sites located on the St. Lucie Port property. After dewatering, the sediments were hauled to the county landfill for use as cover material. The removal of the sediment should reduce further discharge of fine-grained, organic bearing sediments to the IRL and reestablish both navigation and the sediment traps in Taylor Creek.

The project area consists of the westerly edge of the Intracoastal Waterway (ICW) right-of-way to the South Florida Water Management District (SFWMD) Canal No. C-25 spillway (S-50 structure) and the Fort Pierce Farms Water Control District Canal No. 1 (F-1 Spillway). The project is broken down into two reaches: Reach No. 1 is the area between the westerly edge of the ICW channel and the Florida East Coast Railroad (FECRR) Bridge, and Reach No. 2 is the area between the FECRR and the Spillway (S-50 structure) at the C-25 Canal and the submerged weir at the F-1

Approximately 120,000 cubic yards of sediment was removed from Reach No. 1. This includes 90,000 cubic yards of sediments from the previously designed navigation channel (100 to 140 feet wide: -12.5 feet MSL) and an additional 30,000 cubic yards north and south of the navigation channel to the shoreline. Reach No. 2 entailed removal of approximately 80,000 cubic yards of sediment to reestablish the design channel depth to approximately -12.5 feet MSL and 140 feet wide. Reach No. 2 also underwent a shoreline restoration that included shoreline stabilization, improvement, and protection.

Specific objectives of the project included:

(North) Canal on the west.

- Building project consensus through public involvement
- Investigating and recommending innovative sediment dewatering strategies (technologies) and temporary dredged material management site(s)
- Developing a material management strategy, which included material processing, handling and beneficial utilization
- Confirming sediment bathymetry and volumes for removal
- Designing a dredged material management facility, including construction drawings and specifications
- Reevaluating the total project cost
- Preparing and submitting an Environmental Resource Permit (ERP)
- Developing bid specifications and assisting with contractor selection
- Construction monitoring and materials testing (QA/QC) during construction and dredging

### Key Staff:

Les Bromwell, ScD, PE Mike Kelley, PE Walter Reigner, PE, CPESC James Bailey

**Project Cost:** 

\$380,000



### 5. Firms From Section C Involved With This Project

AMEC / Lakeland, Florida / Dredging/Design, Geotechnical Engineering, Testing, Sediment Removal, Permitting, Construction Monitoring

Qualifications of Firm

and Project Team

F. Example Projects Which Best Illustrate the Proposed Team's Qualifications for this Contract Project No. 9					
21. TITLE AND LOCATION (CITY AND )	22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)				
FIND MSA 0-7 DMMA, Martin Coun	2011 / N/A				
23. PROJECT OWNER'S INFORMATION					
a. Project Owner b. Point of Contact Name		c. Point of Contact Telephone Number			
Taylor Engineering, Inc.  Lori Brownell, PE, Director of Waterfront Engineering  904.256.1367					
24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size and cost)					

AMEC was contracted by Taylor Engineering, Inc., through their client, the Florida Inland Navigation District (FIND), to provide geotechnical engineering services for a proposed 39-acre dredged material management area (DMMA) and associated infrastructure. The project site is located on the north side of the Okeechobee Waterway (OWW), near the St. Lucie Lock and Dam, about 5,500 feet south-southwest of the intersection of Florida's Turnpike and I-95 in Martin County, Florida.

The proposed DMMA will have a storage capacity of 569,300 cubic yards. The DMMA will have a dike crest elevation that is about 14.5 feet above the existing grade. The DMMA will have a dike crest width of 15 feet, 3:1 (H:V) dike side slopes, and a basin bottom elevation that is 20 feet below the dike crest. A pile-supported overflow weir structure will be located near the southeastern corner of the proposed DMMA. This DMMA will receive, dewater, and temporarily store material removed from Reach IV of the Okeechobee Waterway (OWW) during maintenance dredging operations. In addition, a 9,650-foot long, unpaved access roadway and two small bridges will be constructed to provide access to the DMMA.

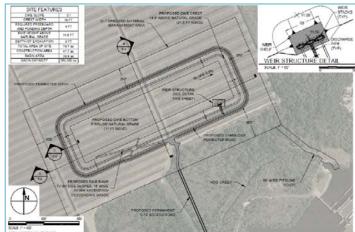
AMEC performed a geotechnical exploration for this project that consisted of 24 SPT borings to depths of 30 to 60 feet each along the proposed perimeter dike alignment, and 16 auger borings to a depth of 10 feet each in the interior of the proposed DMMA. For the proposed roadway and bridges, AMEC performed 24 auger borings to a depth of 6 feet each, and two SPT borings to a depth of 50 feet each for each of the two proposed bridges.

Laboratory testing consisted of moisture content, fines content, organic content, Atterberg limits, carbonate content, consolidation, Proctor compaction, hydraulic conductivity, triaxial compression, and Limerock Bearing Ratio (LBR). Engineering services consisted of multiple seepage and stability analyses for the proposed dikes, pile capacity analyses for the proposed weir structure and bridges, and subgrade evaluations for the proposed roadway.

# Key Staff:

Kirk McIntosh, PE Mike Woodward, PE Zhihong Hu, PhD, PE Brian Hathaway, PE Scott Gutowski, El David Johns Jr.

Project Cost: \$66,000



# 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Role

AMEC / West Palm Beach, Florida / Geotechnical engineering/dredged material management

F. Example Projects Which Best Illustrate the Proposed Team's Qualifications for this Contract Project				
21. TITLE AND LOCATION (CITY AND	22. YEAR COMPLETED (PROFESSIONAL / CONSTRUCTION)			
Loxahatchee L-8 Reservoir Dredgi	2007 / 2007			
23. PROJECT OWNER'S INFORMATIO				
a. Project Owner	b. Point of Contact Name	c. Point of Contact Telephone Number		
South Florida Water Management District	Lin Riley, Jr. – Vice President	865.599.3859		
PBA Holdings, Inc.	FAND DELEVANOS TO THE CONTRACT (			

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

The South Florida Water Management District's (SFWMD) Loxahatchee Reservoir is a critical component of the Comprehensive Everglades Restoration Plan (CERP) and is the first public/private project completed under this plan. This 1,000-acre water storage area was created in a former limestone quarry. AMEC was retained by PBA Holdings, Inc. to provide comprehensive design and construction support and to serve as the engineer of record.

PBA converted mined rock pits into water storage reservoirs by implementing a dredging program to deepen the excavations to an elevation of –42 feet NAVD. The process required analysis of the materials to be dredged, design of disposal areas for the material and optimization of the process to minimize the amount of fine-grained sediments in the hydraulic fill.

Approximately 35 million cubic yards of material were dredged to create the reservoir. AMEC analyzed underwater slopes to minimize long-term erosion during hurricane events and filled disposal areas in a manner to allow for the construction of a power plant and residential development adjacent to the reservoir.



Les Bromwell, ScD, PE Carl Christmann, PE Roberto Fernandez, PE Jeff Beriswill, PE

**Project Cost:** 

Engineering: \$4.5 million Construction: \$100 million



# 25. Firms From Section C Involved With This Project

1. Firm Name / 2. Firm Location / 3. Role

AMEC / Lakeland, Florida / Comprehensive design and construction support

26. Names of Key Personnel (From Section E, Block 12)  27. Role in this Contract (From Section E, Block 13)		28. Example Projects Listed in Section F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Scott Wuitschick, PE	Project Manager/Permitting and Public Education	-	•								
Walter Reigner, PE, CPESC	Principal-in-Charge										
Gary Nemeth	Project Coordinator										
Michael Phelps, PE	QA/QC										
Michael Kelley, PE	Geotechnical Evaluation										
Les Bromwell, ScD, PE	Geotechnical Evaluation										
Glen Andersen, ScD, PE	Geotechnical Evaluation										
Roberto Fernandez, PE	Geotechnical Evaluation										
Lance Lumbard, CLP	Permitting and Public Education										
Kevin Shelton	Permitting and Public Education										
Jeremy Paris, PWS	Permitting and Public Education										
Wendy Blondin, PG	Permitting and Public Education										
Jennifer Sagan	Permitting and Public Education										
Mark Jones	CAD Support Services										
Aziza Baan, GISP	GIS Support Services										
R. Michael Jones, PLS, CFedS	Survey, Sampling & Characterization										
Charles Gardiner, PLS, CFedS	Survey, Sampling & Characterization										
Christopher Lindstedt, PSM	Survey, Sampling & Characterization										
Mary Szafraniec, PhD, PWS	Survey, Sampling & Characterization										
Katherine Deliz Quinones, PhD	Survey, Sampling & Characterization										
William Tucker, PhD	Survey, Sampling & Characterization										
Brian Hathaway, PE	Survey, Sampling & Characterization										
Kyle Compton	Survey, Sampling & Characterization										
Leon Seale III, PE	Dredge Design										
Charlene Stroehlen, PE	Dredge Design										
Gregory Corning, EIT	3 3										

No.	Title Of Example Project (From Section F)	No.	Title Of Example Project (From Section F)
1	Lake Seminole Sediment Removal	6	Lake Griffin Canal Dredging and Eustis Muck Farm Wetland Restoration
2	Tampa Waterway Management Projects	7	Lake Maggiore Aquatic Enhancement
3	Lake Hollingsworth Restoration Project	8	Taylor Creek Restoration Dredging
4	Lake Rowell Aquatic Enhancement	9	FIND MSA 0-7 Dredged Material Management Area (DMMA)
5	Chassahowitzka River Springhead Restoration	10	Loxahatchee L-8 Reservoir Dredging

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# Project Manager's Experience

# H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY, ATTACH ADDITIONAL SHEETS AS NEEDED.

# **Project Manager's Experience**

Mr. Scott Wuitschick, PE will serve as AMEC's project manager for this project. Mr. Wuitschick has served in a similar role on multiple completed and ongoing dredging projects during his eight year tenure with AMEC including the following:

- City of Tampa Tampa Waterways
- Pinellas County Lake Seminole Sediment Removal
- Lake County Water Authority Lake Beauclair
- City of Winter Haven Lake May
- St. Johns River Water Management District Lake Apopka Dredging
- St. Johns River Water Management District Eau Gallie River Dredging

Mr. Wuitschick's involvement in these projects has included everything from direction of technical work efforts to permitting to coordination with private landowners and stakeholders. In addition to the dredging projects listed above, Scott has managed many large scale and high profile permitting projects across the state of Florida involving dredging, mining, and ecological restoration efforts.

Scott routinely manages large multi-disciplinary projects and is familiar with all of the technical aspects of the

proposed project including surveying, geotechnical evaluations, soil and water sampling and testing, materials management, permitting, dredging and pumping systems, dewatering practices, sediment disposal evaluation and design, and development of plans and specifications.

Mr. Wuitschick will be assisted in project management by Mr. Gary Nemeth. Mr. Nemeth has extensive past experience with this project and with the City of Ft. Lauderdale. Gary's primary role will be in project coordination and outreach. Gary's past experience with the project and knowledge of regional stakeholders and conditions will help to ensure that the project is well conceived and that all institutional knowledge of the project is incorporated in AMEC's evaluation and design work.

Mr. Nemeth and Mr. Wuitschick will work together to ensure that the technical strengths of AMEC's team are applied in the most efficient manner possible to achieve the goals of the project. All technical work will be directed and managed through a group of experienced task leaders who are experts in their individual fields as indicated in the team organizational chart. Additional details regarding the project management team are provided in the individual resumes included in this submittal.



AMEC has provided full-service design and consulting solutions to public and private clients throughout Florida for more than 30 years. AMEC's team includes more than 500 highly qualified and experienced professionals in Florida and our local teams have full access to AMEC's broader resource base, which includes approximately 29,000 professionals located across the United States and the globe. Most importantly, AMEC's nearly three decades of Florida lake restoration and dredging projects are unmatched in the industry.

Florida lake restoration and dredging is a flagship service for AMEC's Florida business. Our in-house resources have extensive and recent experience in all aspects of lake dredging and restoration including:

- Lake diagnostics and water quality assessments
- Bathymetric and terrestrial surveying
- Design and implementation of sediment sampling and analytical programs
- Dredging design and alternatives evaluations
- Sediment dewatering design and alternatives evaluations

- Sediment disposal and beneficial reuse design and alternatives evaluations
- Aquatic habitat assessment and restoration services
- Permitting and compliance
- Public and stakeholder communications and coordination
- Project funding assistance

AMEC's expertise has been developed over the course of three decades of successful and continuous Florida project history for a variety of clients including municipalities and counties, Florida Fish and Wildlife Conservation Commission (FWC), Lake County Water Authority (LCWA), private industry, Florida Inland Navigation District (FIND), St. Johns River Water Management District (SJRWMD) and sister Water Management Districts. AMEC's recent experience includes construction design, permitting, and management services for the award-winning Lake Beauclair project, which included utilization of cells F and G for dredged spoil management and disposal.



# H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Working with the AMEC team is Dredging & Marine Consultants (DMC), a State of Florida MBE firm. DMC will perform sediment sampling and permitting coordination for the City of Fort Lauderdale. specializes in sediment removal (dredging) feasibility studies, identifying state and federal funding sources, public education, permitting, engineering, design, technical bid preparation, construction observation, permit-compliance inspection, monitorina management of sediment, including identification of beneficial reuse options. In addition, DMC provides similar services related to the design and assessment of waterfront facilities such as marinas, docks, boat ramps, fishing piers, seawalls, retaining walls, rock revetments and shoreline erosion stabilization.

"Sustainability is a set of environmental, economic and social conditions in which all of society has the capacity and opportunity to maintain and improve its quality of life indefinitely without degrading the quantity, quality or the availability of natural resources and ecosystems."

American Society of Civil Engineers (ASCE)
Sustainable Development Committee

AMEC is committed to implementing sustainable practices, respectful of the balance between environmental, social and economic risks (triple bottom line). Our aim is to create a successful, sustainable company for the long-term. To achieve this, we need to balance economic, social and environmental issues in our decision-making processes, ensuring sustainable working is integrated into the very core of our business.

We believe that by living our values, we ensure excellent project delivery for our customers and as such achieve sustainable growth. We contribute to our clients' sustainability through direct services, which support the economic, environmental and the social performance of their operations.

AMEC is pleased that we have again been ranked the industry leader for sustainability in the oil equipment and services sector of the worldwide Dow Jones Sustainability Indices (DJSI).



This is the fifth time that AMEC has been made industry leader and the 11th time without a break that it has been featured in the DJSI, which is now in its 15th year. DJSI annually surveys and benchmarks thousands of the world's largest companies.

The assessment for 2014 was based on corporate economic, environmental and social performance, taking into account issues such as:

- Corporate governance
- Customer relationship management
- Risk & crisis management
- Operational eco-efficiency
- Corporate citizenship
- Human capital development
- Talent attraction and retention
- Occupational health and safety
- Supply chain standards and
- Labor practices and human rights

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# Approach to Scope of Work

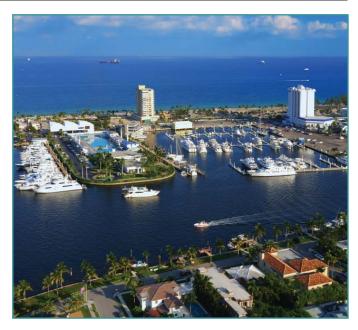
# **Approach - Background and Understanding**

The Florida Inland Navigation District (FIND) plans to deepen the Atlantic Intracoastal Water way (ICWW) extending north from the 17th Street Causeway to a location approximately 1 mile north of the Las Olas Boulevard bridge. Following FIND's deepening project, the City plans to deepen the ICWW extending generally eastward from the limits of FIND's project to the City's marina facilities at the Las Olas Marina and the Bahia Mar Yachting Center. The project is for the specific purpose of maintaining consistency with the deepened federal channel. The dredge area includes both the Florida Department of Environmental Protection (FDEP) submerged lease area limits and outside the boundaries of the channel located between the eastern right of way and the submerged land lease line. The project also includes deepening the Las Olas Marina basin and a limited area north of, and adjacent to, the basin.

The City's project, referred to as the Las Olas Marina Dredging Project, includes the major elements of permitting, compensatory mitigation design, dredge design development, preparation of dredging contractor bid package, field studies, surveys and laboratory analyses required to support these major project elements. Dredging permits/licenses must be obtained by the City in order to perform the proposed dredging activities and include:

- US Army Corps of Engineers (USACE) Section 10
  Department of the Army- Dredge and Fill Permit;
  as part of the USACE permit process, the National
  Marine Fisheries Service (NMFS) and the US Fish &
  Wildlife Service will be required to perform a formal
  consultation review of the permit application,
- FDEP Environmental Resource Permit, and
- Broward County Environmental Protection and Growth Management Department (BCEPGMD) – Environmental Resource License.

A pre-application meeting was held on April 11, 2011 between the City, the Corps of Engineers, FDEP and Broward County to discuss licensing requirements and approval requirements of each regulatory agency. In August 2011, a bathymetric survey, benthic resource and seagrass survey and a preliminary Essential Fish Habitat (EFH) and preliminary Biological Assessment were completed. The City submitted the required environmental permit applications to the USACE, FDEP and the BCEPGMD on January 31, 2013 and a post



submittal roundtable meeting was conducted with all agencies on April 3, 2013.

Six (6) limited benthic resource surveys were conducted within the City's proposed dredge limits between 2008 and 2013. These surveys are summarized in the September 2013 Conceptual Mitigation Plan. This plan was completed in response to agency comments documented at the April 2013 post submittal roundtable meeting.

We understand that the City's Conceptual Mitigation Plan (CMP) was reviewed by the FIND, Broward County, and FDEP and that comments to that plan have been provided. We further understand that this mitigation plan considered a larger dredge area than currently considered, one that included dredging adjacent to the Fort Lauderdale Aquatic Complex. The CMP utilized the northwestern portion of the FIND's Deerfield Island as the location for compensatory seagrass mitigation.

Dredge areas identified on pre-dredge surveys contained in the City's CMP were based on dredge limits identified by the City at the onset of the project and used in the initial waterway assistance grant request. Buffer areas referenced in the CMP separate the dredge limits from undisturbed bottom and were requested by regulatory agencies during the April, 2011 pre-application meeting. The dredge footprint further included an area north of, and adjacent to, the Las Olas Marina basin and an area immediately west of the Fort Lauderdale Aquatic

# H. ADDITIONAL INFORMATION

# 30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY, ATTACH ADDITIONAL SHEETS AS NEEDED.

Complex, which has subsequently been removed. The current dredge footprint includes property, easements, right-of-ways and submerged land leases, utility easements and current improvements.

A dredging plan will be developed as part of this project. It is assumed that dredge material disposal will utilize the FIND's dredge material disposal site located at Port Everglades.

The City has participated in the FIND's Waterways Assistance Program. The City Commission has authorized by resolution the appropriation toward the matching fund requirement of the grant.

# City Needs, Goals and Objectives

The City's needs, goals and objectives related to the Las Olas Marina Dredging project include:

- Complete project design development at a 30% (preliminary), 60% (intermediate) and 90% (final) design level for both the dredging and compensatory mitigation (including basis of design, cost estimates and City reviews) in a period not to exceed 2 years.
- Dredge design development will include requisite monitoring plans and environmental controls, and consider least cost and/or best value alternatives and approaches where appropriate,
- Complete all required permitting, agency reviews, responses, project modifications, meetings, public presentations and approvals required to construct and operate the project in compliance with all environmental and construction regulations, rules, codes and/or approvals in a period not to exceed two years,
- Develop project bid solicitation packages for construction activities and assist City with bid development, requirements, contractor identification, solicitation, evaluation, recommendation for contractor selection in a period not to exceed one year following completion of design and permitting,
- Administer/manage all work activities under this contact compliant with City contract requirements and industry standard project management practices,
- Conduct field surveys, develop design plans and specifications, construction and contract documents and management activities to comply with the FIND's Waterway Assistance Program requirements, applicable local, state and Federal Ordinance, Rules, Codes, Licenses and Regulations, applicable health



and safety standards and to limit and/or avoid potential for construction claims, and

Optimize the project to avoid and minimize natural resource impacts, MOT and allow for concurrent ICWW use.

# **Work Approach**

Based on our understanding of the City's needs, goals and objectives and our experience with similar dredging and permitting projects, AMEC developed a preliminary schedule of activities for the Las Olas Marina Dredging. The preliminary project schedule describes a work approach that incorporates all associated design, scheduling and coordination efforts necessary to allow the City's project to be synchronized with the FIND's dredging project for deepening the Intracoasatal Waterway main corridor adjacent to the City's project location. This schedule assumes that the duration of the FIND's ICWW deepening project is 18 to 24 months.

AMEC's preliminary project schedule is based upon completion of tasks and activities common to the required field data collection, design development or permitting necessary to support either project dredging or permitting. The schedule illustrates the importance of timely collection of field data, initiated at the onset of the project immediately following compilation and review of project documentation provided by the City. Field data collection and field survey activities provide critical, site-specific information necessary to support permit and design development.

# H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY, ATTACH ADDITIONAL SHEETS AS NEEDED.

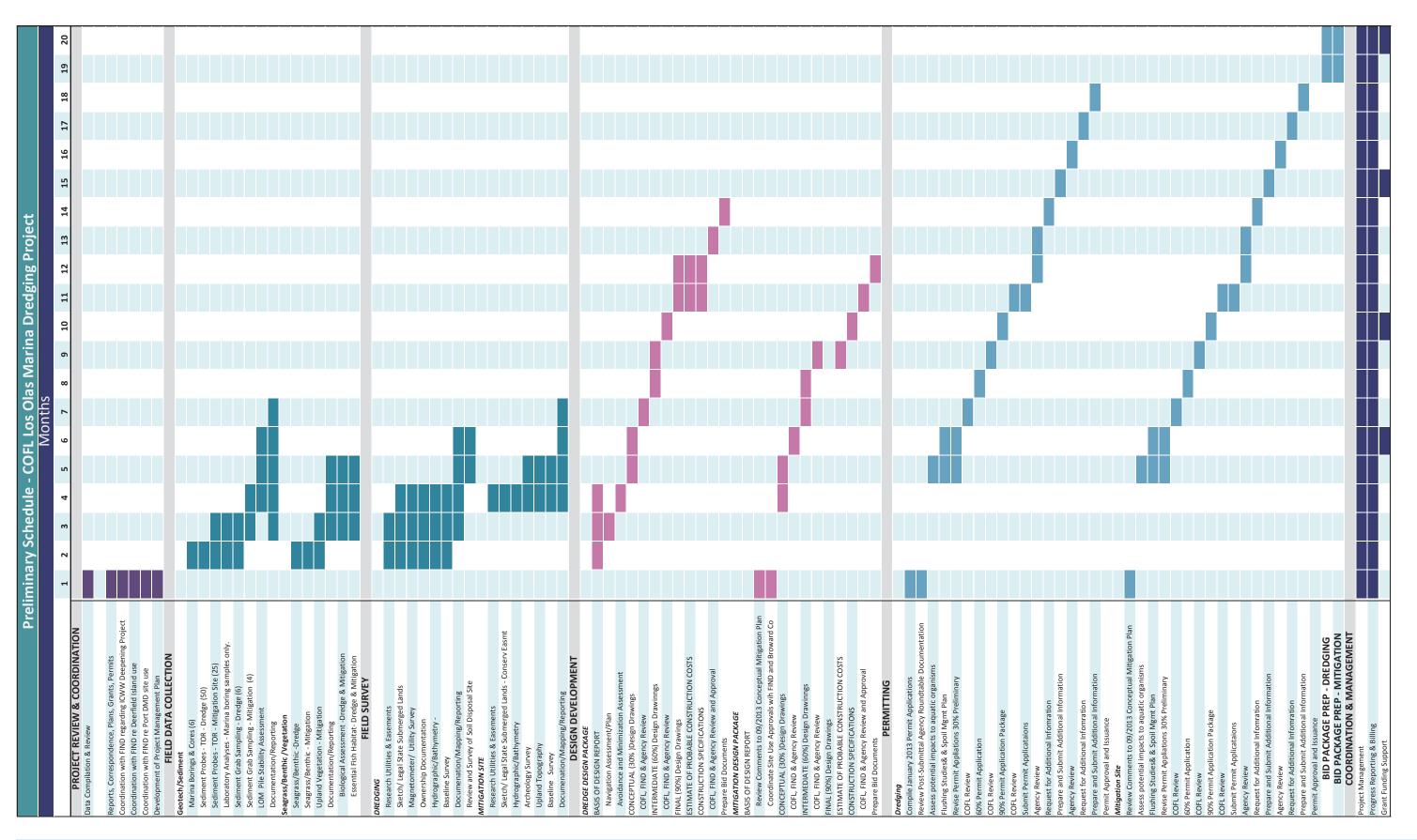
Our preliminary project schedule indicates a project duration of 18 months. The schedule provides a contingent time frame of approximately six months to accommodate unforeseen schedule delays, changes or modifications associated with design development and permitting following near-concurrent tracks. The preliminary schedule includes two rounds of Request for Additional Information with a 30-day response period and a similar 30-day period for agency review and response. The preliminary schedule assumes a notice to proceed in February 2015. Our benthic and bathymetric site work is subsequently initiated in project month 3, coinciding with the early start of the seagrass growing season. Any delays in issuance of notice to proceed will affect the start of this time-sensitive field activity, which drives mitigation design and permitting activities.

Our project schedule on the following page incorporates all scope elements identified in the City's solicitation 946-11484 described for Phases 1 and 2.





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# Vision, Ideas and Methodology

AMEC's approach to complete the work is based upon our experience with dredging and permitting in both marine and freshwater environments. Our work approach includes collaboration with the FIND regarding site conditions, dredging techniques and equipment, regulatory activities and work approaches utilized on their recently completed Dania Cut-Off Canal project for suitable application to the City's project.

AMEC's experience has shown that early and frequent coordination with the permit reviewers ensures a timely permitting process and minimizes Requests for Additional Information (RAI). By working with the reviewers throughout the application review process, we are often able to quickly respond to questions and concerns before project delaying RAI's are issued.

Our approach also includes application of our firm-wide Quality Assurance/Quality Control practices throughout the design development process for both the dredging and mitigation, regulatory communications, presentations, correspondence and applied to all field data collection, laboratory, reporting and construction activities. All subcontractors will perform their work in full compliance with our Quality Assurance/Quality Control Plan unless their own Quality Control plans are more stringent and variance from our corporate QA/QC plan approved. Additionally, all work will be completed in compliance with our corporate Health and Safety and project management plans.

# **Scheduling Methodology**

This is a schedule driven project. Waterways Assistance Grants include detailed project timelines for the accomplishment of key project components including completion dates for permitting, design, bidding, applicant approvals, initiation of construction, and completion of construction. Progress reporting requires monitoring adherence to the project baseline schedule.

AMEC will utilize industry-standard scheduling software (Primavera P3, Timberline or Microsoft Project) to manage this project. Following approval by the City, the selected scheduling program will be used to develop a baseline project schedule, identify critical path, dates for project milestones, deliverables, critical activities and approvals, City and regulatory reviews, and task and project completion dates. Our schedules are typically developed at the individual task level and presented in GANTT format. The schedule is often used to communicate work flow, activity and task relationship,



identify critical tasks, apply and evaluate resources, develop project cash flow, record and report project progress, identify resource constraints, and support development of acceptable work-arounds. The project baseline schedule will form the basis for resource allocation, project costs, and evaluating project progress.

Updated project schedules will be utilized to communicate project objectives associated with scope, time and budget and facilitate coordination with the FIND, USACE, National Marine Fisheries Service (NMFS) FDEP, BCEPGMD, governing board, City Commission, Marina and Beach Advisory Board and other agencies, offices, authorities and stakeholders necessary to complete the project.

# **GIS Software**

For more than 10 years, AMEC has been utilizing GIS and other information management tools to assist both public and private sector clients worldwide. AMEC has indepth knowledge and experience in GIS projects requiring database creation, maintenance, and service support.

The firm also is an Environmental Systems Research Institute, Inc. (ESRI) business partner and Arc-platform software reseller. Our broad variety of services includes needs assessment analysis, system implementation/integration, application development, database development, data quality analyses, mapping and spatial analyses, and project/facilities management. We have also used GPS surveying for data collection on several projects.

# H. ADDITIONAL INFORMATION

# 30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

Additionally, AMEC provides GIS training, with staff members experienced in teaching GIS internally, on client sites, and at the university level. We possess and are experienced in using ESRI's ArcGIS suite (ArcView and ArcInfo) and ArcIMicrosoft; ERDAS Imagine; Autodesk's Civil 3D; databases including Access, Oracle, and SQL Server; and programming languages including Visual Basic, Avenue, AML, and multiple web scripting languages.

# **CAD Software**

All design drawings are developed using AutoCAD version 2011 or later or other similar CAD software that is directly convertible to AutoCAD. AMEC has global agreements in place with major CAD providers such as Autodesk (AutoCAD) and Bentley (MicroStation) giving AMEC personnel extensive concurrent licenses to all products. AMEC is currently expanding these agreements with the goal of giving personnel access to unlimited quantities of software products. AMEC minimum computer configuration is a 3.1 1GHz Core i3-2100 Dell OptiPlex 390 with 8 GB RAM. Current AMEC minimum server configuration is s a Windows server 2008 R2 Standard 64 bit, 4G RAM, Xeon CPU X3430 @2.4GHz. AMEC maintains the latest versions of the following software for use on our design projects:

- Autodesk Civil 3D
- ■3D Studio
- BIM Software Autodesk Revit 2013 (Architecture, MEP and Structural)
- MicroStation
- GEOPAK
- InRoads
- HydroCAD
- Transoft AutoTURN
- Transoft GuidSign
- SignCAD



- Axiom Suite
- ProjectWise

# **Equipment, Facilities and Materials Availability**

AMEC presently has the ability, the personnel and equipment necessary to perform the services outlined in the solicitation. This includes both field and office equipment that will be available for this project. Some of the equipment owned by AMEC is listed below:

- Geophysical Survey Equipment
- Surveying Equipment
- Sampling Equipment
- Aquifer Testing Equipment
- Health/Safety Equipment
- Geotechnical Construction Inspection Equipment
- Environmental/Geotechnical/ Drilling/Water Testing Equipment
- GPS Equipment
- Vehicles
- Total Stations/ Theodolites
- Automatic Levels
- Data Collectors
- Boats
- Subsurface Utility Engineering Equipment
- Samplers
- Measurement
- Soil Vapor Analyzers
- Meters
- Pumps
- Software
- Computer Hardware and Other Equipment
- Digital Cameras and Printers



# Surveying and Hydrographic survey equipment includes:

AMEC Environment & Infrastructure, Inc. Survey Equipment List						
Applanix POS IMU system	HP 48 w/TDS (1)	Nikon model DTM 551 (1") electronic total stations (7)				
2- Meter fixed height tripods (12)	JENA DIA 1" theodolite	Odom Hydrotrac single frequency echo sounders (2)				
Digibar Pro velocimeter	K&E 1' transits (2)	Odom Echotrac MKIII dual frequency echo sounder				
Hammerhead Laptops (2)	Kern GKOA	R2Sonic multi-beam echo sounder				
HP 100(2)	Nikon AP-7 (2)	Ross 825b fathometer				
Sokkia model SET 500 (2') electronic total stations (3)	Trimble 5700 dual frequency receivers w/ Trimble Zephyr L1/L2 antennae (3)	Wild T3 O.5" theodolite				
Spectra Physics laser level	Trimble 5800 dual frequency receivers with NGS calibrated antennas (2)	Wild T16 6" theodolite				
Topcon AT-F2 (5)	Trimble Pro XR resource grade DGPS receivers w/ controllers (3)	Zeiss/ Trimble model Ni 12- 1st order Digital level				
Transducers of various frequencies and beam widths (4)	Trimble R8 dual frequency receivers with onboard antennae (2)	Zeiss/ Trimble model Ni 21- 2nd order Digital level				
Trimble 4000ssi dual frequency receivers w/ Trimble Microcenter L1/L2 antennae (2)	Trimble TSC2 system controllers/ data collectors (10)					
Trimble 4700 dual frequency receivers w/ Trimble Zephyr L1/L2 antennae (3)	Wild N3 1st order level					







# H. ADDITIONAL INFORMATION

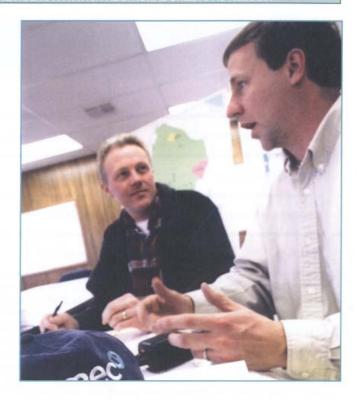
30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY, ATTACH ADDITIONAL SHEETS AS NEEDED

# Workload and Availability

The AMEC Team's ability to meet project needs and perform the required work is founded in our long and comprehensive history of successfully completing similar projects. Through this history, our team has developed and maintained a staff of experienced and qualified professionals who understand water quality, sediment quality, watershed characteristics, lake management and planning, and lake restoration projects and objectives.

AMEC understands that the overall quality project performance is directly related to availability of staffing, future project commitments, and office utilization. A key factor to providing the quality product relies on meeting schedules and providing services that are continuously available on short notice. All AMEC team members will be committed to this project and are available for the life of this contract. AMEC is dedicated to providing exemplary services to its clients and will spare no efforts in exceeding the expectations of the City of Fort Lauderdale.

We are confident that this project will be an excellent fit for the AMEC team in terms of experience and proficiency as well as the availability of the personnel who are proposed. The professionals who would be utilized for this project are committed to client service and accustomed to providing the individual time and effort necessary to successfully achieve the objectives of our clients. We are looking forward to partnering with you for this project and are ready to start work immediately. The AMEC team is fully confident that we will complete the scope of services successfully and to your full satisfaction.



I. AUTHORIZED REPRESENTATIVE	The foregoing is a statement of facts.
31/SIGNATURE	32. DATE September 29, 2014
33. NAME AND TITLE	
Walter Reigner, PE, Ci	PESC, Principal-In-Charge/Vice President

#### 1. SOLICITATION NUMBER (if any) ARCHITECT-ENGINEER QUALIFICATIONS Part II - General Qualifications (If a firm has branch offices, complete for each specific branch office seeking work. 2a. FIRM (OR BRANCH OFFICE) NAME 3. YEAR ESTABLISHED 4. DUNS NUMBER AMEC Environment & Infrastructure, Inc. 1994 03-808-6125 5. OWNERSHIP 2000 E. Edgewood Dr., Suite 215 a. TYPE 2d. STATE 2e. ZIP CODE Corporation lfL 33803 b. SMALL BUSINESS STATUS Lakeland 6a. POINT OF CONTACT NAME AND TITLE not applicable Mike Phelps, PE, Lakeland Office Manager 7. NAME OF FIRM (if block 2a is a branch office) 6b. TELEPHONE NUMBER 6c. E-MAIL ADDRESS AMEC Environment & Infrastructure, Inc. (863) 667-2345 mike.phelps@amec.com 8c. DUNS NUMBER 8a. FORMER FIRM NAME(S) (if any) 8b. YR. ESTABLISHED AMEC Earth & Environmental, Inc. (2000 - 2011) 038086125 1994 803037522 AGRA Earth & Environmental, Inc. (1994 – 2000) Merger History: AMEC E&I Holdings, Inc. (f/k/a MACTEC, Inc.); AMEC E&I, Inc. (f/k/a MACTEC Engineering and Consulting, Inc.); AMEC Geomatrix, Inc. (f/k/a Geomatrix Consultants, Inc.); AMEC-BCI Engineers & Scientists, Inc. (f/k/a BCI Engineers & Scientists, Inc.; Hydrosphere Resource Consultants, Inc.; AMEC Infrastructure, Inc. (f/k/a AGRA Infrastructure, Inc.) 10. PROFILE OF FIRM'S EXPERIENCE AND 9. EMPLOYEES BY DISCIPLINE ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS c. No. of Employees c. Revenue a. Function a. Profile Index Number b. Discipline b. Experience (1) FIRM Code (see below) Code (2) BRANCH Branch (Firm) C14 Conservation and Resource Management 05 Archeologists 75 5 (9) --Biologists C15 Construction Management 07 133 3 (10) D01/D02 Dams; Dikes; Levees 08/29 CADD Technicians/GIS Specialists 250 4 6 (9) Design-Build 12 Civil Engineers 309 4 2 (10) 15/16 Construction Inspectors/Managers 195 3 E01 Ecological & Archeological Investigations 3 (9) Energy Conservation; New Energy Sources 19 **Ecologists** 19 E07 1 (9) 23 Environmental Engineers 271 E09 EIS, Assessments or Statements 3 (10) 24 **Environmental Scientists** 386 E11 Environmental Planning (9) 27/55 Foundation/Geotechnical/Soils Engineers 403 8 E12 Environmental Remediation 2 (10) 390 G04 GIS Services 3 (10) 30 Geologists 1 34 Hydrologists/Hydrogeologists 109 H03 Hazardous, Toxic, Radioactive Waste Remediation 3 (10) 36 Industrial Hygienist 63 H07 Highways; Streets; Airfield Paving; Parking Lots 4 (10) P05/P07 Planning 48 Project Managers 145 4 (8) 51 Safety/Occupational Health Engineers 30 R03 Railroad, Rapid Transit 4 (10) Recreation Facilities (Parks, Marianas, Etc.) 57 Structural Engineers 57 2 R04 4 (9) 58 1078 R11 Rivers; Canals; Waterways; Flood Control 6 (10) Technicians 7 S05 Soils & Geologic Studies; Foundations 60 Transportation Engineers 64 6 (10) Surveying, Platting; Mapping; Flood Plain Studies 62 Water Resources Engineers 187 S10 3 (8) Project Services 797 18 T02 Testing & Inspection Services 3 (10) Other Professional Staff 552 U01 Unexploded Ordnance Remediation (10)Water Resources; Hydrology; Ground Water Total 5513 61 W02 6 (10) 11. ANNUAL AVERAGE PROFESSIONAL PROFESSIONAL SERVICES REVENUE INDEX NUMBER SERVICES REVENUES OF FIRM FOR LAST 3 YEARS 1. LESS THAN \$100,000 \$2 million to less than \$5 million

(Insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	10

- \$100,000 to less than \$250,000 2.
- \$250,000 to less than \$500,000
- \$500,000 to less than \$1 million
- \$1 million to less than \$2 million
- \$10 million to less than \$25 million \$25 million to less than \$50 million

\$5 million to less than \$10 million

- \$50 million or greater

7.

12. AUTHORIZED REPRESENTATIV	/E
The foregoing is a statement of facts	ŝ.

a. SIGNATURE	b. DATE
Michael D. Phelor	3/7/2014
c. NAME AND TITLE	

#### 1. SOLICITATION NUMBER (if any) ARCHITECT-ENGINEER QUALIFICATIONS Part II - General Qualifications (If a firm has branch offices, complete for each specific branch office seeking work. 2a. FIRM (OR BRANCH OFFICE) NAME 3. YEAR ESTABLISHED 4. DUNS NUMBER 1994 AMEC Environment & Infrastructure, Inc. 03-808-6125 2b. STREET 5. OWNERSHIP a. TYPE 75 E. Amelia Street, Suite 200 2c. CITY 2e. ZIP CODE 2d. STATE Corporation b. SMALL BUSINESS STATUS FL 32801-1320 Orlando 6a. POINT OF CONTACT NAME AND TITLE not applicable 7. NAME OF FIRM (if block 2a is a branch office) Lisa Prieto, Orlando Office Manager 6b. TELEPHONE NUMBER 6c. E-MAIL ADDRESS AMEC Environment & Infrastructure, Inc. 407-522-7570 lisa.prieto@amec.com 8a. FORMER FIRM NAME(S) (if any) 8b. YR. ESTABLISHED 8c. DUNS NUMBER AMEC Earth & Environmental, Inc. (2000 - 2011) 1994 038086125 1994 803037522 AGRA Earth & Environmental, Inc. (1994 - 2000) Merger History: AMEC E&I Holdings, Inc. (f/k/a MACTEC, Inc.); AMEC E&I, Inc. (f/k/a MACTEC Engineering and Consulting, Inc.); AMEC Geomatrix, Inc. (f/k/a Geomatrix Consultants, Inc.); AMEC-BCI Engineers & Scientists, Inc. (f/k/a BCI Engineers & Scientists, Inc.); Hydrosphere Resource Consultants, Inc.; AMEC Infrastructure, Inc. (f/k/a AGRA Infrastructure, Inc.) 10. PROFILE OF FIRM'S EXPERIENCE AND 9. EMPLOYEES BY DISCIPLINE ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS c. No. of Employees c. Revenue a. Function a. Profile Index Number b. Discipline b. Experience see below Code (1) FIRM (2) BRANCH Code Branch (Firm) 05 Archeologists 75 C14 Conservation and Resource Management 2 (9) Construction Management 07 Biologists 133 C15 1 (10) D01/D02 08/29 CADD Technicians/GIS Specialists Dams; Dikes; Levees 250 1 (9) 12 309 Design-Build (10)Civil Engineers Construction Inspectors/Managers 195 Ecological & Archeological Investigations 15/16 2 E01 2(9)Environmental Engineers Energy Conservation; New Energy Sources 23 271 F07 (9) EIS, Assessments or Statements 24 **Environmental Scientists** 386 2 E09 2 (10) 14 Environmental Planning (9) 25 F11 Fire Protection Engineers Environmental Remediation Foundation/Geotechnical/Soils Engineers 403 2 (10) 27/55 E12 30 Geologists 390 G04 GIS Services (10)Hydrologists/Hydrogeologists 109 Hazardous, Toxic, Radioactive Waste Remediation 34 H03 (10)Highways; Streets; Airfield Paving; Parking Lots Industrial Hygienists H07 2 (10) 36 63 Planning 38 and Surveyors 37 16 P05/P07 Railroad, Rapid Transit 48 Project Managers 145 R03 1(10) Structural Engineers 57 R04 Recreation Facilities (Parks, Marianas, Etc.) 1(9) 57 Technicians 1078 Ω R11 Rivers; Canals; Waterways; Flood Control 2 (10) 58 62 Water Resources Engineers 187 S05 Soils & Geologic Studies; Foundations 1 (10) Air Quality Specialists Surveying, Platting; Mapping; Flood Plain Studies 51 S10 6 (8) Project Services 797 T02 Testing & Inspection Services 5 (10) Unexploded Ordnance Remediation Other Professional Staff U01 563 (10)Total 5513 36 W02 Water Resources; Hydrology; Ground Water 4 (10)

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a. Federal Work 10
b. Non-Federal Work 10
c. Total Work 10

# PROFESSIONAL SERVICES REVENUE INDEX NUMBER

- 1. LESS THAN \$100,000
- 2. \$100.000 to less than \$250.000
- \$250,000 to less than \$500,000
   \$500,000 to less than \$1 million
  - \$500,000 to less than \$1 million\$1 million to less than \$2 million
- 6. \$2 million to less than \$5 million
- \$5 million to less than \$10 million\$10 million to less than \$25 million
- 9. \$25 million to less than \$50 million
- 10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE

a. SIGNATURE

Lim Min Part, P.E., PLEE

b. DATE

3/7/2014

c. NAME AND TITLE

Lisa Prieto, Orlando Office Manager

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#### 1. SOLICITATION NUMBER (if any) ARCHITECT-ENGINEER QUALIFICATIONS Part II - General Qualifications (If a firm has branch offices, complete for each specific branch office seeking work. 2a. FIRM (OR BRANCH OFFICE) NAME 3. YEAR ESTABLISHED 4. DUNS NUMBER AMEC Environment & Infrastructure, Inc. 1994 03-808-6125 5. OWNERSHIP 2580 MetroCentre Boulevard, Suite 6 2c CITY 2e, ZIP CODE 2d. STATE Corporation FL 33407 b. SMALL BUSINESS STATUS West Palm Beach 6a. POINT OF CONTACT NAME AND TITLE not applicable 7. NAME OF FIRM (if block 2a is a branch office) Bruce Schmitt, West Palm Beach Office Manager 6b. TELEPHONE NUMBER 6c. E-MAIL ADDRESS AMEC Environment & Infrastructure, Inc. (561) 242-7713 bruce.schmitt@amec.com 8a. FORMER FIRM NAME(S) (if any) 8b. YR. ESTABLISHED 8c. DUNS NUMBER AMEC Earth & Environmental, Inc. (2000 – 2011) 1994 038086125 1994 803037522 AGRA Earth & Environmental, Inc. (1994 - 2000) Merger History: AMEC E&I Holdings, Inc. (f/k/a MACTEC, Inc.); AMEC E&I, Inc. (f/k/a MACTEC Engineering and Consulting, Inc.); AMEC Geomatrix, Inc. (f/k/a Geomatrix Consultants, Inc.); AMEC-BCI Engineers & Scientists, Inc. (f/k/a BCI Engineers & Scientists, Inc.; Hydrosphere Resource Consultants, Inc.: AMEC Infrastructure. Inc. (f/k/a AGRA Infrastructure. Inc.) 10. PROFILE OF FIRM'S EXPERIENCE AND 9. EMPLOYEES BY DISCIPLINE ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS c. No. of Employees c. Revenue Index a. Profile a. Function Number b. Discipline b. Experience Code Code (see below) (1) FIRM (2) BRANCH Branch (Firm) Conservation and Resource Management 05 Archeologists 75 C14 1 (9) 07 **Biologists** 133 C15 Construction Management 4 (10) 08/29 CADD Technicians/GIS Specialists 250 D01/D02 Dams; Dikes; Levees 4 (9) Civil Engineers 309 Design-Build 12 (10)Construction Inspectors/Managers 195 2 Ecological & Archeological Investigations 15/16 F01 (9) Ecologists 19 Energy Conservation; New Energy Sources (9) 19 F07 23 Environmental Engineers 271 F09 EIS, Assessments or Statements 1 (10) 24 Environmental Scientists 386 2 E11 Environmental Planning (9) 27/55 Foundation/Geotechnical/Soils Engineers 403 Environmental Remediation 4 E12 2 (10) 30 Geologists 390 G04 GIS Services (10)34 Hydrologists/Hydrogeologists 109 H03 Hazardous, Toxic, Radioactive Waste Remediation 1 (10) Highways; Streets; Airfield Paving; Parking Lots 47 Planners: Urban/Regional/Environmental 49 H07 2 (10) 42 Mechanical Engineers 36 P05/P07 Planning (8) 48 Project Managers 145 R03 Railroad, Rapid Transit (10)Recreation Facilities (Parks, Marianas, Etc.) 58 Technician 1078 5 R04 (9) 60 Transportations Engineers 64 R11 Rivers; Canals; Waterways; Flood Control 1 (10) 62 Water Resources Engineer 187 S05 Soils & Geologic Studies; Foundations 4 (10) **Environmental Regulatory Compliance** 6 S10 Surveying, Platting; Mapping; Flood Plain Studies (8) Specialist 797 T02 Testing & Inspection Services 4 (10) Project Services 2 Unexploded Ordnance Remediation Other Professional Staff 611 1101 (10)Water Resources; Hydrology; Ground Water 5513 19 W02 Total 4 (10) 11. ANNUAL AVERAGE PROFESSIONAL PROFESSIONAL SERVICES REVENUE INDEX NUMBER SERVICES REVENUES OF FIRM FOR LAST 3 YEARS LESS THAN \$100.000 6 \$2 million to less than \$5 million 1 (Insert revenue index number shown at right) \$100,000 to less than \$250,000 \$5 million to less than \$10 million a. Federal Work 3. \$250,000 to less than \$500,000 \$10 million to less than \$25 million b. Non-Federal Work 10 \$500,000 to less than \$1 million. \$25 million to less than \$50 million \$1 million to less than \$2 million 10. \$50 million or greater c. Total Work 10 12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts a SIGNATURE Bruce Sch b. DATE 3/7/2014

Bruce Schmitt, West Palm Beach Office Manager

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Civil/Environmental Engineering SerEXHBIT 4 September 29, 201441584 Page 65 of 95

STANDARD FORM 330 (6/2004)

#### 1. SOLICITATION NUMBER (if any) ARCHITECT-ENGINEER QUALIFICATIONS Part II - General Qualifications (If a firm has branch offices, complete for each specific branch office seeking work.) 2a. FIRM (OR BRANCH OFFICE) NAME 3. YEAR ESTABLISHED 4. DUNS NUMBER AMEC Environment & Infrastructure, Inc. 1994 03-808-6125 2b. STREET 5. OWNERSHIP a. TYPE 5845 NW 158th Street 2c. CITY 2e. ZIP CODE 2d. STATE Corporation FL 33014 b. SMALL BUSINESS STATUS Miami Lakes 6a. POINT OF CONTACT NAME AND TITLE not applicable 7. NAME OF FIRM (if block 2a is a branch office) Jose Perez, Miami Office Manager 6b. TELEPHONE NUMBER 6c. E-MAIL ADDRESS AMEC Environment & Infrastructure, Inc. 305-826-5588 jose.r.perez@amec.com 8a. FORMER FIRM NAME(S) (if any) 8b. YR. ESTABLISHED 8c. DUNS NUMBER AMEC Earth & Environmental, Inc. (2000 - 2011) 1994 038086125 803037522 AGRA Earth & Environmental, Inc. (1994 – 2000) 1994 Merger History: AMEC E&I Holdings, Inc. (f/k/a MACTEC, Inc.); AMEC E&I, Inc. (f/k/a MACTEC Engineering and Consulting, Inc.); AMEC Geomatrix, Inc. (f/k/a Geomatrix Consultants, Inc.); AMEC-BCI Engineers & Scientists, Inc. (f/k/a BCI Engineers & Scientists, Inc.); Hydrosphere Resource Consultants, Inc.; AMEC Infrastructure, Inc. (f/k/a AGRA Infrastructure, Inc.) 10. PROFILE OF FIRM'S EXPERIENCE AND 9. EMPLOYEES BY DISCIPLINE ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS c. No. of Employees c. Revenue a. Function a. Profile Index Number b. Discipline b. Experience (1) FIRM (2) BRANCH Code (see below) Code Branch (Firm) 05 Archeologists 75 C14 Conservation and Resource Management (9) 07 Biologists 133 --C15 Construction Management 7 (10) 06 Architects 19 1 D01/D02 Dams; Dikes; Levees (9) CADD Technicians/GIS Specialists Design-Build 08/29 250 2 7 (10) Ecological & Archeological Investigations 12 Civil Engineers 309 4 E01 (9) Energy Conservation; New Energy Sources 15/16 Construction Inspectors/Managers 195 6 E07 (9) 19 19 F09 EIS. Assessments or Statements Ecologists 6 (10) Environmental Planning Electrical Engineers 21 18 E11 (9) 23 Environmental Engineers 271 4 E12 Environmental Remediation 7 (10) 24 **Environmental Scientists** 386 2 G04 GIS Services 2 (10) 27/55 Foundation/Geotechnical/Soils Engineers 403 H03 Hazardous, Toxic, Radioactive Waste Remediation 3(10) 3 H07 Highways; Streets; Airfield Paving; Parking Lots 30 Geologists 390 1 6 (10) Planning 109 P05/P07 34 Hydrologists/Hydrogeologists --(8) Mechanical Engineers Railroad, Rapid Transit 5 (10) 42 36 1 R03 145 48 Project Managers --R04 Recreation Facilities (Parks, Marianas, Etc.) 2(9) R11 Rivers; Canals; Waterways; Flood Control 57 Structural Engineers 57 1 '(10) Soils & Geologic Studies; Foundations 58 Technicians 1078 25 S05 7 (10) Surveying, Platting; Mapping; Flood Plain Studies Water Resources Engineers 187 S10 62 (8) Project Services 797 15 T02 Testing & Inspection Services 6 (10) Other Professional Staff Unexploded Ordnance Remediation 636 U01 (10)Total 5513 66 W02 Water Resources; Hydrology; Ground Water 3 (10) 11. ANNUAL AVERAGE PROFESSIONAL PROFESSIONAL SERVICES REVENUE INDEX NUMBER SERVICES REVENUES OF FIRM FOR LAST 3 YEARS LESS THAN \$100,000 \$2 million to less than \$5 million (Insert revenue index number shown at right) \$100,000 to less than \$250,000 \$5 million to less than \$10 million a. Federal Work 10 \$250,000 to less than \$500,000 \$10 million to less than \$25 million 3. 8. b. Non-Federal Work 10 \$500,000 to less than \$1 million \$25 million to less than \$50 million 9 c. Total Work 10 \$1 million to less than \$2 million \$50 million or greater 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

b DATE 3/7/2014

c. NAME AND TITLE

a SIGNATURE

Jose Perez, Miami Office Manager

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STANDARD FORM 330 (6/2004)

#### 1. SOLICITATION NUMBER (if any) ARCHITECT-ENGINEER OUALIFICATIONS Part II - General Qualifications (If a firm has branch offices, complete for each specific branch office seeking work.) 2a. FIRM (OR BRANCH OFFICE) NAME 3. YEAR ESTABLISHED 4. DUNS NUMBER AMEC Environment & Infrastructure, Inc. (Gainesville) 1994 03-808-6125 2b. STREET 5. OWNERSHIP 404 SW 140th Terrace a. TYPE 2c CITY 2d. STATE 2e, ZIP CODE Corporation FL b. SMALL BUSINESS STATUS Newberry 32669-3000 6a. POINT OF CONTACT NAME AND TITLE not applicable Mark C. Diblin, PG, Office Manager . NAME OF FIRM (if block 2a is a branch office) 6b TELEPHONE NUMBER 6c. E-MAIL ADDRESS AMEC Environment & Infrastructure, Inc. 352-332-3318 mark.diblin@amec.com 8a. FORMER FIRM NAME(S) (if anv) 8b. YR. ESTABLISHED 8c. DUNS NUMBER AMEC Earth & Environmental, Inc. (2000 – 2011) 1994 038086125 803037522 AGRA Earth & Environmental, Inc. (1994 – 2000) 1994 Merger History: AMEC E&I Holdings, Inc. (f/k/a MACTEC, Inc.); AMEC E&I, Inc. (f/k/a MACTEC Engineering and Consulting, Inc.); AMEC Geomatrix, Inc. (f/k/a Geomatrix Consultants, Inc.); AMEC-BCI Engineers & Scientists, Inc. (f/k/a BCI Engineers & Scientists, Inc.; Hydrosphere Resource Consultants, Inc.; AMEC Infrastructure, Inc. (f/k/a AGRA Infrastructure, Inc.) 10. PROFILE OF FIRM'S EXPERIENCE AND 9. EMPLOYEES BY DISCIPLINE ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS c. Revenue c. No. of Employees a. Function a. Profile Index Number b. Discipline b. Experience (2) BRANCH Code (see below) Code (1) FIRM Branch (Firm) Conservation and Resource Management 07 Biologists 133 2 C14 2 (9) Construction Management CADD Technicians/GIS Specialists 3 (10) 08/29 250 2 C15 Dams; Dikes; Levees 11 Chemists 32 1 D01/D02 (9) Design-Build 12 Civil Engineers 309 3 D04 3 (10) Ecological & Archeological Investigations 15/16 Construction Inspectors/Managers 195 E01 2 (9) 19 19 2 F07 Energy Conservation: New Energy Sources 5 (9) Ecologists EIS, Assessments or Statements 21 Electrical Engineers 18 1 E09 2 (10) Environmental Engineers Environmental Planning

# 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

**Environmental Scientists** 

Mechanical Engineers

Risk Assessors/Toxicologists

Water Resources Engineers

Quality Assurance Specialists

Other Professional Staff

Air Quality Specialists

Project Services

Project Managers

Geologists

Technicians

Foundation/Geotechnical/Soils Engineers

(Insert revenue index number shown at right) a. Federal Work 10 b. Non-Federal Work 10 c. Total Work 10

### PROFESSIONAL SERVICES REVENUE INDEX NUMBER

Testing & Inspection Services

Environmental Remediation

Railroad, Rapid Transit

Hazardous, Toxic, Radioactive Waste Remediation

Highways; Streets; Airfield Paving; Parking Lots

Recreation Facilities (Parks, Marianas, Etc.)

Surveying, Platting; Mapping; Flood Plain Studies

Rivers; Canals; Waterways; Flood Control

Soils & Geologic Studies; Foundations

Unexploded Ordnance Remediation

Water Resources; Hydrology; Ground Water

GIS Services

Planning

LESS THAN \$100,000

5

5

2

5

6

2

10

9

1

58

E11

E12

G04

H03

H07

P05/P07

R03

R04

R11

505

S10

T02

U01

W02

271

386

403

390

36

145

26

1078

187

51

795

2

787

5513

- \$100,000 to less than \$250,000
- 3. \$250,000 to less than \$500,000 \$500,000 to less than \$1 million
- \$1 million to less than \$2 million
- \$2 million to less than \$5 million
- 7. \$5 million to less than \$10 million
- \$10 million to less than \$25 million 8
- \$25 million to less than \$50 million 9
- 10. \$50 million or greater

# 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE b. DATE mark C. Sillin 2/18/2014

c. NAME AND TITLE

23

24

27/55

30

42

48

50/59

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62

Mark C. Diblin, PG, Office Manager

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STANDARD FORM 330 (6/2004)

7 (9)

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5 (10)

	ARCHITECT-ENGINEER Q	UALIFIC	ATIONS		1. SOLICITATION NUMBER	. •			
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20 FIRM (OR I	(If a firm has brand BRANCH OFFICE) NAME	ch offices, co	mplete for each	h specific b	ranch office seeking work.)  3. YEAR ESTABLISHED	4. DUNS NUMBER			
	onment & Infrastructure, Inc.				3. YEAR ESTABLISHED 4. DUNS NUMBER 03-808-61				
2b. STREET					5. OWNERSHIP				
4919 West L	aurel Street				a. TYPE				
2c. CITY		2d. STATE	2e. ZIP CODE	Corporation					
Tampa		FL	33607		b. SMALL BUSINESS STATUS				
6a. POINT OF	CONTACT NAME AND TITLE	•	•		not applicable				
	ann, PE, Tampa Office Manager	T			7. NAME OF FIRM (if block 2a is a	•			
6b. TELEPHON (813) 289-07:		6c. E-MAIL A	ADDRESS <b>mann@amec.</b> o	com	AMEC Environment & Infrastructure, Inc.				
(010) 200 01	8a. FORMER FIRM NAME		mann earneo.	<u> </u>	8b. YR. ESTABLISHED	8c. DUNS	NUMBER		
AMEC Earth	& Environmental, Inc. (2000 – 2011)	( ) ( ) )			1994	03808			
	& Environmental, Inc. (1994 – 2000)				1994	803037522			
	ory: AMEC E&I Holdings, Inc. (f/k/a MAC								
*	omatrix Consultants, Inc.); AMEC-BCI E Inc.; AMEC Infrastructure, Inc. (f/k/a AG	•		(T/K/a BCI E	ngineers & Scientists, Inc.;	Hydrosphere Reso	ource		
,	•				10. PROFILE OF FIRM'S	S EXPERIENCE A	ND		
	9. EMPLOYEES BY DISCIPL			Α	NNUAL AVERAGE REVEN	IUE FOR LAST 5 `			
a. Function		c. No. o	f Employees	a. Profile			c. Revenue Index Numbe		
Code	b. Discipline	(1) FIRM	(2) BRANCH	Code	b. Experier	nce	(see below)		
5	Archeologists	75		C14	Conservation and Resource Ma	Branch (Firm 4 (9)			
07	Biologists	133		C14	Construction Management	3 (10)			
08/29	CADD Technicians/GIS Specialists	250		D01/D02	Dams; Dikes; Levees	3 (9)			
12	Civil Engineers	309	1		Design-Build	2 (10)			
15/16	Construction Inspectors/Managers	195	1	E01	Ecological & Archeological Inve	3 (9)			
23	Environmental Engineers	271	2	E07	Energy Conservation; New Energy Sources		(9)		
24	Environmental Scientists	386	1	E09	EIS, Assessments or Statements		5 (10)		
27/55	Foundation/Geotechnical/Soils Engineers	403	5	E11	Environmental Planning		4 (9)		
30	Geologists	390	4	E12	Environmental Remediation		4 (10)		
34	Hydrologists/Hydrogeologists	109		G04	GIS Services		2 (10)		
36	Industrial Hygienists	63		H03	Hazardous, Toxic, Radioactive Waste Remediation		1 (10)		
40	Materials Engineers Project Managers	33 145	1	H07 P05/P07	Highways; Streets; Airfield Paving; Parking Lots Planning		3 (10)		
57	Structural Engineers	57		R03	Railroad, Rapid Transit		2 (10)		
58	Technicians	1078	14	R04	Recreation Facilities (Parks, Ma	2 (9)			
60	Transportation Engineers	64	2	R11	Rivers; Canals; Waterways; Flo	od Control	2 (10)		
62	Water Resource Engineers	187		S05	Soils & Geologic Studies; Found	dations	5 (10)		
	Air Quality Specialists	51		S10	Surveying, Platting; Mapping; Flo	ood Plain Studies	3 (8)		
	Project Services	797	3	T02	Testing & Inspection Services		5 (10)		
	Other Professional Staff	517		U01	Unexploded Ordnance Remedia		(10)		
	Tota	5513	35	W02	Water Resources; Hydrology; G	round Water	4 (10)		
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STANDARD FORM 330 (6/2004)

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ARCHITECT-ENGINEER QUALIFICATIONS						1. SOLICITATION NUMBER (If any)  RFP #090-0271-NC (AM)					
	/If a firm	PA n has branch office	RT II - GE	NERAL	QUALIFI	CATION	NS.		•	<u>-</u>	
O- FIRM (OI			es, compi	ele lui e	еаст ъре	CITIC DI a		ESTABLISHED			
2a. FIRM (OR BRANCH OFFICE) NAME  Dredging & Marine Consultants, LLC							3. YEAR		4. DUNS NUMBER		
2b. STREET								2002		8-742-0315	
						a. TYPE	5. OWN	IEK5H	<u> </u>		
2c. CITY	3. Ciyue Moi	ris Blvd., Unit 302		2d STA	TE 2e. ZIP (	CODE		itad Liability (	omn	anv	
							Limited Liability Company b. SMALL BUSINESS STATUS				
i dit diango					Certified State MBE & SBE with SFWMD						
Shailesh K. Patel, Principal/Managing			Member	Member				7. NAME OF FIRM (If block 2a is a branch office)			
6b. TELEPHO	ONE NUMBER	6	c. E-MAIL ADD		m		N/A				
		8a. FORMER FIRM N					8b. YR	R. ESTABLISHED	8c. [	DUNS NUMBER	
N/A						10 PROI	EII E OE	FIRM'S EXPERI	ENCE	AND	
	9. EM	PLOYEES BY DISCIPLI	NE		AN			REVENUE FOR			
a. Function Code	b. Discipline		c. No. of Employees (1) FIRM (2) BRANCH		a. Profile Code		b. E	xperience		c. Revenue Index Number (see below)	
02	Admin		2								
	Engineer		3								
19/58	Ecologist		1								
07/24	Biologist		1								
		ntal Scientist	1								
08	Draftsmen		1								
15	Field Support		1								
										<del>                                     </del>	
	Other Employ	yees									
		Total	10								
11 AN	INITIAL AVERA	GE PROFESSIONAL		222		0550/40	EO DEV	TABLE INDEX AU			
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a. SIGNATUI	ne 🔎	Paru						b. DA		45 6641	
c. NAME AN	ID TITLE							Se	ptemb	oer 15, 2014	

Shailesh K. Patel, Principal & Managing Member

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Section 2
References/Projects of Similar Scope



# Lake Seminole Sediment Removal

# Scope

Lake Seminole is a highly eutrophic lake located in Pinellas County, Florida, that is currently listed by FDEP and the EPA as an impaired waterbody pursuant to Section 393(d) of the federal Clean Water Act. The pollutants are nutrients (primarily phosphorus forms) that are present in elevated forms in water column and sediments.

This shallow, 684-acre, fresh water lake has been negatively impacted by nuisance sediments that impair water quality, cause habitat degradation, and impede recreational uses. The Lake Seminole Watershed Management Plan (2001) and The Lake Seminole Reasonable Assurance Plan (2007) recognize that the organic sediments are linked to the lake's nutrient-related impairment. The lake's approximately 3,500-acre watershed is highly urbanized, with commercial and residential land uses comprising most of the land service.

Prior to the mid-1940s Lake Seminole was an estuarine waterbody. It was converted to a freshwater system by the construction of a roadway which acted as a dam. This construction altered the lake's salinity regime from brackish to fresh, and the construction of the dam and several additional hydrologic modifications in the watershed have substantially reduced its flushing rate and increased its hydraulic residence time. The lake has also received discharges of untreated or minimally treated stormwater runoff from a variety of urban land uses for decades.

AMEC was retained in 2010 to provide professional environmental and engineering services requisite to the development of the Lake Seminole Dredging Project to remove approximately 1 million cubic yards of sediments from the lake. AMEC is providing assistance with the engineering, analytical, design, permitting, and administrative support services associated with the removal, processing, and disposal of the nuisance, nutrient rich sediments from within the lake.



AMEC's task assignments associated with this project, and currently in progress, include:

- Bathymetric and sediment surveys
- Physical, nutrient, and chemical characterizations of the sediment including moisture content and wet sieve analysis, specific gravity test, and total organic content analysis
- Geophysical and geotechnical site investigations
- Dredging and process design including prioritization of sediment laden areas; evaluation of sediment characteristics, volumes and material balance; and dredge and pumping system design
- Disposal area and structural foundation design
- Storm and sediment water management design
- Project plans
- Design report
- Permitting including agency communication and coordination; ERP permit applications; and permit RAI responses
- Public outreach
- Construction operations oversight and technical guidance

# Client

Pinellas County

Kelli Hammer Levy, CPM Section Manager 300 S Garden Ave Clearwater, Florida USA 33756 727.464.4425 (p) 727.464.4403 (f) Email: klevy@pinellascounty. org

### Location

Pinellas County, Florida

# **Key Staff**

- Walter Reigner, PE, CPESC
- Scott Wuitschick, PE
- Timothy Kelly, PE, CPSWQ, CPESC
- Jeffrey Beriswill, PE
- Leon Seale. PE
- Mark Chomtid, PhD, PE
- Allan Biddlecomb, PG

# **Start Date**

**2010** 

# **Completion Date**

Ongoing



## **Tampa Waterway Management Projects**

### Scope

#### Client

City of Tampa

Ben Koplin
Environmental Specialist,
Stormwater Department
306 East Jackson Street
Suite 6N
Tampa, Florida
USA 33602
813.274.8371 (p)
813.274.7176 (f)
Email: heather.maggio @ ci.tampa.fl.us

#### Location

■ Tampa, Florida

#### **Kev Staff**

- Walter Reigner, PE, CPESC
- Dave Butcher, PE, LEED AP
- Scott Wuitschick, PE
- Les Bromwell, ScD, PE
- Carl Christmann, PE
- John Kiefer, PhD, PE, PWS
- Leon Seale, PE
- Kevin Shelton
- Aziza Baan, GISP
- Mark Jones

#### **Start Date**

**2008** 

#### **Completion Date**

Ongoing

AMEC was retained to provide professional engineering services in support of the City of Tampa's waterway management projects. This special assessment program includes design of dredging projects at various locations throughout the City including but not limited to the Westshore area and Davis Islands.

The projects are partially funded by the U.S. EPA thereby requiring a substantial environmental enhancement element. Individual projects will typically be performed in three phases: project delineation and survey, preliminary design and permitting, and plans preparation and construction support services.

#### Tasks included:

- Document preparation for compliance with the National Environmental Policy Act (NEPA)
- Preparation of an Environmental Impact Document (EID) in accordance with EPA Section 40 CFR 31.36
- Survey of the existing conditions
- Development of proposed dredging plans
- Exploration of alternative dredging methods/ scenarios
- Identification and permitting of spoil disposal
- Methods and mechanisms to improve water circulation
- Estimates of project costs
- Development of design criteria for City or agency approval
- Public meetings and workshops
- Coordination with permitting agencies
- Construction plan production
- Project permitting
- Construction staging





AMEC has delineated and inventoried areas that currently do not meet the desired level of service of at least 3 feet of clearance at Mean Low Water (MLW) level within 15 canals in the Westshore area in order to apportion costs and facilitate volumetric calculations. AMEC has identified disposal sites suitable for NEPA and SWFWMD co-funding.



## **Lake Hollingsworth Restoration Project**

### Scope

Lake Hollingsworth is a 350-acre urban lake located in the City of Lakeland, Florida. The lake is a popular recreational area for city and county residents but suffered from sediment accumulation and poor water quality.

In 1996, AMEC was retained by the City of Lakeland Public Works Department to develop plans and provide CEI services for the removal of organic sediments that covered approximately 75 percent of the lake bottom. Muck deposits ranged in thickness from one foot to more than twenty feet.

Elements of the project involved the permitting and removal of 3.6 million cubic yards of sediment. Materials handling, location of sufficient spoil areas, and dewatering were major challenges for the project team.

Several key elements of the project included the development and design of flocculation methods, disposal area specifications and dredging. Prior to the start up of full scale operations, a pilot project was conducted to test new dewatering methodologies.

Original disposal plans were redesigned and enlarged due to unusually heavy precipitation (El Niño) in 1997 and 1998. As a result, dredge spoil was pumped a distance of five miles via an 18-inch diameter Plexco pipeline that was installed through the Cleveland Heights Golf Course.

The dredge was constructed to meet the requirements and construction constraints of the project. It was equipped with GPS equipment that allowed accurate positioning within the lake. Final cost for sediment removal at Lake Hollingsworth was approximately \$4 per cubic yard. Major grants from the EPA and SWFWMD were obtained to assist in project funding.

The EPA awarded AMEC \$3 million in grants to test the state-of-the-art dewatering technique.







City of Lakeland

Richard Lilyquist, PE Director of Public Works 228 S. Massachusetts Ave. Lakeland, Florida USA 33801 863.834.6040 (p) 863.834.8040 (f) Email: richard.lilyquist@ lakelandgov.net

#### Location

Lakeland, Florida

- Walter Reigner, PE, CPESC
- Timothy Kelly, PE, CPSWQ, **CPESĆ**
- John Kiefer, PhD, PE, PWS
- David Butcher, PE, LEED AP
- Mark Jones

#### **Start Date**

**1996** 

#### **Completion Date 2001**



## **Lake Rowell Aquatic Enhancement**

#### Scope

#### Client

 Florida Fish and Wildlife Conservation Commission

Bruce Jaggers
Biological Scientist
601 W. Woodward Avenue
Eustis, Florida
USA 32726
352.357.2398 (p)
352.357.2941 (f)
bruce.jaggers@myfwc.com

#### Location

Bradford County, Florida

#### **Key Staff**

- Walter Reigner, PE, CPESC
- Les Bromwell, ScD, PE
- John Kiefer PhD, PE, PWS
- Carl Christmann, PE
- Jie Gao, PE, CFM
- Leon Seale, PE
- Timothy Howard
- Aziza Baan, GISP

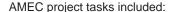
#### **Start Date**

**2008** 

#### **Completion Date**

**2009** 

AMEC provided engineering design support for the removal of approximately 1.5 million cubic vards of sediment to restore the aquatic habitat of Lake Rowell on behalf of FWC. The lake's popular fishery and avifaunal habitats have been adversely affected by artificially accumulated fibrous organic sediments and muck. The sediments, derived largely from previous human-induced nutrient sources, have created excessive internal nutrient cycling that supports nuisance algal blooms and dense rafts of nuisance exotic vegetation (hydrilla) that limit native vegetation growth. The sediment condition of the lake is now affecting Lake Sampson, located immediately downstream. causing detrimental grass formation.



- Preliminary dredge designed to demonstrate a few alternatives most likely to meet the objectives of the project and meet permitting requirements
- Data collection and review including reports, maps, aerial photographs, design plans, etc.
- Sediment assessment, characterization, and testing to facilitate cost-effective restoration design
- Determination of sediment volume increase and the settling and dewatering characteristics of the sediment
- Assisted FWC with selection of dredge material disposal site alternatives based on environmental impacts, groundwater, wetlands, proximity to public resources, safety, site access, pipeline routes to dredge site, ease of construction, costs, and schedule
- Cost estimates for three alternatives
- Preliminary Basis of Design booklet
- Preliminary project plans





Preliminary regulatory consultation was initiated as part of this project. Alternative containment site evaluations included outreach to a variety of landholders, and initiating dialogue with property owners and stakeholders on the potential beneficial use of sediment specific to each property.



### Chassahowitzka Springhead Restoration

### Scope

AMEC provided a dredging feasibility assessment, as well as design and permitting, construction, and dredging management services under a master engineering services contract for the removal of 3,000 cubic yards of sediment and woody debris from the Chassahowitzka headspring.

Chassahowitzka Spring is a first-magnitude springs complex that feeds the Chassahowitzka River, a designated Outstanding Florida Waterway, famous regionally as a passive recreational destination. The majority of the Chassahowitzka River system is publiclyowned. Approximately 3,000 cubic yards of sediment had accumulated in and around the headspring, significantly reducing flow volume and visibility. Removal of the sediment improved water quality within the Chassahowitzka headspring and near downstream area. Dredging soft sediment provided a suitable substrate for the establishment and regeneration of desirable submerged aquatic vegetation and improved aquatic habitat.

The dredging design plan had few to no restrictions on public access, boat launching, and navigation, and had limited impacts to manatee feeding and migration.

Specific AMEC project tasks included:

- Detailed site assessment including sediment surveys and dredging plan involving sediment core sampling using piston-tube sampler, estimate of removal volume, and sediment characterization and contaminant assessments
- Design and permitting of sediment removal including utility location and identification of sediment disposal area options
- Design and permitting of BMPs to be implemented within the canals upstream of the headspring





- Public education plan to reduce pollutants within the canals and headspring
- Dredging and construction technical specifications
- Engineering cost estimate
- Construction/dredging management

#### Client

Citrus County Public Works

Larry Brock
Operations & Projects Officer
3600 W. Sovereign Path
Lecanto, Florida
USA 34461
352.527.5202 (p)
352.527.5204 (f)
Email: larry.brock@bocc.citrus.

#### Location

Citrus County, Florida

#### **Key Staff**

- Walt Reigner, PE, CPESC
- Carl Christmann, PE
- Leon Seale, PE
- Pavan Kolukula, El

#### **Start Date**

**2008** 

### **Completion Date**

**2009** 



# Lake Griffin Canal Dredging and Eustis Muck Farm Wetland Restoration

#### Scope

#### Client

Lake County Water Authority

Ron Hart Water Resources Manager 107 North Lake Avenue Tavares, Florida USA 32778 352.343.3777 (p) 352.343.4259 (f) Email: ronh@lcwa.org

#### Location

Leesburg, Florida

#### **Key Staff**

- Walter Reigner, PE, CPESC
- John Kiefer, PhD, PE, PWS
- Carl Christmann, PE
- Mark Jones

#### **Start Date**

**2003** 

#### **Completion Date**

- Design: 2004
- Construction: 2008

Lake Griffin is a 9,300-acre lake at the headwaters of the Ocklawaha River in Lake County, Florida. AMEC provided evaluation, design, and construction support services of a project to remove sediment from more than 30 canals ringing the lake and to place those sediments in a confined section of a subsided muck farm in order to restore wetlands.

This project required AMEC's expertise in:

- Water resource engineering (disposal site impoundment water budget)
- Hydraulic system design (floating pipeline with booster pumps)
- Water quality treatment (alum and polymer feeds for turbidity control)
- Geotechnical engineering (slope stability, embankment design, settling and consolidation of mixed media slurry)
- Construction support services (bid specifications and plans, contractor screening and selection, engineering inspections, progress payment review, permit compliance review, and landowner coordination)
- Wetland science

Unique components of the project included:

- Long transport distances (5 to 12 miles) from the canals to the disposal site
- Highly variable composition of the dredged sediment (unconsolidated sands, flocculent muck, consolidated muck, and cohesive clay)
- A requirement for precise sediment deposition at a subsided muck farm to cap pesticide contamination hotspots while simultaneously maintaining several feet of water over the disposal site
- The project was completed by the lowest bidder without change orders under AMEC's inspection and coordination program







# **Lake Maggiore Aquatic Enhancement**

### Scope

AMEC conducted a feasibility study of Lake Maggiore for the City of St. Petersburg to determine the most effective method of removing organic sediment from the bottom of the 350-acre lake located in a highly urbanized area. The project's purpose was to improve highly impacted water quality, habitat, and navigation.

There were a number of components that made this project unique. AMEC worked with the governor and his cabinet to successfully obtain project permits because of Pinellas County's environmental designation as "Aquatic Preserve." It was determined that approximately 2.3 million cubic yards of sand and highly organic sediment would need to be removed to achieve optimum restoration. Studied sediment removal methods included hydraulic dredging and lake drawdown/mechanical excavation.

The method selected for bidding was hydraulic dredging. Sediment reuse options that were studied included in-lake disposal areas, remote disposal, and production of beneficial/usable products. AMEC designed and permitted a specialized de-sanding and dewatering system. A dredge contractor was selected, and project implementation concluded in 2008.





#### City of Fort Lauderdale Intracoastal Waterway -Las Olas Marina Dredging Project

References/Projects of Similar Scope

Civil/Environmental Engineering Services September 29, 2014

#### Client

• City of St. Petersburg

Mike Connors
City Hall
175 Fifth St. N.
St. Petersburg, Florida
USA 33701
727.893.7841 (p)
727.892.5365 (f)
Email: Michael.Connors@
stpete.org

#### Location

St. Petersburg, Florida

#### **Key Staff**

- Walter Reigner, PE, CPESC
- John Kiefer, PhD, PE, PWS
- Mark Jones

#### **Start Date**

**1995** 

#### **Completion Date**

- Engineering: 2005
- Construction: 2008



## **Taylor Creek Restoration Dredging**

### Scope

#### Client

St. Lucie County

Donald West, PE County Engineer 2300 Virginia Avenue Fort Pierce, Florida USA 34982 772.462.1485 (p) 772.462.2362 (f) Email: westd@stlucieco.org

#### Location

Fort Pierce, Florida

#### **Kev Staff**

- Les Bromwell, ScD, PE
- Walter Reigner, PE, CPESC
- Michael Kelley, PE
- James Bailey

#### **Start Date**

**2001** 

#### **Completion Date**

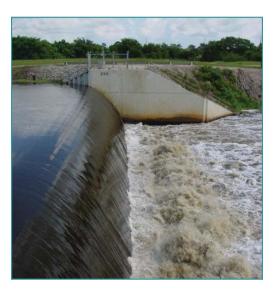
**2009** 

AMEC investigated and evaluated alternative upland disposal sites for three phases (sediment removal and management feasibility, design and permitting, and bid specification and contractor selection) of sediment removal and restoration of Taylor Creek, a coastal stream flowing into the Indian River Lagoon (IRL). AMEC's scope of work included preparation of permit applications; coordination with local, state, and federal agencies; sediment sampling and characterization; calculation of volume requirements for disposal; engineering design and construction monitoring of upland disposal area; and monitoring and testing during dredging and material placement.

The ultimate goal of this project was to hydraulically remove and temporarily store approximately 200,000 cubic yards of sediment in one of two temporary upland dredged material management sites located on the St. Lucie Port property. After dewatering, the sediment was hauled to the county landfill for use as cover material. The removal of the sediment should reduce further discharge of fine-grained, organic bearing sediment to the IRL and reestablish both navigation and the sediment traps in Taylor Creek.

The project area consists of the westerly edge of the Intracoastal Waterway (ICW) right-of-way to the SFWMD Canal No. C-25 spillway (S-50 structure) and the Fort Pierce Farms Water Control District Canal No. 1 (F-1 Spillway). The project is broken down into two reaches. Reach No. 1 is the area between the westerly edge of the ICW channel and the Florida East Coast Railroad (FECRR) Bridge, and Reach No. 2 is the area between the FECRR and the Spillway (S-50 structure) at the C-25 Canal and the submerged weir at the F-1 (North) Canal on the west.

Approximately 120,000 cubic yards of sediment was removed from Reach No. 1. This includes 90,000 cubic yards of sediments from the previously designed navigation channel (100 to 140 feet wide; -12.5 feet MSL) and an additional 30,000 cubic yards north and south of the navigation channel to the shoreline. Reach No. 2 entailed removal of approximately 80,000 cubic



yards of sediment to reestablish the design channel depth to approximately -12.5 feet MSL and 140 feet wide. Reach No. 2 also underwent a shoreline restoration that included shoreline stabilization, improvement, and protection.

Specific objectives of the project included:

- Building project consensus through public involvement
- Investigating and recommending innovative sediment dewatering strategies (technologies) and temporary dredged material management site(s)
- Developing a material management strategy, which included material processing, handling, and beneficial utilization
- Confirming sediment bathymetry and volumes for removal
- Designing a dredged material management facility, including construction drawings and specifications
- Reevaluating the total project cost
- Preparing and submitting an ERP
- Developing bid specifications and assisting with contractor selection
- Construction monitoring and materials testing (QA/QC) during construction and dredging



### FIND MSA 0-7 DMMA

### Scope

AMEC was contracted by Taylor Engineering, Inc., through their client, the Florida Inland Navigation District (FIND), to provide geotechnical engineering services for a proposed 39-acre dredged material management area (DMMA) and associated infrastructure. The project site is located on the north side of the Okeechobee Waterway (OWW), near the St. Lucie Lock and Dam, about 5,500 feet south-southwest of the intersection of Florida's Turnpike and I-95 in Martin County, Florida.

The proposed DMMA will have a storage capacity of 569,300 cubic vards. The DMMA will have a dike crest elevation that is about 14.5 feet above the existing grade. The DMMA will have a dike crest width of 15 feet, 3:1 (H:V) dike side slopes, and a basin bottom elevation that is 20 feet below the dike crest. A pilesupported overflow weir structure will be located near the southeastern corner of the proposed DMMA. This DMMA will receive, dewater, and temporarily store material removed from Reach IV of the Okeechobee Waterway (OWW) during maintenance dredging operations. In addition, a 9,650-foot long, unpaved access roadway and two small bridges will be constructed to provide access to the DMMA.

AMEC performed a geotechnical exploration for this project that consisted of 24 SPT borings to depths of 30 to 60 feet each along the proposed perimeter dike alignment, and 16 auger borings to a depth of 10 feet each in the interior of the proposed DMMA. For the proposed roadway and bridges, AMEC performed 24 auger borings to a depth of 6 feet each, and two SPT borings to a depth of 50 feet each for each of the two proposed bridges.

Laboratory testing consisted of moisture content, fines content, organic content, Atterberg limits, carbonate content, consolidation, Proctor compaction, hydraulic conductivity, compression, and Limerock Bearing Ratio (LBR). Engineering services consisted of multiple seepage and stability analyses for the proposed dikes, pile capacity analyses for the proposed weir structure and bridges, and subgrade evaluations for the proposed roadway.

#### Client

Taylor Engineering, Inc.

Lori Brownell, PE Director of Waterfront Engineering 10151 Deerwood Park, Bldg 300 Suite 300 Jacksonville, Florida USA 32256 904.256.1367 (p) Email: lbrownell@ taylorengineering.com

#### Location

Martin County, Florida

#### **Key Staff**

- Kirk McIntosh, PE
- Mike Woodward, PE
- Zhihong Hu, PhD, PE
- Brian Hathaway, PE
- Scott Gutowski, El
- David Johns Jr.

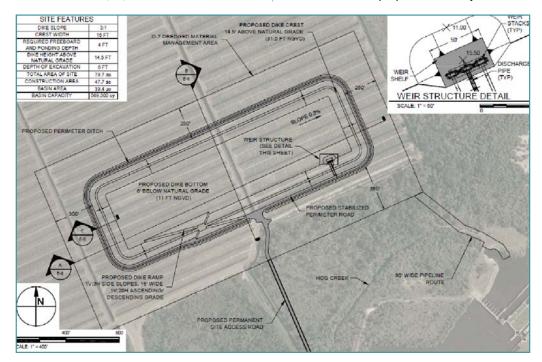
#### **Project Cost**

**\$66.000** 

#### **Start Date**

**2009** 

#### **Completion Date**





### L-8 Reservoir Dredging

#### Scope

#### Client

- South Florida Water Management District
- PBA Holdings, Inc.

Lin Riley, Jr.
Vice President
2100 Fairfax Road
Suite 101D
Greensboro, North Carolina
USA 27407
865.599.3859 (p)
828.584.0831 (f)
Email: Iriley@pandj.com

#### Location

Palm Beach County, Florida

#### **Kev Staff**

- Les Bromwell, ScD, PE
- Carl Christmann, PE
- Jeff Beriswill, PE

#### **Start Date**

**2004** 

#### **Completion Date**

**2007** 

The SFWMD Loxahatchee Reservoir is a critical component of the Comprehensive Everglades Restoration Plan (CERP) and is the first public/private project completed under this plan. This 1,000-acre water storage area was created in a former limestone quarry. AMEC was retained by PBA Holdings, Inc. to provide comprehensive design and construction support and to serve as the engineer of record.

PBA converted mined rock pits into water storage reservoirs by implementing a dredging program to deepen the excavations to an elevation of -42 feet NAVD. The process required analysis of the materials to be dredged, design of disposal areas for the material and optimization of the process to minimize the amount of fine-grained sediments in the hydraulic fill.

Approximately 35 million cubic yards of material were dredged to create the reservoir. AMEC analyzed underwater slopes to minimize long-term erosion during hurricane events and filled disposal areas in a manner to allow for the construction of a power plant and residential development adjacent to the reservoir.











#### PUBLIC WORKS DEPARTMENT LAKES & STORMWATER DIVISION

June 30, 2014

This letter is a reference letter from the City of Lakeland for AMEC Environment & Infrastructure, Inc. The City of Lakeland contracted with BCI (now AMEC) in 1994 to conduct a muck removal feasibility study and oversee dredging operations for Lake Hollingsworth. Attached with this letter is a brief overview of that project. The dredging in Lake Hollingsworth was deemed successful and water quality has since improved dramatically. AMEC continues to work with the City of Lakeland on various water quality and municipal engineering projects and has always provided excellent professional services. I would recommend their team of engineers and scientists to oversee any City of Lakeland projects and I am confident they would provide you with the same level of expertise and service for the Lake Apopka project. If you would like to speak with me concerning this reference, please feel free to contact me directly.

Sincerely,

Curtis Porterfield

Lakes & Stormwater Manager Public Works | City of Lakeland

407 Fairway Ave. Lakeland, FL 33801

863/834-8439 (PH) | curtis.porterfield@lakelandgov.net

407 Fairway Avenue & Lakeland, FL 33801-2467 (863) 834 - 3300 & www.lakelandgov.net



Michael J. Perry, Executive Director Nell Keny, Secretary-Treasure

107 North Lake Avenue - Tavares, Florida 32778-3119 - (352) 343-3777 - Fax (352) 343-4259 - E-mail: info@lcwa.org - www.lcwa.org

July 1, 2014

I am contacting you to provide this letter of recommendation on behalf of AMEC Environment & Infrastructure, Inc.

The Lake County Water Authority has had a long and successful professional relationship with BCI Engineers and Scientists, which was brought into AMEC and with AMEC after the merger. The personnel associated with these firms have always provided first rate customer service and displayed superior technical abilities.

The Lake County Water Authority contracted with AMEC (BCI at the time) to provide design, permitting and construction management services for two separate major dredging projects in Lake County. The first was the Lake Griffin Canal Dredging project which was intended to provide access to Lake Griffin from residential canals should the SJRWMD ever implement the revised fluctuation schedule for the Lake. The project including moving nearly 400,000 cubic yards of sediment from 35 canals around the lake and move the material up to 12 miles to a disposal area on SJRWMD-owned property. The other is the Lake Beauclair Restoration project. This project was to remove an estimated 1.5 million cubic yards of sediment from the terminus end of the Apopka Beauclair Canal that was impeding navigation, particularly during low water periods, and causing water quality and habitat degradation. The project also involved moving the material nearly seven miles to a disposal area on SJRWMD-owned property.

For both projects, BCI/AMEC accomplished all of the pre-project due diligence including sediment and water quality sampling and geotech work necessary to fully understand the issues, design the appropriate cost-effective solutions, secure all of the necessary permitting and provided construction management and monitoring services.

BCI/AMEC created the designs for the dredging and disposal areas for both projects. Both projects required overcoming unique and significant design challenges related to long distance pumping of the dredge spoils and to receive the material and manage the disposal areas. In the

case of the Beauclair Restoration project, the disposal area became a bit of a moving target and the designs had to be modified several times to accommodate the needs of the partnering agencies and to provide assurance to the public that the projects will be completed in a thorough and professional manner. BCI/AMEC personnel managed the disposal areas to ensure material was placed to create desirable bird and other wildlife habitat and to protect against potential fish kills in the spoil area near the sensitive areas of the north shore of Lake Apopka . In both projects alum and a polymer were successfully used to enhance settling of flocculent materials. BCI/AMEC personnel selected the appropriate types of polymers and adjusted the type or dosage rate to achieve the most effective settling rates.

During each of the projects, BCI/AMEC personnel met regularly with the dredging contractor and the Water Authority staff to ensure timely status updates and resolutions to any potential problems. This attention to the process and coordination with the contractor, stakeholders and cooperating agencies resulted in both projects completed on-time, within budget and with no changes orders or additional work.

They possess a seasoned team of technical professionals able to understand the issues, design effective solutions, secure permits and manage and monitor the project while providing strong customer service to the client and the local community. These unique qualities have resulted in the successful completion of two major, complex dredging/restoration projects in Lake County. I would have no reservations in recommending AMEC highly for any future dredging and or restoration projects.

Please contact me if you would like to discuss any of these projects, or this letter of recommendation further.

Sincerely

Michael J. Perry Executive Director



Charlie Justice
Susan Latvala
Janet C. Long
John Morroni
Norm Roche
Karen Williams Seel



July 8, 2014

Pinellas County Watershed Management hired AMEC in 2011 to study the feasibility of and subsequently design a whole-lake dredge project for Lake Seminole. Lake Seminole is a 684 acre hypereutrophic system located in west-central Pinellas County.

AMEC performed bathymetric investigations, soil characterizations, surveys, toxicity tests, and other tests on the accumulated sediments. They then developed several scenarios for removal and ultimately designed a construction project that's goal is to successfully remove the organic sediments. During the design phase AMEC developed plans and specifications, procured permits, and coordinated with various stakeholders.

We were very impressed by AMEC's field staff who provided superior services (e.g. surveys, habitat assessments) in a timely manner. The reports they provided were precise, well researched and well written. They made for excellent reference material during the permitting process and overall project development. AMEC field staff excelled at problem solving when site conditions changed and always exhibited a positive attitude.

AMEC provided services during permitting with the Florida Department of Environmental Protection (FDEP) and the Unites States Army Corp of Engineers (USACOE). AMEC staff coordinated with the permitting agencies to ensure a smooth permitting process. They developed strong applications that had few requests for additional information and when information was needed AMEC responded immediately in a thorough and concise manner. AMEC staff went the extra mile to make sure the reviewers had everything they needed and they kept in constant contact so as to not let anything fall through the cracks.

Overall, Pinellas County has had a favorable experience with AMEC on this project and we look forward to working with them through the successful completion of our project. Please feel free to contact us if you have any further questions.

Regards.

Kelli Hammer Levy

Pinellas County Natural Resources Manager

(727)464-3317

klevy@pinellascounty.org



#### City of St. Petersburg

Post Office Box 2842 St. Petersburg, Florida 33731-2842 Channel 35 WSPF-TV Telephone: 727 893-7171

July 9, 2014

AMEC (formerly BCI Engineers & Scientists) conducted a feasibility study and completed project permitting and design of the Lake Maggiore restoration project for the City of St. Petersburg. The project involved the effective removal of organic sediment from the bottom of a 380-acre lake located in a highly urbanized area of the City. The project's objective was to address a hypereutrophic lake by substantially reducing its trophic state index to improve highly impacted water quality, provide enhanced habitat, and increase navigability.

There were a number of components that made this project unique and somewhat complex. AMEC was required to elevate regulatory approval to the governor and cabinet to successfully obtain project permits because of the lakes environmental designation as an "Aquatic Preserve". It was determined that approximately 1.5 million cubic yards of highly organic sediment would be removed to achieve optimum restoration of the lake's natural bottom. The study determined that hydraulic dredging and subsequent mechanical dewatering of the sediment would be the most economical option.

AMEC assisted the City in oversight of the design and operation of a dewatering system that would facilitate successful removal of lake-bottom sands and maximization of solids concentration for offsite hauling. The project was publically bid and ER Jahna was selected by the City as the most responsive and advantageous bidder.

AMEC personnel provided periodic interface with the dredging contractor and City staff to ensure timely status updates and resolutions to any potential problems. Their attention to the process and regular collaboration with the contractor, stakeholders, and cooperating agencies helped achieve successful project implementation.

AMEC and Jahna staff provided a seasoned group of technical professionals and dredging practitioners who understood the unique issues, constraints, and solutions associated with sediment removal and lake restoration projects. These unique qualities have resulted in the successful completion of this complex dredging/restoration project for the City of St. Petersburg.

Sincerely,

Michael J. Connors

Public Works Administrator

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Section 3
Sample Insurance Certificate/
Licenses/Forms



### ACORD

#### CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY) 04/25/2014

Holder Identifier

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).

RODUCER on Risk Services Northeast, Inc. orristown NJ Office 4 Whippany Road, Suite 220 orristown NJ 07960 USA	CONTACT NAME: PHONE (MC. No. Ext): (866) 283-7122 F-MAIL E-MAIL E-MAIL E-MAIL E-MAIL FAX (AVC. No.): 800-363-0105	
	INSURER(S) AFFORDING COVERAGE	NAIC#
ISURED	INSURER A: Zurich American Ins Co	16535
MEC Environment & Infrastructure, Inc.	INSURER B: ACE American Insurance Company	22667
105 Lakewood Pkwy, Suite 300 Ipharetta GA 30009 USA	INSURER C: ACE Property & Casualty Insurance Co.	20699
	INSURER D: American Zurich Ins Co	40142
	INSURER E:	
	INSURER F:	

CERTIFICATE NUMBER: 570053569272 REVISION NUMBER: COVERAGES

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 requeste Limits shown are as requested

NSR LTR	TYPE OF INSURANCE	ADDL	SUBR WVD	POLICY NUM	BER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	· · · · · · · · · · · · · · · · · · ·
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	CLAIMS-MADE X OCCUR							DAMAGE TO RENTED PREMISES (Ea occurrence)	\$100,000
								MED EXP (Any one person)	\$10,000
								PERSONAL & ADV INJURY	\$1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:							GENERAL AGGREGATE	\$1,000,000
	POLICY X PRO- JECT X LOC							PRODUCTS - COMP/OP AGG	\$1,000,000
	OTHER:								
	AUTOMOBILE LIABILITY			BAP9483148-03		05/01/2014	05/01/2015	COMBINED SINGLE LIMIT (Ea accident)	\$1,000,000
	X ANY AUTO							BODILY INJURY ( Per person)	
	ALL OWNED SCHEDULED							BODILY INJURY (Per accident)	
	AUTOS							PROPERTY DAMAGE	
	X HIRED AUTOS X AUTOS							(Per accident)	
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	AMEC Environment & Infrastru	ıctur	e, I	nc.	AUTHORIZED R	EPRESENTATIVE	E		
	1105 Lakewood Parkway, Suite	e 100	)						i i

AMEC Environment & Infrastructure, Inc. 1105 Lakewood Parkway, Suite 100 Alpharetta GA 30009 USA

Aon Risk Services Northeast, Inc.

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ACORD 25 (2014/01)

Sample Insurance Certificate/

Licenses/Forms

City of Fort Lauderdale

Intracoastal Waterway -

Las Olas Marina Dredging Project

ce Certificate

### **Company Licenses**







### State of Florida Department of State

I certify from the records of this office that AMEC ENVIRONMENT & INFRASTRUCTURE, INC. is a Nevada corporation authorized to transact business in the State of Florida, qualified on August 3, 2000.

The document number of this corporation is F00000004389.

I further certify that said corporation has paid all fees due this office through December 31, 2014, that its most recent annual report/uniform business report was filed on January 16, 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 Sixteenth day of January, 2014



Ken Detron Secretary of State

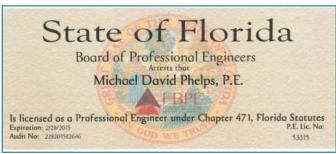
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To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.

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

#### **Professional Licenses**

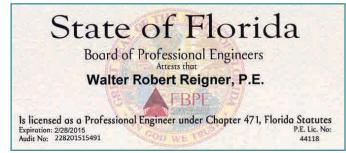


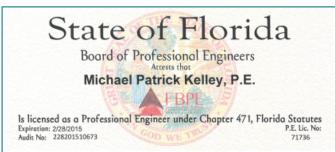


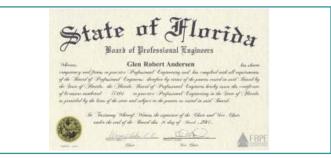


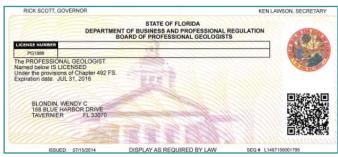






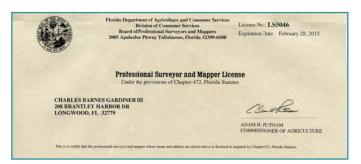


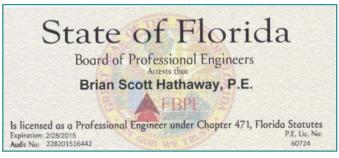


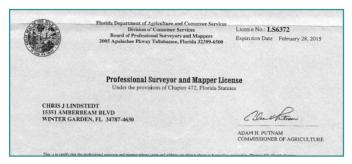


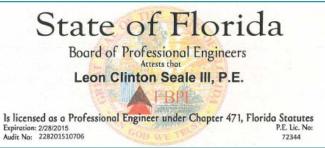


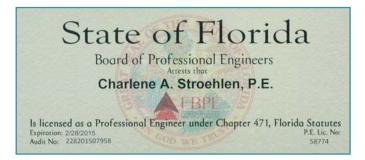
#### **Professional Licenses Continued**













Sample Insurance Certificate/

Licenses/Forms

# Minority Business Enterprise Certification - Dredging & Marine Consultants



Office of Supplier Diversity

#### Dredging & Marine Consultants, LLC

Active

Profile Comn

Commodity Codes

Name: Dredging & Marine Consultants, LLC

Shortname: DMC
Business Designation: corporation

Contact: Shailesh Patel
Address: 4643 S. Clyde Morris Blvd.
Port Orange, FL 32129
County: Volusia

Phone: 386-304-6505
 Fax: 386-304-6506
 Email: spatel@dmces.com

Designations

ASIAN AMERICAN: August 22, 2013 - August 22, 2015



#### **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.

NAME	RELATIONSHIPS	
N/A		
	-	
In the event the vendor does not indicate any vendor has indicated that no such relations!	names, the City shall interpret this to mean that the nips exist.	
AMEC Environment & Infrastructure, Inc., c from collusion.	ertifies that this offer is made independently and free	е
Writer Reigner	September 29, 2014	
Signature	Date	

#### AMEC 2000 East Edgewood Suite No. 215 Lakeland, Florida 33803 863.667.2345

