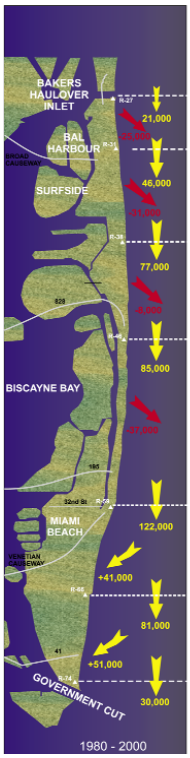
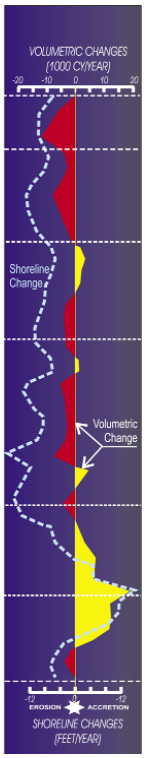
Civil/Environmental Engineering Services
for
City of Fort Lauderdale Intracoastal Waterway
Las Olas Marina Dredging Project
RFQ # 946-11484

Request for Qualifications






CITY OF FORT LAUDERDALE

Prepared For:
Mr. Ronald Archey
City of Fort Lauderdale
Procurement Services Division
Fort Lauderdale City Hall
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, FL 33301

COASTAL SYSTEMS INTERNATIONAL

Prepared By:
Mr. Timothy K. Blankenship, P.E.
Coastal Systems International, Inc.
464 South Dixie Highway
Coral Gables, FL 33146

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COASTAL SYSTEMS INTERNATIONAL, INC.
464 South Dixie Highway • Coral Gables, Florida 33146
Tel: 305-661-3655 • Fax: 305-661-1914
www.coastalsystemsint.com

341800

September 29, 2014

Mr. Ronald Archey, Procurement Specialist
CITY OF FORT LAUDERDALE
Procurement Services Division
100 N. Andrews Avenue, 6th Floor
Fort Lauderdale, Florida 33301

RE: RESPONSE TO REQUEST FOR QUALIFICATIONS FOR CIVIL/ENGINEERING SERVICES FOR THE CITY OF FORT LAUDERDALE INTRACOASTAL WATERWAY – LAS OLAS MARINA DREDGING PROJECT

Dear Mr. Archey:

Coastal Systems International, Inc. (Coastal Systems) is pleased to submit the attached original, five copies, and one CD of the qualifications and performance data in response to the above-referenced Request for Qualifications. This Statement of Qualifications (SOQ) includes a summary of our team's experience with the requested types of coastal and marine projects and key project team resumes on Standard Form 330 (SF-330).

Coastal Systems is known in Florida for delivering solutions for unique and complex coastal and marine projects, and we look forward to applying our experience and innovative spirit to the benefit of the City of Fort Lauderdale. Coastal Systems provides field-to-finish services with top quality hydrographic surveying, coastal/waterfront/civil engineering, marine environmental, construction administration and regulatory permitting capabilities in-house. We have assembled a team of top talent that is experienced in implementing projects on the east coast of Florida. The following is an overview of the unique capabilities and strengths that the Coastal Systems team can offer to the City of Fort Lauderdale:

Project Area Experience: Coastal Systems has provided waterfront consulting services for the Bahia Mar Yachting Center since 2002, and served as Engineer-of-Record for the dredging conducted in 2003 as part of the site redevelopment. The firm has conducted surveys and evaluated options to resolve the mitigation (permitted by other consultants) compliance until the lease rights were sold this year. The "connector" areas have been evaluated adjacent to the Intracoastal Waterway, and dredging volumes estimated. Coastal Systems has extensive data and background information in this project area, and this working knowledge will reduce consulting costs.

Broward County Experience: Coastal Systems has a proven track record working in Broward County, designing and processing environmental permits for coastal and waterfront projects. Specifically:

- Pier 66 Marina Redevelopment
- Hillsboro Inlet: Channel Dredging, Maintenance Sand Bypassing (dredging) and Artificial Reef
- Hilton Ft. Lauderdale Marina
- Las Olas Corridor Improvements and Channel Square

Coastal Systems has extensive experience with environmental permit processing through local, state and federal agencies that will have jurisdiction over the dredging at Las Olas Marina and at Bahia Mar.

Public Sector Clients - Broward County
Coastal Systems has established working relationships with Broward County public sector clients including the following:

- City of Ft. Lauderdale – as subconsultant to EDSA on the Las Olas Corridor Master Planning and to IBI Group on the Channel Square master planning
- Broward County
- City of Hollywood
- City of Hallandale Beach
- Town of Hillsboro Beach
- Hillsboro Inlet District

Subconsultants
Coastal Systems has teamed with the following subconsultants that are also certified M/WBE or DBE firms:

- *Tierra South Florida* **–** Geotechnical Engineering and Environmental Sampling/Testing; certified Disadvantaged Business Enterprise (DBE) and a Minority Business Enterprise (MBE) with a satellite office in the City of Ft. Lauderdale
- *F. R. Aleman* – land surveying; certified Minority Business Enterprise (MBE) and Disadvantaged Business Enterprise (DBE)

Dredging and Environmental Permitting Experience
Coastal Systems is an industry leader in Florida with regard to the successful implementation of large-scale and complex waterfront engineering projects. Coastal Systems will use their expertise in environmental permitting to ensure that the Project initial design concept not only meets the needs of the City with regard to form and function an engineering perspective, but is also feasible in the context of local, state and federal environmental regulations that protect the sensitive marine environment within Broward County. Coastal Systems maintains a dedicated staff of professionals that regularly process environmental permits for marine and waterfront projects. This team works closely with the design team to ensure permitting feasibility through the design process. Coastal Systems has demonstrated experience securing environmental permits through local, state and federal agencies with jurisdiction in Broward County.

Contact Information:
Firm legal name: Coastal Systems International, Inc.
Phone: (305) 661-3655
Fax: (305) 661-1914
Contact: Timothy K. Blankenship
E-mail: tblankenship@coastalsystemsint.com

We look forward to the opportunity to provide effective project solutions for the City of Fort Lauderdale. Should you have any questions or require any additional information, please do not hesitate to contact me.

Sincerely,
COASTAL SYSTEMS INTERNATIONAL, INC.

Timothy K. Blankenship, P.E.
Director

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:_____ 9/29/14
(signature) (date)

Name (printed) **Timothy K. Blankenship** Title: **Director**

Company: (Legal Registration): **Coastal Systems International, Inc.**

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

Address: **464 South Dixie Highway**
City **Coral Gables** State: **FL** Zip: **33146**

Telephone No. **(305) 661-3655** FAX No. **(305) 661-1914** Email: **tblankenship@coastalsystemsint.com**

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

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

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

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

Addendum No.	Date Issued

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

3. QUALIFICATIONS OF THE FIRM

COASTAL SYSTEMS INTERNATIONAL, INC.

Coastal Systems International, Inc. (Coastal Systems) has an established reputation for planning effective strategies and delivering complex projects in coastal and other waterfront environments. For over 20 years, Coastal Systems has helped clients realize their vision by engineering cost-effective solutions in the design of marinas, beaches, coastal structures, environmental and public space enhancements, and other specialized projects. We have amassed significant experience in completing projects with unique designs and requiring construction under challenging conditions. From initial field investigations in hydrographic surveying and marine resource assessments through environmental impact assessment, regulatory permitting, design and construction, we provide clients with a field-to-finish solution.

TIERRA SOUTH FLORIDA

Tierra South Florida, Inc. (TSF) is a full service consulting geotechnical engineering, construction materials testing and inspections engineering firm with capabilities to provide test borings, engineering analyses and reports, AutoCAD and Microstation plan sheets, laboratory soils testing, and construction materials testing. TSF was incorporated in the State of Florida in 2003. The professional team has been working together since 2000 and is committed to providing quality, responsive service establishing a reputation for sound approaches and professional competence in a wide range of technically demanding areas. The firm's services also include threshold/special inspection and roofing inspection services. TSF is a certified Disadvantaged Business Enterprise (DBE) with the Florida Department of Transportation and a certified Minority Business Enterprise (MBE) with the State of Florida's Office of Supplier Diversity. The firm's staff includes principal engineers with more than 27 years of experience in geotechnical, construction, laboratory and field materials testing and inspection services. TSF feature Masters Degree level or higher educational background amongst their Registered Professional Engineers and maintain licenses in the State of Florida.

Please refer to Section 12 for detailed information on Tierra South Florida.

F.R. ALEMAN & ASSOCIATES

FRA is a Minority Owned Consulting Engineering & Surveying Firm; FRA is certified as a Disadvantaged Business Enterprise (DBE) and Minority Business Enterprise (MBE) with the state of Florida. FRA's knowledge and expertise lay in Project Development and Environmental Studies; Major and Minor Highway Design - Roadway; Traffic Engineering and Operations Studies; Intelligent Transportation Systems Analysis Design and Implementation; Traffic Operations Design; Surveying and Mapping; Construction Engineering Inspection; Planning and Subsurface Utility Engineering. The FRA Team is comprised of nearly seventy full-time professionals who take pride in doing their jobs exceptionally well. The firm has grown to five offices located throughout the State of Florida in Miami (headquarters), Weston, Orlando, Tampa and Jacksonville. Additionally, FRA has been recognized by Hispanic Business Magazine, since 1998 among the "Top 500 largest Hispanic-owned Companies in the United States".

Please refer to Section 12 for detailed information on F.R. Aleman & Associates.

The following pages (completed on Standard Form 330) outline detailed descriptions of the firm's qualifications, including relevant project experience.

ARCHITECT – ENGINEER QUALIFICATIONS

PART I – CONTRACT – SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*
City of Ft. Lauderdale Intracoastal Waterway – Las Olas Marina Dredging Project

2. PUBLIC NOTICE DATE	3. SOLICITATION OR PROJECT NUMBER
August 29, 2014	**RFQ # 946-11484**

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Mr. Timothy K. Blankenship

5. NAME OF FIRM
Coastal Systems International, Inc.

6. TELEPHONE NUMBER	7. FAX NUMBER	8. E-MAIL ADDRESS
(305) 661-3655, ext. 130	**(305) 661-1914**	**tblankenship@coastalsystemsint.com**

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

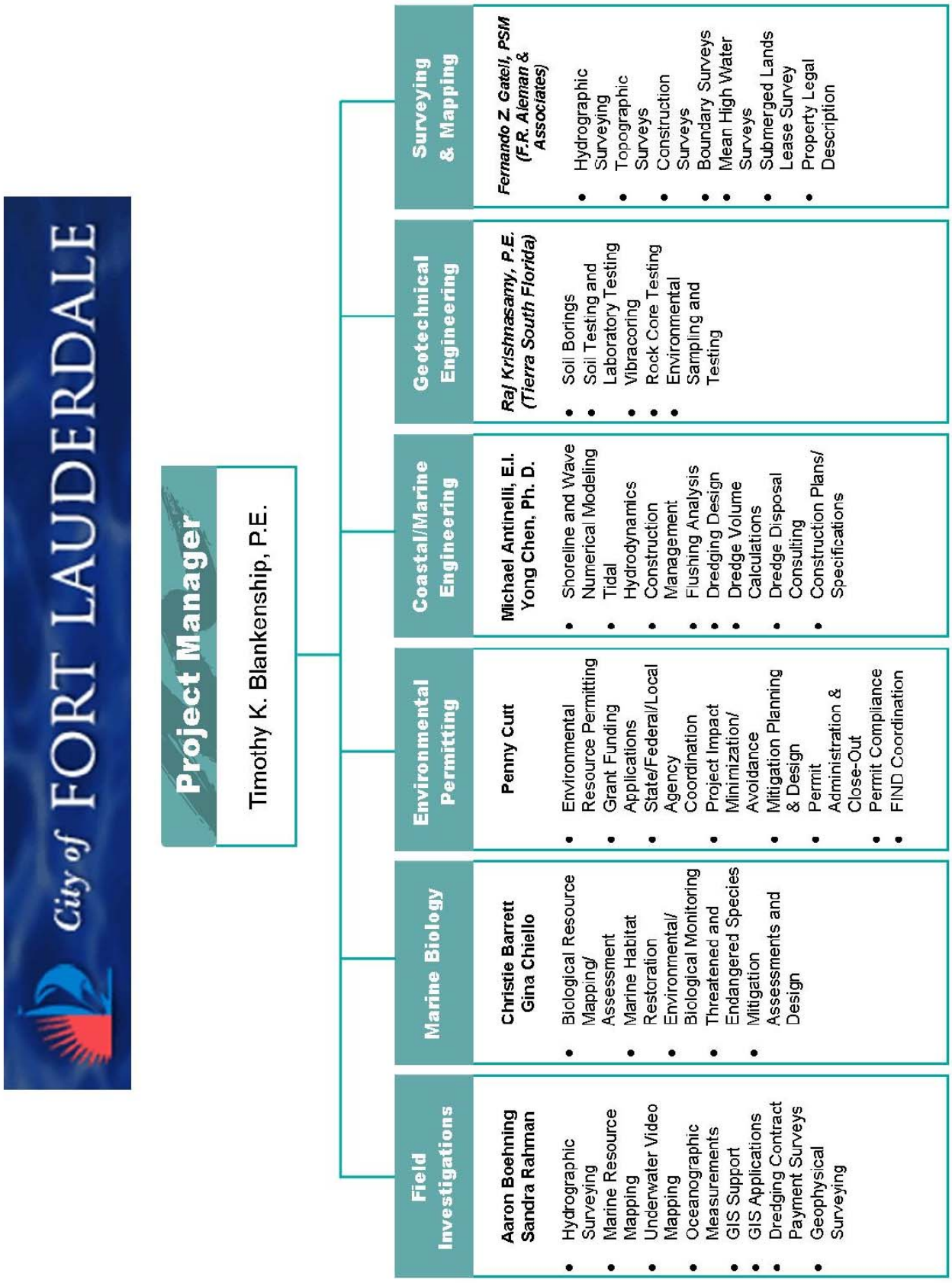
	(Check) PRIME	(Check) JV PARTNER	(Check) SUBCON-TRACTOR	9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
a.	X			Coastal Systems International, Inc. ☐ CHECK IF BRANCH OFFICE	464 South Dixie Highway Coral Gables, Florida 33146	Coastal/Marine Engineering Hydrographic Surveying Marine Biology Environmental Permitting
b.				Coastal Systems International, Inc. ☒ CHECK IF BRANCH OFFICE	2047 Vista Parkway, #101 West Palm Beach, Florida 33411	Environmental Permitting Marine Biology
c.			X	Tierra South Florida ☒ CHECK IF BRANCH OFFICE	2209B NE 54th Street Ft. Lauderdale, Florida 33308	Geotechnical Engineering Environmental Sampling/Testing
d.			X	F.R. Aleman & Associates ☐ CHECK IF BRANCH OFFICE	10305 NW 41st Street Suite 200 Miami, FL 33178	Land Surveying Submerged Lands Survey

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

☒ *(Attached on the following page)*

STANDARD FORM 330 (1/2004) **PAGE 1**

ORGANIZATIONAL CHART OF PROPOSED TEAM



F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **1**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Bahia Mar Yachting Center **Fort Lauderdale, FL**	**2002**	**2003**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
LXR Luxury Marinas **2301 SE 17th St** **Fort Lauderdale, FL 33316**	**Mr. Kevin Quirk**	**(954) 873-3157**

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

Coastal Systems International, Inc. designed the maintenance dredging and bulkhead replacement for Bahia Mar's marina replacement project. Bahia Mar is the world's original mega-yacht marina, built in 1949, and is home to the Fort Lauderdale International Boat Show. The dredging required excavating approximately 26,000 cubic yards of material to accommodate larger vessels and 235 new slips. Coastal Systems designed dredged material handling areas to facilitate material drying prior to trucking to an approved landfill in accordance with the environmental permits. Disposal in the landfill was required due to the contaminants in the dredged material. In addition, turbidity control plans were developed to maintain turbidity within the permit limits. Coastal Systems prepared construction plans and specifications for the dredging and marine works project. Coastal Systems provided pre/post dredging hydrographic surveys to confirm the dredging was completed in accordance with the plans and to confirm dredge volumes. Coastal Systems also monitored trucking tickets and disposal records. Consulting in dredged material handling were provided to support construction.

Bulkhead improvements included the design of steel sheet piling replacement walls and marina utility penetrations for the docks. Construction administration services were provided, and construction was completed by November, 2003, in time for the boat show.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida	Prime

STANDARD FORM 330 (1/2004) **PAGE 3**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **2**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Bahia Mar Maintenance Dredging **Fort Lauderdale, FL**	**2014**	**N/A**

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
LXR Luxury Marinas **2301 SE 17th St** **Fort Lauderdale, FL 33316**	**Mr. Kevin Quirk**	**(954) 873-3157**

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

Coastal Systems conducted marine resource and hydrographic surveys to design maintenance dredging within the marina basin at the Bahia Mar Yachting Center. In addition surveys were conducted of the "triangular" areas between the proposed Intracoastal Waterway channel deepening and the basin limits. Preliminary dredging designs were completed to evaluate the dredge plan limits, depths and volumes to provide access from the marina basin to the proposed channel.

Mitigation was required to offset impacts to seagrass resulting from the permitted dredging in 2003; the required seagrass mitigation and project permitting was conducted by others. At the end of the prescribed monitoring period, the agencies determined that the seagrass mitigation did not meet the required success criteria.

Coastal Systems worked with Bahia Mar and FIND in 2010 to evaluate the potential to combine the Bahia Mar mitigation obligations with the mitigation being evaluated to facilitate FIND dredging operations. FIND ultimately decided to eliminate the portions of their project that required seagrass mitigation. Coastal Systems coordinated closely with FIND in the evaluation of the Bahia Mar site as a potential dredged material handling area for the navigation channel work. In 2012 and 2013 Coastal Systems evaluated other mitigation options that could satisfy the outstanding mitigation obligations for Bahia Mar. Follow up in water assessments of the on-site and off-site mitigation were conducted to determine if any ecological lift could be considered for the previously conducted work. Detailed analyses were conducted to consider on site, off site, and out of county mitigation opportunities; as well as in kind and out of kind options. A matrix was prepared summarizing the results, which included potential ecological lift, estimated costs, and potential for success. The results of these investigations were presented to the environmental regulatory agencies and a plan to move forward was outlined. The marina was sold in the summer of 2014 prior to implementation of the strategy to offset the mitigation obligations.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida West Palm Beach, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

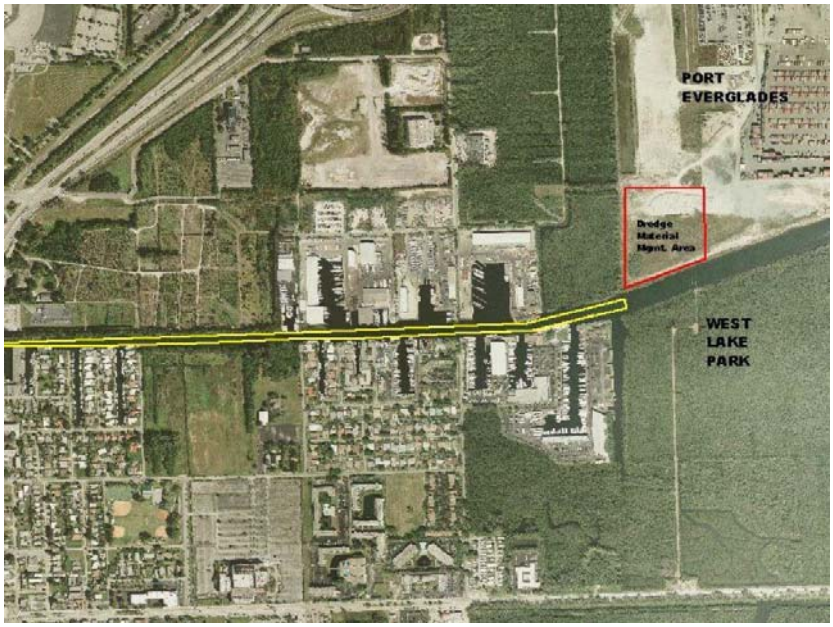
20. EXAMPLE PROJECT KEY NUMBER: **3**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Dania Cutoff Canal Deepening Port Everglades, FL	**2012**	**N/A**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Florida Inland Navigation District 1314 Marcinski Road Jupiter, FL 33477	**Mr. Mark Crosley**	**(561) 627-3386**

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



Tierra South Florida performed a limited pre-dredge soil sampling and analysis for the Dania Cutoff Canal Deepening Project in Port Everglades-Broward County, Florida. Collected 4 samples within the dredge material. The samples were collected at a depth of 6 inches. The samples were analyzed for EPA method 8260 (purgeable volatiles), 8270 (extractable organics), FL-PRO (Florida petroleum residual organics), 8081A/8082 (Organochlorine pesticides/polychlorinated biphenyls) and 8 RCRA metals. A report was issued which summarizing the findings. Completed on time and within budget in 2012.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	tierra SOUTH FLORIDA Tierra South Florida	Ft. Lauderdale, Florida	Prime

STANDARD FORM 330 (1/2004) **PAGE 3**

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **4**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Dinner Key Marina Maintenance Dredging Miami, FL	**2009**	**2009**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
City of Miami 3400 Pan American Drive Miami, Florida 33133	**Mr. Stephen Bogner**	**(305) 579-6950**

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

Coastal Systems is under contract with the City of Miami to provide consulting engineering services for miscellaneous repairs and improvements to the Dinner Key Marina along the Coconut Grove Waterfront. Dinner Key is one of the largest wet slip marinas in South Florida with 582 wet slips. Services provided included the following:

- Hydrographic Survey – survey of the entire marina and entrance channel to assess water depths and to recommend areas for maintenance dredging.
- Marine Resource Survey – conducted seagrass surveys in areas of proposed maintenance dredging to evaluate potential impacts to marine resources.
- Maintenance Dredging – design and permitting of 5,500 cubic yard dredging project for marina slips including dredged material soils investigation and design of material handling/placement.
- Dredged Soils Investigation – conducted sampling and testing of soils in accordance with DEP protocol to evaluate potential dredged material disposal areas based on petroleum and heavy metal contaminants.

Coastal Systems assisted in negotiating issuance of permits with DERM and the U.S. Army Corps of Engineers for maintenance dredging. The project was exempt from requiring an environmental resource permit from the DEP, and as part of this permitting process, a letter of consent was granted by the DEP to authorize maintenance dredging of State-owned sovereign submerged lands. Mitigation was required for the impacts of the maintenance dredging activities to the unvegetated bay bottom in the form of installation of limestone riprap on two (2) of the existing spoil islands immediately south of the Dinner Key Marina site. Coastal Systems aided in the marine resource mapping of the spoil islands for precise placement of riprap to avoid impacts to existing seagrass beds and the mangrove-predominant shoreline. Coastal Systems prepared construction plans and specifications and assisted the City in the bid process. In addition, construction administration along with Resident Project Representative (RPR) services.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables/West Palm Beach, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **5**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Hillsboro Inlet **Broward County, FL**	**Ongoing**	**N/A**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Hillsboro Inlet District **907 Hillsboro Mile** **Hillsboro Beach, Florida 33062**	**Mr. Jack Holland**	**(561) 479-5627**

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

Hillsboro Inlet is one of the most successfully managed coastal inlets along the east coast of Florida. The Hillsboro Inlet Improvement and Maintenance District (District) is a special taxing district created in 1957 consisting of representatives from Broward County and seven nearby municipalities. The District operates a hydraulic cutterhead dredge to maintain navigation through the inlet and to bypass sand to maintain the natural sediment transport along the beach annually. The District has maintained the inlet since the early 1960's, and Coastal Systems prepared the inlet management plan that was adopted by the Florida Department of Environmental Protection (DEP) in 1997. The plan establishes a goal of bypassing approximately 120,000 cubic yards of sand annually.

Coastal Systems was retained by the District to process environmental regulatory permits for the ongoing maintenance dredging and inlet bypassing. Permit applications were processed through the U.S. Army Corps of Engineers, DEP, and the Broward County Environmental Protection and Growth Management Department. Coastal Systems worked closely with the agencies to evaluate potential impacts to marine resources from the dredging operations. Marine resource surveys were conducted to evaluate seagrass beds within the inlet adjacent to the navigation channel that will be maintained at a depth of -12 feet. Coastal Systems designed and permitted the inlet exterior channel and sand trap expansion that was constructed in 2003. This exterior area is permitted for dredging to a depth of -20 feet. Nearshore hardbottom communities were mapped to evaluate potential impacts, and dredge operations and water quality constraints were negotiated with the agencies for the exterior sand trap and channel dredging area.

Bypassing operations place the sand on the beach immediately downdrift of the inlet. To protect the marine turtle nesting beach, permit conditions were negotiated with the U.S. Fish and Wildlife Service, as the biological opinion was issued. The beach fill design and operational constraints were also negotiated with the Florida Fish and Wildlife Conservation Commission, and permit conditions were processed for beach fill operations during marine turtle nesting season. Coastal Systems negotiated proprietary authorization for the dredging and beach fill placement through the DEP State Lands, and a letter of consent to use sovereign submerged lands was granted for the inlet bypassing activities.

As part of the inlet management plan, the District acquired a new hydraulic cutterhead dredge in 2008. The new $1.8M dredge will increase capacity and efficiency for operations at the inlet. Coastal Systems also processed DEP funding applications for cost-sharing of the dredge acquisition as part of the prioritized DEP inlet funding assistance program enacted by the Florida legislature in 2008.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida West Palm Beach, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **6**

21. TITLE AND LOCATION *(City and State)*
Hilton Ft. Lauderdale Marina
Ft. Lauderdale, FL

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2014	**N/A**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
LXR Luxury Marinas **2301 SE 17th St** **Fort Lauderdale, FL 33316**	**Mr. Kevin Quirk**	**(954) 873-3157**

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

Coastal Systems performed a hydrographic survey of the megayacht slips at the Hilton Ft. Lauderdale Marina along the Intracoastal Waterway. The marina is located on 17th Street, just north of Port Everglades. The slips can accommodate vessels up to 300 feet long, and the hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

Contours were generated from digital terrain modeling software, and maintenance dredging volumes were calculated for a range of depths as coordinated with the marina manager to restore the megayacht slips. A base map was prepared along with an engineering report summarizing the maintenance dredging recommendations. Coastal Systems conducted an updated marine resource survey in 2014, prior to the end of the federal seagrass growing season time frame.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **7**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Island Gardens Mega-Yacht Harbor Miami, FL	**Ongoing**	**2015 (Est.)**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Flagstone Development Corporation 888 MacArthur Causeway Miami, FL 33132	**Dr. A. Oktay Cini**	**(305) 531-3747**

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

Coastal Systems International Inc. (Coastal Systems) designed and secured all environmental permits for a 50-slip mega-yacht harbor at the proposed Flagstone Island Gardens development on Watson Island in the City of Miami. This waterfront project is being developed as a public-private partnership between the City of Miami and Flagstone Properties, LLC. The mixed-use development includes two (2) luxury hotels, fractional units, a world-class spa, retail, dining and entertainment overlooking magnificent public spaces, and a mega-yacht harbor on the beautiful waters of Biscayne Bay.

Coastal Systems conducted field investigations consisting of bulkhead assessments and hydrographic surveys at the marina site. Marine resource surveys were also conducted to document resources that will be unavoidably impacted by the deep dredging required for the harbor basin to accommodate large vessels, such as fish, seagrass, hardbottom and sponge habitat. Significant biological assessments, alternatives analyses and mitigation negotiations were required by the environmental agencies due to the project's location within protected Johnson's seagrass critical habitat, the Biscayne Bay Aquatic Preserve, and under the purview of the Miami-Dade County Manatee Protection Plan.

Regulatory approvals were secured from the U.S. Army Corps of Engineers, South Florida Water Management District and the Miami-Dade County Department of Environmental Resources Management (DERM). The approved mitigation design includes marine resource relocation, creation of artificial reef habitat, and restoration of seagrass and sponge habitat.

Coastal Systems coordinated with the development consultant team that includes environmental attorneys, engineers, architects and fuel and retail/marketing experts to ensure design optimization. In addition, U.S. Department of Homeland Security requirements were addressed due to the international use of the marina and proximity to the Port of Miami.

Coastal Systems prepared final construction documents that incorporate details for dredging, a floating water taxi dock, and fixed piers that can accommodate vessels up to 465 feet in length. The harbor will be further protected from waves and wakes from the nearby cruise ship turning basin by a fixed wave attenuator to be installed under the piers. Dredging design was completed for the excavation of 214,000 cy with placement in dredge hole fill areas as mitigation for seagrass and sponge resources. Multibeam hydrographic surveys were conducted of the dredge hole areas to provide 3-D resolution for digital terrain modeling to design the underwater fill placement areas.

High capacity marina utilities are being designed, including fire protection, electrical and cable services, potable water, in-slip fueling, and sewage pump-out facilities. Construction of the dredging and bulkhead commenced in August, 2014 with the scheduled completion of the marine works planned for October, 2015.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **8**

21. TITLE AND LOCATION *(City and State)*: **Pier 66 Redevelopment, Fort Lauderdale, FL**

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	**2014**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
LXR Luxury Marinas 2301 SE 17th St Fort Lauderdale, FL 33316	**Mr. Kevin Quirk**	**(954) 873-3157**

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

Pier 66 Marina is located in Ft. Lauderdale at the Hyatt Regency Resort on the Intracoastal Waterway adjacent to the deep water in Port Everglades.

Coastal Systems designed the redevelopment of the marina to accommodate a range of vessels with seasonal slip mixes ranging from 80 to 99 vessels. The marina is designed to accommodate large megayachts in excess of 250 feet long during the yachting season in South Florida, but the docks are designed with flexibility in the utilities to accommodate smaller vessels depending on the market demand. Coastal Systems designed the marine structures and the utilities infrastructure for the marina. Concrete fixed docks were designed to moor the larger vessels along A and F docks within the basin and to avoid seagrass impacts. Mooring hardware and fenders were designed for the larger docks to accommodate the larger yachts. Floating docks were designed for Piers B and C within the marina basin to moor vessels between 50 and 90 feet long. These docks were designed to avoid impacts to seagrass within the existing marina fairways, and design criteria was prepared for the floating docks including wind, waves, tidal current, and storm surge. Replacement bulkheads, totaling 2,600 feet of shoreline, were also designed throughout the marina. The bulkheads were coordinated with the landscape architect to provide a promenade along the waterfront, and the bulkheads along F Dock also provide mooring for vessels ranging from 60 to 90 feet long. Marina utilities were planned and designed for the facility.

Coastal Systems worked with marina management to design and specify shore power pedestals to meet the requirements of the seasonal slip mixes, yet also to provide 3-phase power at 480V for the superyachts. Fire protection and domestic water services were designed, along with high speed fueling and communications. Utility routing design was completed to coordinate all of the utilities along the fixed and floating docks. Coastal Systems completed the environmental permitting for the marina redevelopment through the U.S. Army Corps of Engineers, Florida Department of Environmental Protection, and Broward County. Key environmental issues addressed through the permitting process included the avoidance of impacts to seagrass and water quality criteria compliance. Coastal Systems also provided sovereign submerged lands use consulting services to secure the State Lands Leases required for A Dock along the Intracoastal Waterway. Coastal Systems provided construction administration and Resident Project Representative (RPR) services throughout construction.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida West Palm Beach, Florida	Prime

F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT *(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)*	20. EXAMPLE PROJECT KEY NUMBER **9**

21. TITLE AND LOCATION *(City and State)*	22. YEAR COMPLETED	
	PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Rybovich Marina Redevelopment **West Palm Beach, FL**	**2010**	**2010**

23. PROJECT OWNER'S INFORMATION		
a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Huizenga Holdings **450 East Las Olas Boulevard, Ste. 1500** **Ft. Lauderdale, Florida 33301**	**Mr. Alex Muxo**	**(954) 627-5000**

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

The Rybovich Marina Redevelopment project in West Palm Beach will transform the waterfront in the City. The marina will include approximately 147 wet slips to accommodate megayachts up to 240 feet long. Coastal Systems designed the following marine works for the project:

- 3,400 linear feet of steel sheet piling bulkhead
- 125,000 cubic yards of dredging
- Dredged material placement areas near Little Munyon Island as seagrass habitat
- Concrete piers for the 660-ton marine travelift

Coastal Systems performed a site-specific coastal engineering study to provide design loads for the concrete floating docks proposed for the marina. Numerical modeling utilizing the MIKE-21 software was conducted to evaluate wave attenuation for the marina. Tidal currents were also simulated with the MIKE-21 hydrodynamic model to evaluate flushing and to provide design criteria for vessel navigation. The design effort required a multi-disciplined team coordinating between the marine works contractor, floating dock manufacturer, upland civil engineers, architects and specialty boatyard consultants.

As part of the marina environmental permitting, Coastal Systems collaborated with the marina owner to develop site plans that would avoid and minimize impacts to seagrass. A site alternatives analysis was prepared and detailed marine resource and hydrographic surveys were conducted within the existing and proposed marina basin areas, as well as along the access corridors.

Coastal Systems coordinated with marina and regulatory agencies to design mitigation and habitat restoration for the unavoidable impacts using the UMAM. Mitigation included seagrass habitat restoration offsite through the use of clean dredged material from the Project expansion area to fill a 2.9-acre dredge hole, as well as protection of adjacent seagrass habitat and out-of-kind native wetland/upland habitat restoration at Little Munyon Island. Construction administration services were provided for the marine works that were completed in phases between 2007-2010.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT			
	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida	Prime

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F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER: **10**

21. TITLE AND LOCATION *(City and State)*
Vertical Yacht Clubs Marina Mile
Fort Lauderdale, FL

22. YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2008	**Pending**

23. PROJECT OWNER'S INFORMATION

a. PROJECT OWNER	b. POINT OF CONTACT NAME	c. POINT OF CONTACT TELEPHONE NUMBER
Vertical Yacht Club Development, LLC **3990 Sheridan Street, Suite 107** **Hollywood, Florida 33021**	**Mr. John Ross**	**(954) 374-2782 Ext. 211**

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

Vertical Yacht Club Marina Mile will be the first dry storage facility designed exclusively for megayachts up to 85-feet in length and weighing up to 90 tons. The facility proposes a conversion of a boat maintenance and repair yard along the Marina Mile stretch of the New River in Ft. Lauderdale, Florida to a state-of-the-art dry-storage facility designed for storage of 46 luxury yachts, utilizing a patented automated laser-guided overhead bridge crane system. The yachts will be stored in custom climate-controlled suites which will include shore power connections and other luxury amenities.

Coastal Systems designed the marine works for the facility, which included excavation of uplands for an interior launching basin, dredging of submerged lands, and construction of 950 linear feet of bulkhead and adjacent staging docks. The planning and design of the facility required close coordination with the multi-disciplined design team of Architects and Engineers as well as the marina developer. Hydrographic and marine resource surveys were conducted, and numerical modeling studies simulated the tidal hydrodynamics utilizing the Danish Hydraulic Institute (DHI) MIKE-21 HD software. Flushing and dispersion studies were also completed to evaluate the water quality and flushing rates for the proposed interior launching basin.

Environmental permits were processed through the Florida Department of Environmental Protection (FDEP), U.S. Army Corps of Engineers (ACOE) and the Broward County Environmental Protection and Growth Management Department (EPGMD). Environmental permitting issues raised by these regulatory agencies included, but were not limited to verification of slip allocation within the Broward County Manatee Protection Plan; navigation clearance with the ACOE and the Florida Department of Transportation (FDOT); resolution of concerns regarding water quality and flushing rates within the proposed interior launching basin; and sovereign submerged land lease coordination. Coastal Systems obtained environmental permits from the regulatory agencies in the Fall of 2008, and construction is pending.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

	(1) FIRM NAME	(2) FIRM LOCATION	(3) ROLE
a.	Coastal Systems International, Inc.	Coral Gables, Florida	Prime

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H. ADDITIONAL INFORMATION

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

For over 20 years, Coastal Systems has helped clients realize their vision by engineering and securing environmental permits for cost-effective solutions relative to streetscapes, public parks and open spaces, marinas, beaches, coastal structures, environmental/ecosystem enhancement and restoration, and other specialized projects. Our engineers have experience evaluating existing coastal and marine structures and can prepare project plans and specifications for both coastal and marine projects. Our field team has capabilities to conduct biological assessments and physical monitoring, as well as prepare corresponding reports. Our staff includes past regulators with unmatched experience preparing and processing permit applications. We have a proven track record of securing grants for our clients, as well as serving as expert witnesses for administrative hearings. Our team is ready to provide assistance with bidding construction contracts, as well as inspections of construction projects. Our firm has extensive knowledge of the coastal processes and aquatic habitats in Broward County, having worked on numerous projects throughout this region. The company maintains a diversified staff of more than 30 individuals, including specialized Project Managers, Engineers, Biologists, and Surveyors.

The firm has unique capabilities and experience providing consulting services to municipal clients, including the following public sector clients in Southeast Florida:

- City of Fort. Lauderdale, Broward County*
- Town of Palm Beach, Palm Beach
- Town of Hillsboro Beach, Broward County
- City of Hollywood, Broward County
- City of Hallandale Beach, Broward County
- City of West Palm Beach, Palm Beach County
- City of Sunny Isles Beach, Miami-Dade County
- Village of Key Biscayne, Miami-Dade County
- City of Miami Beach, Miami-Dade County
- City of Miami, Miami-Dade County
- Village of Bal Harbour, Miami-Dade County

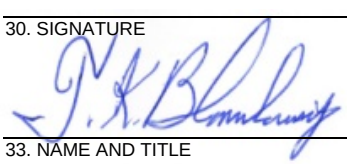
**As subconsultant to EDSA and to IBI Group*

Coastal Systems has planned, designed, permitted and managed construction for a variety of coastal and inland dredging projects throughout Southeast Florida and for international projects. The scale and complexity of the projects have ranged from small maintenance projects with less than 500 cubic yards (cy) to channel dredging projects exceeding 800,000 cy. Dredging design and dredged material handling are very specialized engineering disciplines, and each project is site specific. Coastal Systems has surveyed and designed dredging at one of the project sites, the Bahia Mar Yachting Center. An extensive amount of data at the site has been collected, and initial mitigation negotiations have been conducted.

The firm specializes in “Engineered Waterfront Environments” and the firm has designed a a variety of habitat restoration/creation projects over the years. These projects have included living shorelines, underwater fill placement for seagrass habitat, artificial reefs, and habitat creation components to marina/waterfront projects. In addition, the firm has designed coastal wetland restoration projects that have won awards for the use of native vegetation. The firm has designed many public space projects in coastal and waterfront areas where native vegetation and stormwater management have been designed as part of the firm’s sustainability practice. In addition, the firm integrates sustainable business practice in every day operations. These range from dedicated recycling of paper and other appropriate solid waste, the use of electronic media to minimize printing/plotting and the use of advanced web-based project management tools to facilitate project communication and to minimize traveling to various meetings.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of true facts.

30. SIGNATURE	32. DATE
	September 29, 2014

33. NAME AND TITLE

Timothy K. Blankenship, Director

ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER *(If any)*: **RFQ # 946-11484**

PART II – GENERAL CONDITIONS

(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
Coastal Systems International, Inc.	**1995**	**835411604**

2b. STREET	5. OWNERSHIP
464 South Dixie Highway	a. TYPE: **Corporation**
2c. CITY: **Coral Gables** / 2d. STATE: **Florida** / 2e. ZIP CODE: **33146**	b. SMALL BUSINESS STATUS
6a. POINT OF CONTACT NAME AND TITLE: **Mr. Timothy K. Blankenship, Director**	7. NAME OF FIRM *(If block 2a is a branch office)*
6b. TELEPHONE NUMBER: **(305) 661-3655, ext. 130** / 6c. E-MAIL ADDRESS: **tblankenship@coastalsystemsint.com**	

8a. FORMER FIRM NAME(S) *(If any)*	8b. YR. ESTABLISHED	8c. DUNS NUMBER
Coastal Technology Corporation	**1984**	

9. EMPLOYEES BY DISCIPLINE

a. Function Code	b. Discipline	c. No. of Employees (1) FIRM	c. No. of Employees (2) BRANCH
2	Administrative	8	
7	Biologist	2	2
8	CADD	6	
12	Civil Engineer	2	
24	Environmental Scientist	1	1
29	GIS Technician	2	
33/38	Land/Hydrographic Surveyor	2	
48	Project Manager	2	
57	Structural Engineer	2	
	Media Specialist	1	
	Coastal Engineers	5	1
	Total	33	4

10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

a. Profile Code	b. Experience	c. Revenue Index Number *(see below)*
A02	Aerial Photography	1
C07	Coastal Engineering	4
C15	Construction Management	2
D08	Dredging Studies and Design	2
E09	Environmental Impact Studies/Assessments	2
E10	Environmental & Natural Resources Mapping	2
G04	GIS	1
H01	Harbors, jetties, etc	2
H13	Hydro Survey	1
P06	Planning (Site, Installation & Project)	2
R06	Rehabilitations (Buildings/Structures)	1
R11	Rivers, Canals, Waterways	1
S04	Sewage Collection, Treatment & Disposal	2
S09	Structural Design	1
S13	Stormwater Handling	2
T04	Topographic Survey	1
W03	Water Supply Treatment & & Distribution	1
R04	Recreational Facilities (Parks, Marinas)	2

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS *(insert revenue index number shown at right)*

a. Federal Work	0
b. Non-Federal Work	**6**
c. Total Work	**6**

PROFESSIONAL SERVICES REVENUE INDEX NUMBER

1. Less than $100,000
2. $100,00 to less than $250,000
3. $250,000 to less than $500,000
4. $500,000 to less than $1 million
5. $1 million to less than $2 million
6. $2 million to less than $5 million
7. $5 million to less than $10 million
8. $10 million to less than $25 million
9. $25 million to less than $50 million
10. $50 million or greater

12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.

a. SIGNATURE: *T. K. Blankenship*

b. DATE: **September 29, 2014**

c. NAME AND TITLE: **Timothy K. Blankenship, Director**

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PROFESSIONAL LICENSES

The following pages enclose Coastal Systems' professional licenses and certifications. Professional licenses for the team's subconsultants are enclosed in Section 12.

State of Florida
Department of State

I certify from the records of this office that COASTAL SYSTEMS INTERNATIONAL, INC. is a corporation organized under the laws of the State of Florida, filed on October 14, 1994.

The document number of this corporation is P94000075733.

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 13, 2014, and its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Thirteenth day of January, 2014

Ken Detzner

Secretary of State

Authentication ID: CC3190650674

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

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

State of Florida

Board of Professional Engineers

Attests that

Coastal Systems International Inc

is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2015
Audit No: 228201503501

Certificate of Authorization

CA Lic. No:
7087

State of Florida

Board of Professional Engineers

Attests that

Timothy King Blankenship, P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015
Audit No: 228201519029

P.E. Lic. No:
55910

4. QUALIFICATIONS OF THE PROJECT TEAM

The following pages (completed on Standard Form 330) outline detailed descriptions of the Project Team's qualifications, as well as their participation in representative projects (detailed in Section 3). Subconsultant qualifications are incorporated into Section 12.

G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

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 under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Timothy K. Blankenship, P.E.	Project Manager	X	X		X	X	X	X	X	X	X
Yong Chen, Ph.D.	Coastal Engineer		X		X	X		X	X	X	
Michael Antinelli	Coastal Engineer							X	X		
Penny Cutt	Environmental Permitting Project Manager		X		X	X	X	X	X	X	X
Gina Chiello	Marine Biologist		X				X	X	X		X
Christie Barrett	Marine Scientist		X			X	X				
Sandra Rahman	GIS Analyst	X	X		X	X	X	X	X	X	X
Aaron Boehning	Hydrographic Surveyor		X		X	X	X	X	X	X	X
Raj Krishnasamy, P.E.*	Geotechnical Engineer (Tierra SF)			X							
Fernando Z. Gatell, PSM*	Land Surveyor (F.R. Aleman)										

29. EXAMPLE PROJECTS KEY

No.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	No.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Bahia Mar Yachting Center, Ft. Lauderdale, Florida	6	Hilton Ft. Lauderdale, Ft. Lauderdale, Florida
2	Bahia Mar Maintenance Dredging, Ft. Lauderdale, Florida	7	Island Gardens Mega-Yacht Harbor, Miami, Florida
3	Dania Cutoff Canal Deepening, Port Everglades, Florida	8	Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida
4	Dinner Key Maintenance Dredging, Miami, Florida	9	Rybovich Marina Redevelopment, West Palm Beach, Florida
5	Hillsboro Inlet, Broward County, Florida	10	Vertical Yacht Clubs Marina Mile, Ft. Lauderdale, Florida

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**Refer to resumes incorporated into Section 12.*

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Timothy K. Blankenship, P.E.	Project Manager	21	13

15. FIRM NAME AND LOCATION *(City and State)*
Coastal Systems International
Coral Gables, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
M.Sc./Coastal Engineering B.S./Civil Engineering	Professional Engineer, Florida, Virginia

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

Mr. Blankenship has over 20 years of experience in the civil and coastal engineering fields. His broad range of experience includes projects involving waterfront facility assessment and rehabilitation design, bridge engineering projects involving structural assessment, structural design and hydraulic analysis/design; land development projects including drainage design and environmental permitting, and construction phase services for several civil projects. He is experienced in all facets of coastal engineering including the planning, design and monitoring of shore protection projects. Projects have included beach nourishment and coastal structures such as jetties, breakwaters and groynes. He has conducted numerical modeling studies of coastal processes along shorelines as well as for the design of marinas and harbors. He has also planned and conducted field investigations consisting of hydrographic surveys, oceanographic data collection, and underwater inspections.

Mr. Blankenship has planned, designed, and managed construction for a variety of dredging and beach nourishment projects throughout Florida. He has managed initial field investigations including geotechnical and environmental sampling as well as marine resource and hydrographic surveys. He has a working knowledge of dredge plants and methodologies to specify appropriate means/methods based on the site-specific criteria. He has designed dredging of marinas and channels in sensitive marine environments, and he has designed dredged fill placement areas for normal, clean material and has provided consulting services for dredging contaminated material that has required disposal at a landfill. He has designed dredging projects in all types of soil conditions, including sand, silt, and rock. He has provided construction administration services that has included oversight of dredging operations with specialized equipment involving hydraulic and mechanical methods.

PROFESSIONAL AFFILIATIONS
Florida Engineering Society
American Society of Civil Engineers (Past-President, Miami-Dade Branch)
ASCE Ports and Harbors Committee – Engineer/Diver Standard Task Committee
Marinas 2020 Committee

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Yachting Center, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2003 — CONSTRUCTION *(If applicable)*: 2003

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

Design of bulkhead replacement and maintenance dredging for 250-slip marina project. Provided consulting services for contaminated dredge material disposal, and performed hydrographic surveys for before/after dredging operations.

b.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Maintenance Dredging, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION *(If applicable)*: Ongoing

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

Marine Resource and hydrographic surveys of marina basin and areas adjacent to Intracoastal Waterway channel. Evaluated proposed dredging and potential impacts to benthic resources. Initiated consultations and development of mitigation strategies for environmental permit compliance from previous project impacts.

c.

(1) TITLE AND LOCATION *(City and State)*: Dinner Key Marina Maintenance Dredging, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 — CONSTRUCTION *(If applicable)*: 2009

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

Design of existing deck replacement, security access, and maintenance dredging for 580-slip marina. Conducted dock as-built surveys. Coordinated construction bid engineering support between Client, Manufacturer, and installation Contractors. Under contract to provide construction administration services pending commencement.

d.

(1) TITLE AND LOCATION *(City and State)*: Hidden Harbour Marina, Pompano Beach, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 — CONSTRUCTION *(If applicable)*: 2009

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

Design of dry storage marina to accommodate 200 vessels. Marine works design included augercast piling-supported forklift launch concrete platform, as well as a steel sheet piling bulkhead and associated fill areas.

e.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro Inlet Channel Improvements, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2003

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

Coastal engineering and environmental permitting for 165,000 cubic yard inlet-dredging project to improve coastal sediment sand bypassing and navigation. Hydrographic and marine resource surveys conducted.

f.

(1) TITLE AND LOCATION *(City and State)*: Hilton Ft. Lauderdale Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2007 | CONSTRUCTION *(If applicable)*: N/A

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

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project. Hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

g.

(1) TITLE AND LOCATION *(City and State)*: Island Gardens Mega Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Marina design and environmental permitting for 50-slip megayacht harbor on Watson Island as part of $600M site redevelopment. Hydrographic and marine resource surveys and underwater bulkhead assessments provided. Design of dredging, seagrass mitigation, artificial reefs, fixed piers, and utilities for vessels up to 450' long.

h.

(1) TITLE AND LOCATION *(City and State)*: Marina Mile, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2012

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

Environmental permitting and design of waterfront for automated dry storage system for 61 vessels up to 90' in length.

i.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Terminal H Maintenance Dredging, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

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

Conducted hydrographic pre-dredge and marine resource surveys to plan and design 4,000 cy of maintenance dredging for the berth at Terminal H. Managed geotechnical investigation to obtain core borings within the proposed dredge area, and reviewed maintenance dredging limits based on the depth of the rock layers. Prepared construction plans and assisted client with environmental permit processing.

j.

(1) TITLE AND LOCATION *(City and State)*: Peanut Island Environmental Restoration, Palm Beach County

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2003 | CONSTRUCTION *(If applicable)*: 2005

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

Coastal/civil and marine structures design for 1.5-acre artificial reef habitat and 1.3 acre shallow seagrass lagoon. Additional features include a tidal pond and Flushing channel, shallow-draft marina with floating docks, pedestrian boardwalks, and site utility upgrades.

k.

(1) TITLE AND LOCATION *(City and State)*: Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Planning and design of 100-slip replacement marina facility. Design of upland excavation and dredging, including material handling and disposal design. Design of bulkhead improvements and associated shore-support structures, along with a portion of fixed docks.

l.

(1) TITLE AND LOCATION *(City and State)*: Rybovich Marina, West Palm Beach, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2010

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

Design of dredging and bulkhead for 150-slip marina redevelopment to accommodate vessels up to 250 feet long. Design of 100,000 cubic yards of dredging and 3,000 feet of bulkhead along with travel lift piers to accommodate 660-ton lift. Coastal engineering analysis for floating structure design.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Penny Cutt	Environmental Permitting Regional Manager	17	3

15. FIRM NAME AND LOCATION *(City and State)*
Coastal Systems International
West Palm Beach, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
M.Sc./ Marine Biology and Coastal Zone Management, Pending Capstone Review B.S./Bioprocess Management	

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

Ms. Cutt has over 20 years of experience in the field of environmental monitoring, assessment, planning and regulatory permitting, at the local, State and Federal levels. She is able to quickly evaluate complex scientific information and communicate it to lay leaders for decision-making purposes. Ms. Cutt has a proven track record negotiating complex technical issues, particularly with regard to aquatic and coastal ecosystems, with a variety of interest groups. Ms. Cutt very effectively and equitably applies scientific, regulatory and financial judgment when evaluating complex scientific and technical information and issues. She also effectively manages workflow and product delivery, accurately identifies key issues and project needs to achieve environmentally sustainable ecosystem solutions.

Ms. Cutt has extensive background in regulatory permitting of dredging projects having worked as a regulator for agencies including the U.S. Army Corps of Engineers. This regulatory experience facilitates the development of the permitting strategy for project implementation as the regulatory permitting is normally on the critical path for most coastal and waterfront projects.

PROFESSIONAL AFFILIATIONS

Member Broward County Marine Advisory Committee
Member Pompano Beach Marine Advisory Board
Florida Association of Environmental Professionals

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Berth Dredging in the Port of Miami associated with deepening the Federal Channel, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2005 | CONSTRUCTION *(If applicable)*: N/A

❑ Check if project performed with current firm

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

Managed and conducted the review and decision making by the Corps of Engineers of the permit application to dredge the Port of Miami berthing areas, in association with the dredging of the Federal port entrance channel. The review and evaluation included identifying operational constraints on scow movement to the ocean dredged material disposal area in order to avoid impacts to coral resources and strengthen the NEPA EA for the project.

b.

(1) TITLE AND LOCATION *(City and State)*: Island Gardens Mega-Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2005 | CONSTRUCTION *(If applicable)*: Ongoing

❑ Check if project performed with current firm

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

Managed and conducted the review and decision making by the Corps of Engineers of the permit application to construct the Island Gardens mega yacht marina, adjacent to the Port of Miami. Evaluated alternatives, avoidance and minimization to minimize impacts of the marina to ecologically valuable hardbottom/seagrass habitat. Evaluated, adjusted and approved proposed mitigation for the hardbottom and seagrass impacts by filling dredge holes in northern Biscayne Bay. Evaluated and approved marine resource assessments provided by the applicant.

c.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Maintenance Dredging, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

☒ Check if project performed with current firm

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

Marine Resource and hydrographic surveys of marina basin and areas adjacent to Intracoastal Waterway channel. Evaluated proposed dredging and potential impacts to benthic resources. Initiated consultations and development of mitigation strategies for environmental permit compliance from previous project impacts.

d.

(1) TITLE AND LOCATION *(City and State)*: Dinner Key Managed Mooring Fields, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 | CONSTRUCTION *(If applicable)*: 2009

☒ Check if project performed with current firm

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

Design and environmental permitting of 225-slip managed mooring field. Conducted hydrographic surveys, jet probes, and marine resource surveys. Prepared construction plans and specifications and provided construction administration services including underwater inspection.

e.

(1) TITLE AND LOCATION *(City and State)*
Dinner Key Marina Maintenance Dredging, Miami, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2009	2009

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

☒ Check if project performed with current firm

Design and environmental permitting of 5,500 cy of maintenance dredging for 580-slip marina. Conducted pre-dredge hydrographic, marine resource, and geotechnical investigations. Prepared construction plans that included shoreline mitigation on adjacent spoil islands. Assisted client with bidding and with construction administration.

f.

(1) TITLE AND LOCATION *(City and State)*
Hillsboro/Deerfield Beach Renourishment, Broward County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	2011

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

☒ Check if project performed with current firm

Senior Project Manager providing environmental permitting, coastal engineering, funding application, and biological monitoring services for 375,000 cubic yard beach fill project and previous interim nourishment truck haul project. Manage marine and coastal surveys including marine resource investigations, pipeline corridor surveys, hardbottom mapping, Acropora sp. and in-water sea turtle surveys, and year-long shorebird monitoring. Ensure compliance with permit required monitoring and advise the Commission on all beach related issues.

g.

(1) TITLE AND LOCATION *(City and State)*
Hillsboro Inlet Mitigation Project, Broward County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	Ongoing

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

☒ Check if project performed with current firm

Coastal Systems provided professional consulting services to the Hillsboro Inlet District for design, permitting and construction administration for channel improvements including rock dredging and mitigation for the unavoidable impacts of the channel improvements. The Project mitigation involves placing limerock boulders in an area adjacent to the natural hardbottom south of the Inlet entrance channel. Served as senior manager reviewing and approving work products of the Coastal Systems project manager regarding design, permitting and construction of the mitigation reef.

h.

(1) TITLE AND LOCATION *(City and State)*
Hilton Ft. Lauderdale Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2007	N/A

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

☒ Check if project performed with current firm

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project. Hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

i.

(1) TITLE AND LOCATION *(City and State)*
Marina Mile, Ft. Lauderdale, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2008	2012

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

☒ Check if project performed with current firm

Environmental permitting and design of waterfront for automated dry storage system for 61 vessels up to 90' in length. Engineering design of dredging, shoreline stabilization, and marine works.

j.

(1) TITLE AND LOCATION *(City and State)*
Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	2014 (Est.)

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

☒ Check if project performed with current firm

Design and environmental permitting of marina redevelopment with 99 slips to accommodate vessels up to 250 feet long. Fixed and floating docks designed, along with marina utilities such as shore power, fire and domestic water, communications, and sewage pump-out.

k.

(1) TITLE AND LOCATION *(City and State)*
PortMiami Channel Deepening Monitoring, Miami-Dade County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	2015 (Est.)

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

☒ Check if project performed with current firm

Conducting biological monitoring of seagrass and coral transplantation mitigation areas over a 5 year period to document mitigation success for marine resource impacts from the 50-foot navigation channel deepening.

l.

(1) TITLE AND LOCATION *(City and State)*
PortMiami Channel Deepening (Seagrass), Miami-Dade County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2012	2015 (Est.)

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

☒ Check if project performed with current firm

Managed field implementation and reporting for baseline seagrass monitoring event documenting pre-construction conditions. Baseline survey to determine whether actual seagrass impacts were consistent with predicted impacts relative to mitigation obligations. Under contract to conduct one year post construction biological and bathymetric surveys and associated reporting.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Yong Chen, Ph.D.	Senior Coastal Engineer	25	4

15. FIRM NAME AND LOCATION *(City and State)*

Coastal Systems International
Coral Gables, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Ph.D./Civil & Structural Engineering Ms.C./Coastal Engineering B.S./Harbor & Waterway Engineering	

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

Dr. Chen's coastal engineering experience includes projects involving wave statistical analysis, wave shoaling, refraction and diffraction analysis, sediment transport analysis, spectral analysis of wave-floating structural interactions, dynamic vessel motion study; structural design projects involving riprap shore protection, floating breakwaters, jetties, spread mooring systems, marinas, and floating dolphins.

Dr. Chen has strong skills in research and programming. He has research experience on wave-structural interactions and has developed many programs on wave statistics, dynamic vessel motion study, wave interaction with porous barriers, single-point mooring systems, and spectral analysis of floating bridges. He applies his research experience and programming skills to coastal structural design projects.

Dr. Chen is experienced in utilizing engineering software packages for numerical model simulations of coastal processes. He has applied the DHI MIKE-21 modules for wave propagation and transformation as well as the sediment transport packages, LITPACK and LITLINE. He has also used the HD package to simulate tidal hydrodynamics. Dr. Chen routinely programs computer applications for wave statistical analysis purposes.

Dr. Chen developed and conducted numerical models for coastal engineering projects for over 8 years at the Nanjing Hydraulic Research Institute, China. Dr. Chen's coastal engineering experience in China includes projects of navigation channel planning, port and harbor planning, sediment dredging analysis, beach protection and management, environmental impact study, and coastal structure design and planning using the methods of field survey, physical and numerical modeling. Dr. Chen prepared more than 20 coastal engineering reports for harbor developments, such as Shekou Harbor, Ciwan Harbor, Dachanwan Harbor, Tonggu Navigation Channel project and Zhuhai Gaolan Harbor in Pearl River Estuary.

19. RELEVANT PROJECTS

	(1) TITLE AND LOCATION *(City and State)*	(2) YEAR COMPLETED	
		PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
a.	Bal Harbour Beach Management, Village of Bal Harbour, Florida	Ongoing	Ongoing
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm Evaluation of coastal processes and sediment transport downdrift of Bakers Haulover Inlet. Conducted feasibility study to evaluate inlet bypassing options to maintain sediment transport and reduce beach erosion in Bal Harbour and Miami-Dade County beaches.		
b.	(1) TITLE AND LOCATION *(City and State)* Hallandale Beach, Broward County, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES Ongoing	CONSTRUCTION *(If applicable)* 2014 (Est.)
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm Engineering, design, permitting and resource assessment consulting services to the Cities of Hollywood and Hallandale Beach related to beach renourishment. Design, resource assessment and permit application processing are ongoing for a renourishment of approximately 2 miles of beach. Resource assessment involves preparation of a Biological Evaluation for endangered corals listed under the federal Endangered Species Act.		
c.	(1) TITLE AND LOCATION *(City and State)* Hillsboro/Deerfield Beach Nourishment, Broward County, Florida	(2) YEAR COMPLETED PROFESSIONAL SERVICES Ongoing	CONSTRUCTION *(If applicable)* 2011
	(3) BRIEF DESCRIPTION *(Brief scope, size, cost, etc.)* AND SPECIFIC ROLE ☒ Check if project performed with current firm Coastal engineering and environmental permitting for 339,151 cubic yard beach fill project. Performed all beach profiles, hydrographic surveys, aerial photography, magnetometer surveys and monitoring.		

d.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro Inlet Mitigation Project, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Coastal Systems provided professional consulting services to the Hillsboro Inlet District for design, permitting and construction administration for channel improvements including rock dredging and mitigation for the unavoidable impacts of the channel improvements. The Project mitigation involves placing limerock boulders in an area adjacent to the natural hardbottom south of the Inlet entrance channel. Served as senior manager reviewing and approving work products of the Coastal Systems project manager regarding design, permitting and construction of the mitigation reef.

e.

(1) TITLE AND LOCATION *(City and State)*: Island Gardens Mega-Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Marina design and environmental permitting for 50-slip megayacht harbor on Watson Island as part of $600M site redevelopment. Hydrographic and marine resource surveys and underwater bulkhead assessments provided. Design of dredging, seagrass mitigation, artificial reefs, fixed piers, and utilities for vessels up to 450' long.

f.

(1) TITLE AND LOCATION *(City and State)*: Jensen Beach Managed Mooring Field, Martin County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

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

Design and environmental permitting of 51-slip managed mooring field. Prepared feasibility study to evaluate waterfront opportunities for wet slips and managed mooring field configurations. Conducted hydrographic and marine resource surveys and funding grant administration.

g.

(1) TITLE AND LOCATION *(City and State)*: Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Planning and design of 100-slip replacement marina facility. Design of upland excavation and dredging, including material handling and disposal design. Design of bulkhead improvements and associated shore-support structures, along with a portion of fixed docks.

h.

(1) TITLE AND LOCATION *(City and State)*: Resorts World Bimini Ferry Terminal, North Bimini, Bahamas

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Planning, coastal/marine/structural engineering for terminal to provide fast ferry service for the 670' Superfast VI vessel with 1,500-passenger capacity. Designed pier, platform, terminal, entrance channel, and mooring dolphins. Provided hydrographic surveying, subbottom profiling, and marine biological services.

i.

(1) TITLE AND LOCATION *(City and State)*: Rickenbacker Causeway Recreational Area, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 | CONSTRUCTION *(If applicable)*: 2010

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

Site planning, civil/coastal engineering and environmental permitting of 4,000 feet of shoreline improvements along causeway. Designed parking, stormwater management, living shoreline and beach nourishment.

j.

(1) TITLE AND LOCATION *(City and State)*: Rybovich Marina, West Palm Beach, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2010

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

Design of dredging and bulkhead for 150-slip marina redevelopment to accommodate vessels up to 250 feet long. Design of 100,000 cubic yards of dredging and 3,000 feet of bulkhead along with travel lift piers to accommodate 660-ton lift. Performed hydrographic surveys of marine for dredging design and surveyed dredge hole fill areas for mitigation construction.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Michael Antinelli, E.I.	Coastal Engineer	4	3

15. FIRM NAME AND LOCATION *(City and State)*

Coastal Systems International
Coral Gables, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Ms.C./Coastal Engineering B.S./Civil Engineering	

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

Mr. Antinelli is a graduate of the Coastal Engineering Program at the University of Florida. He completed graduate courses in estuarine hydrodynamics, physical oceanography, littoral processes, and coastal structures. While at Coastal Systems, Mr. Antinelli has completed coastal engineering analyses for various shore protection and marine works projects including beach nourishment, maintenance dredging, inlet management, and mooring fields. Mr. Antinelli has designed marina, port and beach nourishment dredging projects. His design is completed using advanced engineering tools such as AutoCAD Civil 3D to evaluate dredging cross sections, templates, and volumes. He has prepared technical specifications for several dredging and beach nourishment projects throughout Florida.

He has conducted numerical modeling with the DHI MIKE-21 software package to simulate coastal processes including tidal hydrodynamics and wave propagation. Mr. Antinelli has conducted construction administration of several beach nourishment and dredging projects to track contract payment volumes, review survey data, and provide QA/QC of construction operations.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Bal Harbour Beach Management, Village of Bal Harbour, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: N/A

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

Evaluation of coastal processes and sediment transport downdrift of Bakers Haulover Inlet. Conducted feasibility study to evaluate inlet bypassing options to maintain sediment transport and reduce beach erosion in Bal Harbour and Miami-Dade County beaches.

b.

(1) TITLE AND LOCATION *(City and State)*: Hallandale Beach Truck Haul Beach Nourishment, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Design and environmental permitting of 71,500 cubic yard truck haul beach nourishment as interim beach management project within Broward County Segment III beach area.

c.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro/Deerfield Beach Restoration, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: 2011

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

Coastal engineering and environmental permitting for 339,151 cubic yard beach fill project. Performed all beach profiles, hydrographic surveys, aerial photography, magnetometer surveys and monitoring.

d.

(1) TITLE AND LOCATION *(City and State)*: Hollywood Beach Renourishment, City of Hollywood, FL

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing; CONSTRUCTION *(If applicable)*: 2012

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

Strategic beach management services are being provided to the City of Hollywood, Community Redevelopment Agency. Two segments of interim beach renourishment have been designed to avoid the potential for cumulative impacts with periodic renourishment provisions. Project manager responsible for securing Joint Coastal Permit, Corps Individual Permit, and Environmental Resource License for the Hollywood Beach truck haul beach renourishment project to include authorization for multiple renourishment events, preparing annual DEP Local Government Funding Requests and quarterly reports each year, designed all pre and post construction biological monitoring of the nearshore hardbottom, designed contingency mitigation plan, conducted pre-construction transect installation and biological monitoring including hardbottom mapping, Acropora cervicornis health tracking and assessment of the nearshore reef using BEAMR, conducting post construction hardbottom and epifaunal edge surveys and project compliance management.

e.

(1) TITLE AND LOCATION *(City and State)*: Island Gardens Mega-Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2015 (Est.)

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

Marina design and environmental permitting for 50-slip megayacht harbor on Watson Island as part of $600M site redevelopment. Hydrographic and marine resource surveys and underwater bulkhead assessments provided. Design of dredging, seagrass mitigation, artificial reefs, fixed piers, and utilities for vessels up to 450' long.

f.

(1) TITLE AND LOCATION *(City and State)*: Key Biscayne Beach Renourishment, Key Biscayne, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2012

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

Services included coastal engineering, beach nourishment design/permitting, sea turtle lighting ordinance development, marine biology, and hydrographic surveying. The beach is classified as an "Engineered Beach" due to the ongoing beach management program, and $1.3M in FEMA funding was obtained for a two phase project that included dune restoration in 2008 and the truck haul nourishment in 2012. Analyzed the physical processes influencing the project such as winds, waves, tides and storm impacts.

g.

(1) TITLE AND LOCATION *(City and State)*: Museum Park, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014

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

The large vessel mooring facility, designed and permitted by Coastal Systems within the existing basin adjacent to the American Airlines Arena, is complete. The moorings accommodate a variety of vessels, and consist of 16 dolphin structures that provide approximately 750 linear feet of berthing along the existing bulkhead. Coastal Systems provided civil engineering and environmental permitting services for the park based on the approved master plan and park program. Potable water and sanitary sewer utility services were also designed for the Park. Managed the planning/landscape architect, as well as soil remediation and electrical engineering sub-consultants to prepare construction documents.

h.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Terminal H Maintenance Dredging, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

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

Conducted hydrographic pre-dredge and marine resource surveys to plan and design 4,000 cy of maintenance dredging for the berth at Terminal H. Managed geotechnical investigation to obtain core borings within the proposed dredge area, and reviewed maintenance dredging limits based on the depth of the rock layers. Prepared construction plans and assisted client with environmental permit processing.

i.

(1) TITLE AND LOCATION *(City and State)*: Resorts World Bimini Ferry Terminal, North Bimini, Bahamas

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Planning, coastal/marine/structural engineering for terminal to provide fast ferry service for the 670' Superfast VI vessel with 1,500-passenger capacity. Designed pier, platform, terminal, entrance channel, and mooring dolphins. Provided hydrographic surveying, subbottom profiling, and marine biological services.

j.

(1) TITLE AND LOCATION *(City and State)*: Rickenbacker Causeway Recreational Area, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 | CONSTRUCTION *(If applicable)*: 2010

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

Site planning, civil/coastal engineering and environmental permitting of 4,000 feet of shoreline improvements along causeway. Designed parking, stormwater management, living shoreline and beach nourishment.

k.

(1) TITLE AND LOCATION *(City and State)*: Rockerman Canal Dredging, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: 2011

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

Provided Resident Project Representative (RPR) services for the management of a 2,000-cy maintenance dredging project. Monitored dredging contract payment surveys, daily construction operations to assist municipal client with construction management.

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

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Christie Barrett	Marine Scientist	10	6

15. FIRM NAME AND LOCATION *(City and State)*
Coastal Systems International
West Palm Beach, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
M.Sc./Marine Science B.A/ Anthropology	

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

Ms. Barrett has 9 years of experience in the field of environmental monitoring, assessment, reporting, planning and regulatory permitting, at the local, State and Federal levels. Experience includes environmental assessments associated with beach nourishment, marina construction, coastal structures, fiber-optic cable installation, coral reef damage by vessels, dune restoration, artificial reefs construction, marina and canal dredging. Evaluation of the effectiveness of mitigation artificial reefs and seagrass transplants, biological monitoring of nearshore and offshore coral reef and ephemeral hardbottom habitats in association with beach nourishment related projects, biological surveys involving seagrass habitat, dune vegetation, shorebird and sea turtle surveys.

Experience also includes application of grants, funding applications, Joint Coastal Permits, Environmental Resource Permits, and preparation of Environmental Impact Statements, Environmental Assessments, Biological Assessments, Cumulative Impact Assessments, Essential Fish Habitats, Biological Opinions (in conjunctions with FWS) and UMAM documentation.

Ms. Barrett has obtained environmental approvals and permits working directly with the staff of Federal, State and Regional agencies including the National Marine Fisheries Service, U.S. Army Corps of Engineers, Florida Department of Environmental Protection, and other local government marine resource management agencies on a variety of ocean and coastal resource management and science issues. Ms. Barrett also manages large scale coastal projects including municipal beach nourishment, marina, and international development projects.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Broward County Segment III Beach Renourishment Project, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2005 | CONSTRUCTION *(If applicable)*: 2008

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

4 years of experience working with Broward County, Florida as a co-manager. She was responsible for the scheduling of biological monitoring activities on the natural and artificial reefs, personnel and sub-contractors; she managed the crew in the field, conducted biological monitoring requirements, data analysis, report preparation and submittals. Biological monitoring included the permanent establishment of, and biological monitoring of 27 artificial reef transects and 29 natural hardbottom transects using Benthic Ecological Assessment for Marginal Reefs (BEAMR), underwater video, sediment measurements, macroalgae species-area assessments, coral species-area assessments, coral stress, coral fate tracking, rugosity assessments, PointCount for Coral Reefs and turbidity monitoring. Also conducted in-water sea turtle population surveys, hardbottom edge mapping using DGPS software and Hypack® and pipeline route inspections. She also assisted in the preparation of all compliance monitoring reports including the Governor's Report.

b.

(1) TITLE AND LOCATION *(City and State)*: Collier County Beach Renourishment Project 2003 and 2006 / Doctors Pass Maintenance Dredging, Collier County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2006 | CONSTRUCTION *(If applicable)*: 2003 & 2006

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

Ms. Barrett has 3 years of experience working in Collier County as a principal investigator for environmental permitting and seagrass monitoring for the Doctors Pass Inlet Maintenance Dredging Project and as a project scientist for the Collier County Beach Nourishment Project, Collier County, FL (2004-2006). During which time she conducted nearshore hardbottom edge mapping, biological monitoring using Benthic Ecological Assessment for Marginal Reefs (BEAMR) on nearshore transects, a resource investigation along the nearshore spoil site located between Florida Department of Environmental Protection (FDEP) survey monuments R-60 to R-62, a seagrass survey along the shoal at Doctors Pass Inlet and she assisted with data analysis and report preparation of the Marine Resource Investigation Report for the North Collier County, Fl Beach Renourishment Project.

c.

(1) TITLE AND LOCATION *(City and State)*: Longboat Key Seagrass Mitigation Project / Town of Longboat Key Beach Renourishment and Mitigation Reef Project, Manatee County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2007 | CONSTRUCTION *(If applicable)*: N/A

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

Ms. Barrett worked with Longboat Key as a project scientist for 3 years. During which time she assisted in the monitoring of success rates of transplanted seagrass, data analysis, data presentation and report preparation. She conducted additional mapping and monitoring of natural and artificial reefs in the nearshore waters of the Gulf of Mexico, coastal dune vegetation study and sand compaction monitoring.

d.

(1) TITLE AND LOCATION *(City and State)*: Hallandale Beach Renourishment Project, City of Hallandale Beach, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Project manager responsible for securing Joint Coastal Permit, Corps Individual Permit, and Environmental Resource License for the Hallandale Beach truck haul beach renourishment project to include authorization for multiple renourishment events, preparing annual DEP Local Government Funding Requests each year, designed and participated in marine resource investigation including hardbottom mapping and Acropora sp. survey. Designed all pre and post construction biological monitoring of the nearshore hardbottom and designed the contingency mitigation plan.

e.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro/Deerfield Beach Renourishment, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2011

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

Secured Environmental Resource Permit, Corps Individual Permit, and Environmental Resource License, for 375,000 beach fill project. Process Local Government Funding Request and compiling applications for next renourishment event. Responsible for conducting marine and coastal surveys including marine resource investigations, pipeline corridor surveys, hardbottom mapping, Acropora sp. and in-water sea turtle surveys, weekly escarpment surveys and year-long shorebird monitoring. Designed all pre, during and post construction biological monitoring of the nearshore and offshore hardbottom including that adjacent to the borrow area. Designed conceptual mitigation plan.

f.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro Inlet District Maintenance Dredging, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2002

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

Environmental compliance for ongoing bypass operation at Hillsboro Inlet. Conducted marine biological monitoring surveys and weekly shorebird surveys for four months.

g.

(1) TITLE AND LOCATION *(City and State)*: Hollywood Beach Renourishment, City of Hollywood, FL

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2012

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

Strategic beach management services are being provided to the City of Hollywood, Community Redevelopment Agency. Two segments of interim beach renourishment have been designed to avoid the potential for cumulative impacts with periodic renourishment provisions. Project manager responsible for securing Joint Coastal Permit, Corps Individual Permit, and Environmental Resource License for the Hollywood Beach truck haul beach renourishment project to include authorization for multiple renourishment events, preparing annual DEP Local Government Funding Requests and quarterly reports each year, designed all pre and post construction biological monitoring of the nearshore hardbottom, designed contingency mitigation plan, conducted pre-construction transect installation and biological monitoring including hardbottom mapping, Acropora cervicornis health tracking and assessment of the nearshore reef using BEAMR, conducting post construction hardbottom and epifaunal edge surveys and project compliance management.

h.

(1) TITLE AND LOCATION *(City and State)*: Jensen Beach Managed Mooring Field, Martin County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Project manager responsible for the design and environmental permitting of 51-slip managed mooring field. Conducted marine resource survey for the federally listed Johnson's seagrass (H. johnsonii) within the Indian River Lagoon, prepared grant funding applications, and represented the County in an 120 Administrative Hearing.

i.

(1) TITLE AND LOCATION *(City and State)*: Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Design and environmental permitting of marina redevelopment with 99 slips to accommodate vessels up to 250 feet long. Fixed and floating docks designed, along with marina utilities such as shore power, fire and domestic water, communications, and sewage pump-out.

j.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Channel Deepening Monitoring, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2015 (est)

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

Conducting biological monitoring of seagrass and coral transplantation mitigation areas over a 5 year period to document mitigation success for marine resource impacts from the 50-foot navigation channel deepening.

k.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Channel Deepening (Seagrass), Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: 2015 (est)

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

Managed field implementation and reporting for baseline seagrass monitoring event documenting pre-construction conditions. Baseline survey to determine whether actual seagrass impacts were consistent with predicted impacts relative to mitigation obligations. Under contract to conduct one year post construction biological and bathymetric surveys and associated reporting.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Gina Chiello	Marine Biologist	5	1

15. FIRM NAME AND LOCATION *(City and State)*

Coastal Systems International
West Palm Beach, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Graduate Certificate/GIS B.S./Marine Biology	

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

Prior to joining Coastal Systems, Ms. Chiello worked with the Florida Department of Environmental Protection where she has over 5 years of experience in the field of environmental monitoring, assessment, planning and regulatory permitting, at the local, State and Federal levels. She is able to quickly evaluate complex scientific information and communicate it to lay leaders for decision-making purposes.

As a Project Manager for the Submerged Lands and Environmental Resources Program (SLERP), Ms. Chiello reviewed and processed applications for environmental resource exemptions, permits, leases, and easements for activities and projects proposed in and around jurisdictional wetlands and sovereign submerged lands owned by the State of Florida.

During this review process, Ms. Chiello performed site inspections, wetland delineations, submerged aquatic resource surveys, assessed mitigation and monitoring criteria via UMAM, WATER, and WRAP scoring as well as directly coordinated with the staff of Federal, State and Regional agencies including the National Marine Fisheries Service, U.S. Army Corps of Engineers, Florida Department of Environmental Protection, and other local government marine resource management agencies.

CERTIFICATIONS

AAUS Scientific Diver , Florida Atlantic University
PADI Advanced Open Water
PADI Enriched Air (NITROX) Certified
REEF- Fish Identification
FDEP- Wetland Delineation, Soil, Plant ID
SFWMD- UMAM

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Living Shoreline, Palm Beach County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: N/A

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

Managed and conducted the review and permit evaluation of the DEP permit application and request to use Sovereign Submerged Lands to 3.32 acres of shoreline and non-vegetated substrate by installing riprap, installing breakwater systems, and creating mangrove planters.

b.

(1) TITLE AND LOCATION *(City and State)*: Miami-Dade County Crandon Gardens, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013 | CONSTRUCTION *(If applicable)*: N/A

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

Managed and conducted the review and permit evaluation of the DEP permit application to enhance Miami-Dade County Crandon Gardens Park by connecting two existing dead-end artificial canals by mechanically dredging and creating a bird rookery area.

c.

(1) TITLE AND LOCATION *(City and State)*: Pelican Harbor Marina, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: N/A

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

Managed and conducted the review and permit evaluation of the DEP permit application to mechanically dredge of submerged land within 8 slips located within the Biscayne Bay Aquatic Preserve adjacent to the Pelican Harbor Marina.

d.

(1) TITLE AND LOCATION *(City and State)*: Rickenbacker Marina Dredging & New Piers, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2011 | CONSTRUCTION *(If applicable)*: N/A

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

Managed and conducted the review and permit evaluation of the DEP permit application to install a dock extension, finger piers, and floating docks, and to dredge within the Biscayne Bay Aquatic Preserve adjacent to the Rickenbacker Marina Miami. This project also included planting mangroves for public interest.

e.

(1) TITLE AND LOCATION *(City and State)*: TWS Investments, Inc., Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013 | CONSTRUCTION *(If applicable)*: N/A

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

Managed and conducted the review and permit evaluation of the DEP permit application and request to use Sovereign Submerged Lands to mechanically dredge 2,565 ft2 of submerged land within the New River, adjacent to 1614 & 1622 Brickell Drive, Ft. Lauderdale, a single family docking facility. The Project required an easement in order to meet DEP Proprietary requirements.

f.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Maintenance Dredge

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Marine Resource and hydrographic surveys of marina basin and areas adjacent to Intracoastal Waterway channel. Evaluated proposed dredging and potential impacts to benthic resources. Initiated consultations and development of mitigation strategies for environmental permit compliance from previous project impacts.

g.

(1) TITLE AND LOCATION *(City and State)*: Hilton Ft. Lauderdale Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2007 | CONSTRUCTION *(If applicable)*: N/A

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

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project. Hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

h.

(1) TITLE AND LOCATION *(City and State)*: Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project.

i.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Deep Dredge Seagrass, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: 2015 (est)

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

Managed field implementation and reporting for baseline seagrass monitoring event documenting pre-construction conditions. Baseline survey to determine whether actual seagrass impacts were consistent with predicted impacts relative to mitigation obligations. Under contract to conduct one year post construction biological and bathymetric surveys and associated reporting.

j.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Terminal H Maintenance Dredging, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

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

Conducted hydrographic pre-dredge and marine resource surveys to plan and design 4,000 cy of maintenance dredging for the berth at Terminal H. Managed geotechnical investigation to obtain core borings within the proposed dredge area, and reviewed maintenance dredging limits based on the depth of the rock layers. Prepared construction plans and assisted client with environmental permit processing.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Aaron Boehning	Hydrographic Surveyor	18	7

15. FIRM NAME AND LOCATION *(City and State)*
Coastal Systems International
Coral Gables, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Civil Engineering Technology Degree Construction Management Technology Degree	United States Coast Guard OUPV Captain's License

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

Mr. Boehning has extensive experience collecting field data in the coastal/marine environment. He has planned and conducted beach profile and hydrographic surveys throughout the State of Florida for a variety of purposes including dredging (and/or beach nourishment) contract payment, physical monitoring, and post-hurricane assessments. These surveys have also required topographic and geodetic control surveys for the land-based work. Mr. Boehning has managed dredging construction operations for channel and for maintenance dredging projects, and these services have included monitoring daily production, observing condition surveys, and tracking truck volumes for upland disposal.

Mr. Boehning has performed hydrographic surveys with advanced equipment including the following:

- GPS Receivers (DGPS and RTK)
- Magnetometers
- Echo Sounders (single beam and multi-beam)
- Heave/Pitch/Roll Sensors
- Electronic Tide Gauges
- Conventional Total Station and Levels
- Towed Underwater Video

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Boat Show Surveys, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013 — CONSTRUCTION *(If applicable)*: 2013

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

Conducted pre and post Ft. Lauderdale Boat Show hydrographic surveys of the marina basin on an annual basis from 2007-2013 to evaluate maintenance dredging requirements and the presence of shoals that may affect vessel draft in the marina.

b.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Maintenance Dredging, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing — CONSTRUCTION *(If applicable)*: Ongoing

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

Marine Resource and hydrographic surveys of marina basin and areas adjacent to Intracoastal Waterway channel. Evaluated proposed dredging and potential impacts to benthic resources. Initiated consultations and development of mitigation strategies for environmental permit compliance from previous project impacts.

c.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Yachting Center, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2003 — CONSTRUCTION *(If applicable)*: 2003

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

Design of bulkhead replacement and maintenance dredging for 250-slip marina project. Provide consulting services for contaminated dredge material disposal, and performed hydrographic surveys for before/after dredging operations.

d.

(1) TITLE AND LOCATION *(City and State)*: Dinner Key Marina Maintenance Dredging, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 — CONSTRUCTION *(If applicable)*: 2009

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

Design and environmental permitting of 5,500 cy of maintenance dredging for 580-slip marina. Conducted pre-dredge hydrographic, marine resource, and geotechnical investigations. Prepared construction plans that included shoreline mitigation on adjacent spoil islands. Assisted client with bidding and with construction administration.

e.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro Inlet Channel Improvements, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 — CONSTRUCTION *(If applicable)*: 2003

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

Coastal engineering and environmental permitting for 165,000 cubic yard inlet-dredging project to improve coastal sediment sand bypassing and navigation. Hydrographic and marine resource surveys conducted.

f.

(1) TITLE AND LOCATION *(City and State)*: Hilton Ft. Lauderdale Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2007 | CONSTRUCTION *(If applicable)*: N/A

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

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project. Hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

g.

(1) TITLE AND LOCATION *(City and State)*: Island Gardens Mega Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2014 (Est.)

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

Marina design and environmental permitting for 50-slip megayacht harbor on Watson Island as part of $600M site redevelopment. Hydrographic and marine resource surveys and underwater bulkhead assessments provided. Design of dredging, seagrass mitigation, artificial reefs, fixed piers, and utilities for vessels up to 450' long.

h.

(1) TITLE AND LOCATION *(City and State)*: Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Planning and design of 100-slip replacement marina facility. Design of upland excavation and dredging, including material handling and disposal design. Design of bulkhead improvements and associated shore-support structures, along with a portion of fixed docks.

i.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Channel Deepening Monitoring, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: 2015 (Est.)

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

Conducting biological monitoring of seagrass and coral transplantation mitigation areas over a 5 year period to document mitigation success for marine resource impacts from the 50-foot navigation channel deepening.

j.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Channel Deepening (Seagrass), Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2012 | CONSTRUCTION *(If applicable)*: 2015 (Est.)

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

Managed field implementation and reporting for baseline seagrass monitoring event documenting pre-construction conditions. Baseline survey to determine whether actual seagrass impacts were consistent with predicted impacts relative to mitigation obligations. Under contract to conduct one year post construction biological and bathymetric surveys and associated reporting.

k.

(1) TITLE AND LOCATION *(City and State)*: PortMiami Terminal H Maintenance Dredging, Miami-Dade County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: N/A

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

Conducted hydrographic pre-dredge and marine resource surveys to plan and design 4,000 cy of maintenance dredging for the berth at Terminal H. Managed geotechnical investigation to obtain core borings within the proposed dredge area, and reviewed maintenance dredging limits based on the depth of the rock layers. Prepared construction plans and assisted client with environmental permit processing.

l.

(1) TITLE AND LOCATION *(City and State)*: Rybovich Marina Redevelopment, West Palm Beach, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2010

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

Design of dredging and bulkhead for 150-slip marina redevelopment to accommodate vessels up to 250 feet long. Design of 100,000 cubic yards of dredging and 3,000 feet of bulkhead along with travel lift piers to accommodate 660-ton lift. Coastal engineering analysis for floating structure design.

m.

(1) TITLE AND LOCATION *(City and State)*: Sunrise Harbor Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 | CONSTRUCTION *(If applicable)*: N/A

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

Coastal Systems performed a hydrographic survey of the marina which is located adjacent to the Intracoastal Waterway. The slips can accommodate vessels up to 200 feet long, and the hydrographic survey was conducted within the marina basin to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel. Additional manual sounding were obtained along the docks and adjacent to vessels moored at the facility to supplement the hydrographic survey data.

E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

12. NAME	13. ROLE IN THIS CONTRACT	14. YEARS EXPERIENCE	
		a. TOTAL	b. WITH CURRENT FIRM
Sandra Rahman	GIS Analyst	18	14

15. FIRM NAME AND LOCATION *(City and State)*

Coastal Systems International
Coral Gables, Florida

16. EDUCATION *(DEGREE AND SPECIALIZATION)*	17. CURRENT PROFESSIONAL REGISTRATION *(STATE AND DISCIPLINE)*
Data Processing and Management Geographic Information Systems	

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

Ms. Rahman is responsible for processing all field data collected by Coastal Systems for use in analysis, monitoring, and design. She regularly utilizes Digital Terrain Modeling (DTM) software to generate contour maps and calculate cut/fill volumes for a variety of coastal and dredging projects. She is also responsible for providing deliverables in GIS formats, as well as providing full GIS capabilities for the firm with ESRI software.

Before Coastal Systems, Ms. Rahman worked for the Petroleum Company of Trinidad and Tobago. She was responsible for computer-aided drafting and design using AutoCAD. In addition, she was responsible for scanning, vectorizing, and digitizing, GPS post-processing, cadastral and topographic maps, geological drawings, royalty and volume computations using terrain-modeling software, and managing the database for thousands of drawings as well as control point records.

19. RELEVANT PROJECTS

a.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Boat Show Surveys, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2013 | CONSTRUCTION *(If applicable)*: 2013

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

Conducted pre and post Ft. Lauderdale Boat Show hydrographic surveys of the marina basin on an annual basis from 2007-2013 to evaluate maintenance dredging requirements and the presence of shoals that may affect vessel draft in the marina.

b.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Maintenance Dredging, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: Ongoing | CONSTRUCTION *(If applicable)*: Ongoing

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

Marine Resource and hydrographic surveys of marina basin and areas adjacent to Intracoastal Waterway channel. Evaluated proposed dredging and potential impacts to benthic resources. Initiated consultations and development of mitigation strategies for environmental permit compliance from previous project impacts.

c.

(1) TITLE AND LOCATION *(City and State)*: Bahia Mar Yachting Center, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2003 | CONSTRUCTION *(If applicable)*: 2003

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

Design of bulkhead replacement and maintenance dredging for 250-slip marina project. Provide consulting services for contaminated dredge material disposal, and performed hydrographic surveys for before/after dredging operations.

d.

(1) TITLE AND LOCATION *(City and State)*: Dinner Key Marina Maintenance Dredging, Miami, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2009 | CONSTRUCTION *(If applicable)*: 2009

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

Design and environmental permitting of 5,500 cy of maintenance dredging for 580-slip marina. Conducted pre-dredge hydrographic, marine resource, and geotechnical investigations. Prepared construction plans that included shoreline mitigation on adjacent spoil islands. Assisted client with bidding and with construction administration.

e.

(1) TITLE AND LOCATION *(City and State)*: Hillsboro Inlet Channel Improvements, Broward County, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2008 | CONSTRUCTION *(If applicable)*: 2003

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

Coastal engineering and environmental permitting for 165,000 cubic yard inlet-dredging project to improve coastal sediment sand bypassing and navigation. Hydrographic and marine resource surveys conducted.

f.

(1) TITLE AND LOCATION *(Citv and State)*: Hilton Ft. Lauderdale Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED — PROFESSIONAL SERVICES: 2007 | CONSTRUCTION *(If applicable)*: N/A

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

Conducted a marine resource assessment as required by the U.S. Army Corps of Engineers (Corps), the Florida Department of Environmental Protection (DEP), and Miami-Dade County Division of Environmental Resource Management (DERM) in order to secure a permit for the proposed Project. Hydrographic survey was conducted along the 700 linear feet of bulkhead to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel.

g.

(1) TITLE AND LOCATION *(City and State)*
Island Gardens Mega Yacht Harbor, Miami, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	2014 (Est.)

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

☒ Check if project performed with current firm

Marina design and environmental permitting for 50-slip megayacht harbor on Watson Island as part of $600M site redevelopment. Hydrographic and marine resource surveys and underwater bulkhead assessments provided. Design of dredging, seagrass mitigation, artificial reefs, fixed piers, and utilities for vessels up to 450' long.

h.

(1) TITLE AND LOCATION *(City and State)*
Pier 66 Marina Redevelopment, Ft. Lauderdale, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	Ongoing

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

☒ Check if project performed with current firm

Planning and design of 100-slip replacement marina facility. Design of upland excavation and dredging, including material handling and disposal design. Design of bulkhead improvements and associated shore-support structures, along with a portion of fixed docks.

i.

(1) TITLE AND LOCATION *(City and State)*
PortMiami Channel Deepening Monitoring, Miami-Dade County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	2015 (est)

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

☒ Check if project performed with current firm

Conducting biological monitoring of seagrass and coral transplantation mitigation areas over a 5 year period to document mitigation success for marine resource impacts from the 50-foot navigation channel deepening.

j.

(1) TITLE AND LOCATION *(City and State)*
PortMiami Channel Deepening (Seagrass), Miami-Dade County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2012	2015 (est)

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

☒ Check if project performed with current firm

Managed field implementation and reporting for baseline seagrass monitoring event documenting pre-construction conditions. Baseline survey to determine whether actual seagrass impacts were consistent with predicted impacts relative to mitigation obligations. Under contract to conduct one year post construction biological and bathymetric surveys and associated reporting.

k.

(1) TITLE AND LOCATION *(City and State)*
PortMiami Terminal H Maintenance Dredging, Miami-Dade County, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
Ongoing	N/A

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

☒ Check if project performed with current firm

Conducted hydrographic pre-dredge and marine resource surveys to plan and design 4,000 cy of maintenance dredging for the berth at Terminal H. Managed geotechnical investigation to obtain core borings within the proposed dredge area, and reviewed maintenance dredging limits based on the depth of the rock layers. Prepared construction plans and assisted client with environmental permit processing.

l.

(1) TITLE AND LOCATION *(City and State)*
Rybovich Marina Redevelopment, West Palm Beach, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2008	2010

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

☒ Check if project performed with current firm

Design of dredging and bulkhead for 150-slip marina redevelopment to accommodate vessels up to 250 feet long. Design of 100,000 cubic yards of dredging and 3,000 feet of bulkhead along with travel lift piers to accommodate 660-ton lift. Coastal engineering analysis for floating structure design.

m.

(1) TITLE AND LOCATION *(City and State)*
Sunrise Harbor Marina, Ft. Lauderdale, Florida

(2) YEAR COMPLETED

PROFESSIONAL SERVICES	CONSTRUCTION *(If applicable)*
2009	N/A

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

☒ Check if project performed with current firm

Coastal Systems performed a hydrographic survey of the marina which is located adjacent to the Intracoastal Waterway. The slips can accommodate vessels up to 200 feet long, and the hydrographic survey was conducted within the marina basin to evaluate the need for maintenance dredging. The survey was conducted with an automated hydrographic survey system operated from Coastal Systems' custom aluminum 25-foot survey vessel. Additional manual sounding were obtained along the docks and adjacent to vessels moored at the facility to supplement the hydrographic survey data.

5. PROJECT MANAGER'S EXPERIENCE

Mr. Timothy K. Blankenship, P.E. will serve as project manager for this contract. He will serve as the single-point-of-contact for the City under this contract, and he will be responsible for directing all subconsultants. He will meet with the City to define the scope of services for the contract, and then allocate resources to meet the schedule of deliverables. He will track budgets along with work progress for the duration of the project. Mr. Blankenship has over 20 years of engineering experience, with more than 16 years of project management experience.

Mr. Blankenship has specific experience within the project areas providing marine works and dredging consulting engineering services as follows:

- Bahia Mar Yachting Center – Engineer of Record for the maintenance dredging, bulkhead and construction administration for the $18M marina redevelopment project completed in 2003.
- Bahia Mar Yachting Center Maintenance Dredging – Project Manager for the evaluation of permit compliance requirements for seagrass mitigation (mitigation planned, permitted and implemented by other consultants) within the marina basin and evaluation of dredging adjacent "triangle" (connector) dredge areas for continuation of navigation depth from planned deepening of the Intracoastal Waterway. Conducted meetings with FIND to evaluate the potential joint mitigation project prior to FIND reducing dredge footprint to avoid/minimize impacts to seagrass and other marine resources in planned Intracoastal Waterway.
- Ft. Lauderdale Channel Square – as a subconsultant to IBI Group, Mr. Blankenship was project engineer for the hydrographic survey and tidal hydraulic modeling for the canal and adjacent waterway that included Las Olas Marina

He has served as project manager on several Florida state, county and municipal contracts, including the following:

Broward County	Florida Department of Environmental Protection
City of Hallandale Beach	Hillsboro Inlet District
City of Hollywood	Martin County
City of Miami	Miami-Dade County
City of Miami Beach	Town of Hillsboro Beach

Mr. Blankenship has planned, designed, permitted and managed construction of dredging and beach nourishment projects throughout the U.S. and in the Caribbean. These projects have included channel, marina, port berth, beach nourishment, and mitigation dredging. Projects have ranged in size from small maintenance dredging projects that are less than 1,000 cubic yards (cy) in volume to beach nourishment and channel dredging projects in excess of 1,000,000 cy. He has designed and managed dredging projects in all types of soil conditions including silt, sand and rock. He has experience specifying dredging projects for both hydraulic and mechanical methods depending on site specific conditions including, but not limited to, 1)quantity of dredge materials, 2)distance to placement or disposal/handling area, 3) construction cost and 4)environmental permitting.

Mr. Blankenship works closely with the Environmental/Permitting project team to ensure the engineering design and construction documents are in compliance with the permit conditions. He actively works with the environmental/permitting project manager to expedite the responses to Requests for Additional Information (RAI) that have jurisdiction on dredge and fill projects.

Mr. Blankenship also has a background in land and hydrographic surveying. He has been surveying beach profiles since 1990, and worked previously for a large dredging engineering firm managing construction of navigation channel and beach nourishment projects.

6. APPROACH TO SCOPE OF WORK

GENERAL SYNOPSIS

Coastal Systems is an industry leader in Florida with regard to the successful implementation of large-scale and complex waterfront engineering projects. Coastal Systems will use their expertise in environmental permitting to ensure that the Project initial design concept not only meets the needs of the City with regard to form and function an engineering perspective, but is also feasible in the context of local, state and federal environmental regulations that protect the sensitive marine environment within Broward County. The firm has extensive, demonstrated project experience at one of the project areas located at Bahia Mar Yachting Center, and similar services required under this contract have been provided over the years since 2002. More recently, Coastal Systems worked closely with the former tenant of the property to coordinate use of the upland area for dredged material handling for the Florida Inland Navigation District (FIND) Intracoastal Waterway channel dredging project in exchange for a combined seagrass mitigation project. Extensive marine resource and hydrographic surveys have been conducted by Coastal Systems to assist the former tenant in resolving pending seagrass mitigation from construction of the 2003 marina redevelopment project. (The seagrass mitigation plan and environmental permitting was completed by other consultants in 2002-2003). The additional "connector" areas outlined in this contract have been surveyed in the past by Coastal Systems, and therefore extensive background data is maintained in-house.

The team will utilize experienced project managers and biologists to analyze implications of the intricate environmental regulations to the design and implementation of this multi-faceted Project from initial conceptual design through construction. As the Project moves forward into design development and processing of environmental permits, the dredging engineering will progress with dredged material handling/placement and appropriate construction detailing. The schedule for design, permitting and construction will be closely managed in conjunction with the implementation of the FIND dredging project. Federal, state and local environmental permitting will be coordinated to run concurrently with the City's design review and permitting process to streamline the Project schedule.

The following is a concise project approach to this dredging project:

BACKGROUND DATA REVIEW

The Coastal Systems team will collect available background/technical data and confirm scope for collection of any missing data or additional forensic investigations of the site that may be critical to the Project design and/or evaluating compliance with applicable environmental regulations. The City will provide past and current project documents and technical reports, and Coastal Systems has extensive background data associated with the Bahia Mar Yachting Center from previous project experience.

ENVIRONMENTAL RESOURCE SURVEYS

To confirm existing marine habitat conditions in the vicinity of the Project improvements that may impact the environment, assessments will be conducted to evaluate marine benthic resources, including seagrasses, hard and soft corals, sponges, macroalgae and other species of significance. Coastal Systems will complete the required marine resource surveys with experienced in-house biologists. The biological information obtained during the resource survey will be used to determine the most environmentally sustainable design and will be referenced during the environmental permitting process.

HYDROGRAPHIC SURVEYING

The Coastal Systems team can provide the full range of hydrographic/bathymetric surveying services required for the Project. Hydrographic surveys are essential to obtain accurate water depth information within the Project area to confirm dredging design and construction cost assumptions. This data will be utilized for planning and engineering design of the dredging projects.

The Coastal Systems team offers the full range of hydrographic, beach profiling, marine resource, and oceanographic data collection capabilities led by registered Professional Surveyor and Mappers. The team maintains a full inventory of equipment including GPS receivers, survey vessels, fathometers (single beam and multibeam), total stations, towed

underwater video, current meters and other related equipment. The team also utilizes GIS to process and import a variety of data from multiple sources for analysis. Geophysical survey equipment is also regularly deployed including, but not limited to, side scan sonar, magnetometer, and subbottom profiling equipment.

Coastal Systems owns and operates a 27-foot custom aluminum survey vessel. Hydrographic data is collected with a survey echo-sounder interfaced to DGPS and HYPACK software operated on the vessel. RTK-GPS is utilized to provide real time tidal corrections on-board the vessel during survey operations. Coastal Systems will work concurrently with F. R. Aleman for the in-water survey operations.

TOPOGRAPHIC, BOUNDARY AND SUBMERGED LANDS

F. R. Aleman will complete the required boundary and topographic surveys for the dredging design and permitting. The upland shoreline interface will be combined with the hydrographic survey data to provide a complete base map. In addition, F. R. Aleman will conduct any required Mean High Water (MHW) surveys, and will provide the required documentation and survey maps for the submerged lands lease. The MHW line is recognized in Florida as the boundary between private upland property and submerged State owned lands (161.161 (5), F.S.).

SUBMERGED LANDS USE

The Coastal Systems team will research the ownership of the submerged lands at the Project site and coordinate with the DEP Division of State Lands to ensure the proper authorization for the preemption of State Lands at the Project site and authorization for the proposed dredging.

GEOTECHNICAL

Tierra will provide will provide geotechnical services for this contract with oversight by Coastal Systems. A drill barge will be mobilized to obtain sufficient soil borings within the dredging limits at both sites to adequately define the types of soils to be encountered. Delineating the top of limestone elevation is essential to design the dredge project and to quantify the amount of silt/sand and limestone to be dredged. Coastal Systems will specify the specialty types of geotechnical sampling and testing to evaluate the "dredgeability" of the project. Laboratory testing of the silt/sand and the rock core samples will be specified to provide the required data. Vibracores and/or jet/wash probes may be obtained to reduce costs but yet provide more data between borings to further quantify and evaluate the material to be dredged. The geotechnical evaluation is one of the most important components of the project scope to minimize the risk of unforeseen conditions that could result in claims during construction.

A comprehensive geotechnical report will be compiled that is suitable for the engineering design and that is suitable for incorporation into the construction bid documents. Depending on the recovered samples, Coastal Systems may instruct Tierra to maintain the rock cores and other samples at the soils lab for visual evaluation by dredging contractors during the bid process.

ENVIRONMENTAL SAMPLING

Tierra will also sample the materials to be dredged while mobilized with a rig on site. Undisturbed samples provide will be obtained and sent to a laboratory for testing in accordance with standard Florida Department of Environmental Protection (DEP) protocol for the evaluation of dredged materials. The levels of any contaminants must be identified and quantified, as this information will be required for the design of the dredged handling and placement area(s).

PUBLIC UTILITIES

Coastal Systems practices civil engineering in South Florida, and the firm regularly coordinates subsurface utility coordination for marine and upland projects. The firm provides these services in-house for Quality Level "D" subsurface investigations in accordance with the ASCE 38-02 Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data. Utility companies are contacted through the "design ticket" process and as-built utility information

is collected and overlaid on project plans to evaluate potential conflicts. Coastal Systems regularly works with specialty utility location firms to provide Level "B" services which involve site location through a variety of remote sensing methods, and in some cases exploratory excavation is performed to further locate and confirm utilities. Coastal Systems utilizes geophysical and multibeam surveys to confirm the location of outfalls and buried cables.

MANAGEMENT OF THE ENVIRONMENTAL PERMITTING PROCESS

Coastal Systems maintains a dedicated staff of professionals that regularly process environmental permits for marine and waterfront projects. This team works closely with the design team to ensure permitting feasibility through the design process. The environmental regulatory agencies that will have jurisdiction over the Project include the U.S. Army Corps of Engineers, the DEP, and Broward County Environmental Protection and Growth Management Department (EPGMD). The federal and state agencies also have commenting agencies such as the U.S. Fish and Wildlife Service, National Marine Fisheries Service, U.S. Coast Guard, Florida Fish and Wildlife Conservation Commission (FWC). As part of the design phase, the Coastal Systems team will review the pertinent regulations and provide feedback to the City and design team regarding implications of regulatory criteria to the Project design. Our focus on effective communication with the City, agency staff, and stakeholders brings consensus to the final product and permit approvals.

The Coastal Systems team will hold consultation discussions with the jurisdictional regulatory agencies to affirm procedural options (such as potential Project phasing and delegations of authority), key code compliance items, and any interpretive matters that may affect the Project. Issues and agency concerns are identified, and a cohesive strategy will be developed for optimum results in the minimum amount of time. The Coastal Systems team will analyze the extent of potential unavoidable environmental impacts, and the City will be advised regarding potential impact minimization and mitigation requirements, including implications to Project environmental permitting feasibility, budget and schedule. The Coastal Systems team typically endeavors to maximize the functionality of the Project while avoiding and minimizing impact to sensitive environmental resources to the greatest possible extent.

The Coastal Systems team has extensive experience and working relationships with key staff and administrators in the jurisdictional agencies to expedite the permitting process once the Project moves forward to the permit application phase. Several key staff with Coastal Systems are former regulators from local, state and federal environmental agencies. These staff are keenly aware of the information required to prepare complete applications with all of the information required to minimize Requests for Additional Information (RAI's). With in-house waterfront engineering and permitting staff, comprehensive responses to any RAI's can be compiled to expedite the permit issuance..

Expediting the permitting process is the goal for efficient Project delivery. However, permit compliance during construction and after construction with environmental monitoring is also essential. Coastal Systems regularly works with the contractor to review permit compliance documents being submitted to the agencies, as the City is the permittee. Coastal Systems also provides post-construction environmental monitoring and reporting services on behalf of the City in accordance with permit requirements.

WATERFRONT ENGINEERING

Design efficiency is provided through the collection of appropriate field data; for example, additional soil borings and or topographic/hydrographic data can provide an optimized engineered design in certain situations. The dredging limits will be established as coordinated with the marinas and the Intracoastal Waterway plans from FIND. A spoil management plan will be developed depending on the level of contaminants and the type of soils. Alternatives will be evaluated relative to spoil management to provide the contractor with flexibility with handling of the dredged material based on their preferred means/methods.

Permit sketches will be prepared documenting the dredge area, volumes and dredged material handling. These sketches will be based on the schematic design, as the project may be modified through the environmental permitting process. The sketches will include the required information, along with specific information required by the agencies, to expedite the permitting process.

WATER QUALITY

Coastal Systems has conducted tidal hydrodynamic studies throughout Florida and has simulated several waterways in Broward County utilizing the hydrodynamic modules within the DHI MIKE-21 suite of numerical models. Water quality may be a concern relative to the proposed dredging project to ensure the proposed dredging has no impact on water quality. For tidal hydraulic studies, calibration of the models is essential with the collection of tidal current and water level measurements over an appropriate period of time. The coastal modelers work closely with the field survey team to ensure the proper data is collected for modeling purposes. Once the MIKE-21 HD model is calibrated, other modules can be simulated including the advection/dispersion (AD) module which provides water quality modeling capabilities. Coastal Systems has full numerical modeling capabilities with in-house modelers and coastal engineers to address water quality concerns through the regulatory permitting process.

SEAGRASS AND BENTHIC HABITAT

Coastal Systems has mapped hardbottom and seagrass communities throughout Florida, with extensive experience in Broward County. As mitigation is costly, we strive to design projects that avoid/minimize impacts to marine resources. The firm has designed, managed, and monitored seagrass and artificial reef mitigation projects. During the permitting process, Coastal Systems biologist demonstrate project related avoidanc, minimization, and proposed compensation. Unavoidable impacts are typically assessed with the Uniform Mitigation Assessment Method (UMAM) during the environmental resource permitting process.

Strategies for "out of kind" mitigation were established in some of the mitigation negotiations on the Bahia Mar Yachting Center project over the past 12 months, as there have been few, if any, successful seagrass mitigation projects within Broward County.

REVIEW AND COORDINATE WITH FIND

Coastal Systems is unique in the coastal management/engineering industry by providing field investigations, planning, engineering design, environmental permitting, biological, and construction administration services with in-house staff. Our combined engineering/permitting experience and capabilities allow us to provide comprehensive consulting services in support of the City's dredging project. Coastal Systems is not under contract with FIND, and therefore the firm can properly represent the City relative to this dredging project.

Coastal Systems will work closely with the City to coordinate with FIND relative to their planned channel deepening project adjacent to these two project areas. These meetings promote direct communication and address specific concerns, scheduling and permit conditions

FUNDING AND GRANT ASSISTANCE

Coastal Systems has prepared and processed a variety of grant and funding requests for several municipal clients in Florida. These packages include compiling documentation that translates to ranking for prioritized projects. Technical assistance will be provided to the City and grant opportunities identified early on the planning and design development phases of the project. Coastal Systems can also assist the City in exploring public/private partnerships to evaluate private sources of funding.

REVIEW AND COORDINATE WITH CITY

Coastal Systems will maintain regular communication with the City and conduct an initial kick-off meeting to discuss the scope and schedule for the project. Regular progress meetings and/or conference calls will be conducted, and the City is encouraged to participate in environmental agency pre-application and other specific meetings throughout the permitting process.

Coastal Systems has assisted our clients with educating their residents and the public about waterfront projects. We have participated in numerous public workshops to assist in educating the public on specific studies we have done and on various infrastructure projects. We are able to communicate technical information to the public so that they have an understanding of

the regulatory process and how the projects being considered have avoided and minimized impacts to resources. Our team has presented at numerous conferences including the International Marina and Boatyard Conference, Docks and Marinas Course – University of Wisconsin, the Florida Chamber of Commerce Environmental Permitting Summer School, and Law Seminars International.

CONSTRUCTION COST ESTIMATES

Coastal Systems monitors the unit prices and trends in the marine and dredging construction industry. Timing of project bidding can result in significant cost savings on the mobilization of a dredge. Similarly providing the flexibility for construction scheduling with a dredging contractor can also result in significant cost savings to a project. Coastal Systems has worked with public sector clients in the past to take advantage of opportunities with dredges already operating in the area.

Coastal Systems will provide updated construction cost estimates at every phase of the project design from initial schematic design (environmental permitting) through design development and preparation of construction documents.

CONSTRUCTION DOCUMENTS

Once the Project permitting is progressing, Coastal Systems will complete the design development and preparation of construction documents. Coastal Systems will prepare technical specifications for the dredging, environmental protection, vibration monitoring, turbidity control/monitoring, and construction surveying. Coastal Systems utilizes the Unified Facilities Guide Specifications (UFGS), which are consistent with the specifications utilized by the U.S. Army Corps of Engineers. These specifications comply with Construction Specification Institute (CSI) standards.

Coastal Systems will assemble the bid documents for the Project to assist the City with the bid process. Coastal Systems has implemented a variety of construction projects throughout Florida for public sector clients using client-provided "up front" contract documents. Similarly, Coastal Systems can prepare the full contract document package using the Engineers Joint Contract Documents Committee (EJCDC) contract documents. Coastal Systems will work with the City to ensure the "Best Value" procurement process is implemented that will result in the "lowest, most responsive bidder."

Coastal Systems has organized and managed selection committees to review bid packages that include qualifications/experience in addition to the means/methods proposed by the contractor. This selection process is based on scoring that combines both the qualifications and the bid price. Coastal Systems is a strong proponent of this method of procurement to avoid the "low bid" process, which often results in unqualified contractors who do not perform sufficiently on projects.

During the bidding process, Coastal Systems will assist the City in responding to requests for clarification and associated technical questions. Coastal Systems has implemented bidding processes on a fast-track process that has included incorporating all environmental permit conditions in the construction documents prior to final environmental permit issuance.

CONSTRUCTION ADMINISTRATION

Coastal Systems provides a "hands-on" approach to construction administration with regular site visits, and Representative Project Representative (RPR) services (full time inspection) have been provided to public sector clients. The firm regularly utilizes web-based construction management to facilitate construction documents control. In addition, the Engineer-of-Record for the dredging project will make representative site visits and oversee any of the construction inspection. Coastal Systems strongly supports the active participation and oversight of the professional engineer that completed the design work throughout construction. Coastal Systems will also assist the City with the required environmental and permit close-out process services through project completion.

The firm has the capabilities to provide contract payment or condition hydrographic surveys and water quality monitoring if required. The firm maintains several survey and support vessels and regularly operates these vessels in Broward County in support of coastal/marine projects.

WORKLOAD

Coastal Systems has a 5-year strategic plan for growth and management of the firm. The firm has the capability to manage and implement this project over the next 2-4 years based on the resource allocation and current projected workload. The environmental permitting process for a project of this complexity will require a minimum of 2 years, especially if seagrass mitigation has to be planned and negotiated. Preparation of construction documents and the bid process should require less than 6 months, and construction would require 6-12 months depending on the material handling and placement requirements.

FACILITIES

Coastal Systems, along their subconsultants maintain offices in the tri-county area of Southeast Florida with adequate resources and equipment to support this project from initial field investigations through construction administration.

7. REFERENCES

Coastal Systems is proud of the quality of work we produce, and we believe our high percentage of repeat clients testifies to the success of our staff. New clients are encouraged to contact our references:

Contact Name	Project
Mr. Jack Holland Hillsboro Inlet District 907 Hillsboro Mile Hillsboro Beach, FL 33062 papajackbc@aol.com T: (561) 479-5627	**Hillsboro Inlet** Description: *see SF 330* Year Completed: Ongoing Estimated Construction Cost: N/A Actual Construction Cost: N/A
Mr. Stephen Bogner City of Miami 3400 Pan American Dr. Miami, FL 33133 sbogner@ci.miami.fl.us T: (305) 579-6950 F: (305) 579-6952	**Dinner Key Maintenance Dredging** Description: *see SF 330* Year Completed: 2009 Estimated Construction Cost:$2.5M Actual Construction Cost: $2.5M
Mr. Kevin Quirk LXR Luxury Marinas 2301 SE 17th St Fort Lauderdale, FL 33316 kquirk@lxrmarinas.com T: (954) 873-3157	**Bahia Mar Yachting Center** Description: *see SF 330* Year Completed: 2003 Estimated Construction Cost: $4.5M Actual Construction Cost: $4.5M

8. MINORITY/WOMEN (M/WBE) PARTICIPATION

Coastal Systems maintains a diversified staff of 30+ individuals, representing 10 countries with fluency in more than seven foreign languages. The firm has teamed with several M/WBE companies during past projects, and will continue to meet the City's M/WBE procurement goals through our subconsultants, Tierra South Florida and F.R. Aleman & Associates.

Minority/Women (M/WBE) Certifications for Tierra South Florida and F.R. Aleman & Associates are provided below.

State of Florida

Minority, Women & Florida Veteran Business Certification

Tierra South Florida, Inc.

Is certified under the provisions of
287 and 295.187, Florida Statutes for a period from:

12/30/2013 to 12/30/2015

Craig J. Nichols, Secretary
Florida Department of Management Services

DEPARTMENT OF MANAGEMENT SERVICES

Office of Supplier Diversity • 4050 Esplanade Way, Suite 380 • Tallahassee, FL 32399 • (850) 487-0915 • www.osd.dms.state.fl.us

State of Florida

Minority, Women & Florida Veteran Business Certification

F.R. Aleman and Associates, In

Is certified under the provisions of
287 and 295.187, Florida Statutes for a period from:

02/04/2014 to 02/04/2016

Craig J. Nichols, Secretary
Florida Department of Management Services

DEPARTMENT OF MANAGEMENT SERVICES

Office of Supplier Diversity • 4050 Esplanade Way, Suite 380 • Tallahassee, FL 32399 • (850) 487-0915 • www.osd.dms.state.fl.us

9. LOCAL BUSINESS PREFERENCE

The following pages demonstrate Tierra South Florida's qualifications as a Local Business. A signed Local Business Preference Certification Statement and Broward County Local Business Tax Receipt are enclosed on the following pages.

LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local BUSINESS preference classification as indicated herein, and further certifies and agrees that it will re-affirm it's local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

(1) Tierra South Florida, Inc. (Business Name) is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(2) _____ (Business Name) is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Business Tax Receipt **or** a complete list of full-time employees and their addresses shall be provided within 10 calendar days of a formal request by the City.

(3) _____ (Business Name) is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.

(4) _____ (Business Name) requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(5) _____ (Business Name) requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

(6) _____ (Business Name) is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-12-04, Sec.2-199.2. and does not qualify for Local Preference consideration.

BIDDER'S COMPANY: Tierra South Florida, Inc.

AUTHORIZED COMPANY PERSON: Raj Krishnasamy, P.E. (NAME) _____ (SIGNATURE) 9/23/2014 (DATE)

BROWARD COUNTY LOCAL BUSINESS TAX RECEIPT

115 S. Andrews Ave., Rm. A-100, Ft. Lauderdale, FL 33301-1895 – 954-831-4000

VALID OCTOBER 1, 2014 THROUGH SEPTEMBER 30, 2015

DBA:
Business Name: KRISHNASAMY RAJ

Receipt #: 315-733
Business Type: ENGINEER (ENGINEER)

Owner Name: TIERRA SOUTH FLORIDA INC
Business Location: 2209B NE 54 ST
FT LAUDERDALE

Business Opened: 03/13/2008
State/County/Cert/Reg: 53567
Exemption Code:

Business Phone:

Rooms	Seats	Employees	Machines	Professionals
		4		

For Vending Business Only — Number of Machines: — Vending Type:

Tax Amount	Transfer Fee	NSF Fee	Penalty	Prior Years	Collection Cost	Total Paid
30.00	0.00	0.00	0.00	0.00	0.00	30.00

THIS RECEIPT MUST BE POSTED CONSPICUOUSLY IN YOUR PLACE OF BUSINESS

THIS BECOMES A TAX RECEIPT

WHEN VALIDATED

This tax is levied for the privilege of doing business within Broward County and is non-regulatory in nature. You must meet all County and/or Municipality planning and zoning requirements. This Business Tax Receipt must be transferred when the business is sold, business name has changed or you have moved the business location. This receipt does not indicate that the business is legal or that it is in compliance with State or local laws and regulations.

Mailing Address:

TIERRA SOUTH FLORIDA INC
2765 VISTA PKWY # 9
WEST PALM BEACH, FL 33411

Receipt #WWW-13-00112820
Paid 09/10/2014 30.00

2014 - 2015

10. SAMPLE INSURANCE CERTIFICATE

The firm's Professional and General Liability Insurance certificate is shown below.

OP ID: JT

CERTIFICATE OF LIABILITY INSURANCE — DATE (MM/DD/YYYY): 01/20/2014

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

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

PRODUCER Tanenbaum Harber of Florida 2900 SW 149th Avenue Miramar, FL 33027-6605 Pat Murphy Phone: 954-883-2900 Fax: 954-517-7400	CONTACT NAME: PHONE (A/C, No, Ext): FAX (A/C, No): E-MAIL ADDRESS: PRODUCER CUSTOMER ID #: COAST-1
INSURED Coastal Systems International 464 S. Dixie Highway Coral Gables, FL 33146	INSURER(S) AFFORDING COVERAGE — NAIC # INSURER A: Hartford Casualty Insurance Co — 14397 INSURER B: Hartford Underwriters Ins. Co. — 30104 INSURER C: Beazley Insurance Co., Inc. — 37540 INSURER D: INSURER E: INSURER F:

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

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

INSR LTR	TYPE OF INSURANCE	ADDL INSR	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	GENERAL LIABILITY X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT X LOC			21SBMIG4745	01/20/2014	01/20/2015	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1,000,000 $ 300,000 $ 10,000 $ 1,000,000 $ 2,000,000 $ 2,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS X HIRED AUTOS X NON-OWNED AUTOS			21UECIN8962	01/20/2014	01/20/2015	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ 1,000,000 $ $ $
A	X UMBRELLA LIAB X OCCUR EXCESS LIAB CLAIMS-MADE DEDUCTIBLE X RETENTION $ 10,000			21SBMIG4745	01/20/2014	01/20/2015	EACH OCCURRENCE AGGREGATE	$ 3,000,000 $ 3,000,000
	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A					WC STATU-TORY LIMITS / OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
C	Professional Liab Claims Made			V15R12140701 RETRO DATE - N/A	01/30/2014	01/30/2015	Per Claim Aggregate	1,000,000 2,000,000

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

CERTIFICATE HOLDER	CANCELLATION
COASYS1 Coastal Systems International, Inc. 464 South Dixie Highway Coral Gables,, FL 33146	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE Patrick D. Murphy

ACORD 25 (2009/09) The ACORD name and logo are registered marks of ACORD

11. JOINT VENTURES

Coastal Systems is not involved in any joint ventures.

12. SUBCONSULTANTS

The following pages provide detailed qualifications of the team's subconsultants, including relevant project experience, resumes, and professional licenses.

TIERRA SOUTH FLORIDA

Within Broward County, TSF has successfully completed over 450 projects in the last five years. TSF is extremely familiar with the Fort Lauderdale area and possess a high degree of information about local conditions. TSF's main office and laboratory is in West Palm Beach, Florida, TSF also has a local satellite office within the City limits of Fort Lauderdale. TSF can quickly mobilize resources throughout the City. TSF owns and operates 5 drill rigs (equipped with automatic hammers) mounted on either trucks, ATV's, and barge to meet the City's drilling needs. TSF currently holds a continuing contract with the City of Fort Lauderdale for Bridge Engineering services as the geotechnical subconsultant to Hardesty & Hanover. Recent projects completed for the City include but are not limited to Taxiway Echo Rehabilitation Project at Fort Lauderdale Executive Airport, Taxiway Bravo Rehabilitation Project at Fort Lauderdale Executive Airport, and Taxiway Delta & Charlie Rehabilitation Project at Fort Lauderdale Executive Airport.

BASIC SERVICES

Geotechnical Engineering: TSF can provide a complete range of geotechnical engineering services. Our organization helps define the construction and long-term performance risks associated with subsurface conditions. Applications are for all types of buildings, airport facilities, transportation systems, landfills, dams, and other civil and private projects. TSF's geotechnical services include:

- Laboratory testing and analysis
- Subsurface exploration
- Site preparation recommendations
- Expert witness testimony
- Value engineering
- Pavement evaluations and design
- Slope stability analysis
- Soil reinforcement
- Corridor studies
- Sinkhole studies
- Deep and shallow foundation analysis and design

Construction Materials Testing: TSF offers materials engineering, testing and inspection services applicable to the governmental, construction and manufacturing industries. TSF will evaluate and then develop recommendations regarding both existing structures and new construction. During construction, monitoring and quality control services will cover every phase of construction and all materials used. TSF has a fully equipped laboratory and certified technicians that can provide a wide range of material testing and inspection services. Our capabilities with respect to soils, concrete, and asphalt have been approved by the Florida Department of Transportation (FDOT) and certified by Construction Material Engineering Council (CMEC). TSF's construction material testing and inspection services include:

- Soils/aggregates/concrete/masonry/asphalt
- Concrete testing and placement observation
- Asphalt paving monitoring
- MSE wall installation monitoring
- Drilled shaft installation monitoring
- Earthwork testing and observations
- Masonry, grout, and mortar sampling and testing
- Asphalt plant observations and monitoring
- Pre-stressed yard observations
- Pile driving installation monitoring

Building Inspection: TSF also provides building inspection services to public and private clients; our services include:

- Threshold/special inspections
- Roof installation observations
- Welding inspections
- Floor flatness testing
- Non-destructive testing
- Torque testing and inspections
- Fire proofing testing

CAPABILITIES AND EXPERIENCE

TSF's principals have served as geotechnical engineering consultants to a large variety of clients, both public and private, in the course of our experience. These clients include architects, engineers, contractors, developers, utilities, institutions, schools, military, municipalities, and private enterprise covering commercial and residential entities. Our collective project experience is broad based covering: airport construction, pavement design of municipal airports, buildings, highways, bridges, communication towers, dams and levees, sinkhole remediation, ground improvement projects, water supply projects, landfills, slope stabilities analyses, and distressed structure/foundation studies.

RELEVANT EXPERIENCE

Terminal 4 Improvements, Port Everglades, Florida
Performed a geotechnical engineering study for the improvements to Terminal 4. Improvements included 1) interior remodeling, 2) construction of internal roadway and parking lots, 3) installation of two loading bridges dockside, 4) installation of canopies at drop-off areas around Terminal 4, and 5) extending slip #2 by dredging. Additionally, 16-inch-diameter or Auger Cast-in Place (ACIP) piles were being considered to support the bridge structures, and the existing grades in parking areas were to be raised 2 to 4 feet. TSF's field work consisted of 3 Standard Penetration Test (SPT) borings, 10 power augers, and 2 Borehole Permeability (BHP) tests. Provided recommendations regarding site preparation (stripping, compaction, surcharging vs. biaxial geogrid and geotextile, etc.), trench excavations, trench backfill, foundation design for buildings, foundation design alternatives for canopies (shallow/mat foundations vs. deep foundation/ACIP pile design), passenger loading bridge foundation including ACIP pile design criteria, cofferdam soil parameters, flexible pavement design for parking lot/driveway areas, and other construction considerations. Completed on time and within budget in 2013.

Bulkhead Reconstruction and Slip Dredging at Slip No. 3, Port of Palm Beach, Florida
Performed geotechnical study which included subsurface exploration and provided recommendations for slip dredging and bulkhead reconstruction. Completed on time and within budget.

West Lake Improvement, Fort Lauderdale, Florida
Performed geotechnical services for confirmatory subsurface investigation performed in the Intracoastal Water Way (ICWW) for the proposed improvement along the West Lake Park Shoreline. The purpose of the study was to investigate the subsurface conditions in the ICWW at requested locations where timber piles were to be utilized along the shoreline for the rip rap and determine the depth of unsuitable material (if any). Field work included Standard Penetration Test (SPT) borings. Provided geotechnical recommendations including pile installation recommendations (pre-drilling holes, fill for annular spaces, steel shoe tips for drivability purposes, etc.) Completed on time and within budget.

Bulkhead at Container Terminal South, Port Everglades, Florida
Performed a geotechnical engineering study for the replacement of about 250 feet of bulkhead. The canal at the time of the study was about 12 feet deep, and an additional 3 to 4 feet was expected to be dredged. Field work included Standard Penetration Test (SPT) borings. Provided soil parameters for bulkhead design and geotechnical recommendations. Also preformed driven pile axial capacity analysis for 14-inch steel pipe pile using FB-DEEP and provided results with discussion. Completed on time and within budget in 2012.

Royal Caribbean Cruise Ship Pier, Labadee, Haiti
Performed a geotechnical engineering study for the construction of a new cruise ship mooring/berthing pier, pier to shore trestle, breakwater, and basin dredging (to a depth of about 36 feet) to accommodate Royal Caribbean cruise ships. The purpose of the geotechnical study was to evaluate the subsurface conditions at the site and to provide foundation recommendations for the pier. Proposed pier design consisted of concrete structures founded on steel pipe piles driven to rock. The scope of the geotechnical study included subsurface exploration, field-testing, engineering analysis and recommendations for pile foundation. Subsurface exploration and field testing consisted of Standard Penetration Tests (SPT) borings, split spoon samples and soil probes. Based on the results of the field and laboratory testing completed for this project, TSF confirmed that the subsoils for the proposed pier were suitable for the support of the proposed structure on a pile foundation system. TSF performed pile capacity analysis for 36, 42, 48, and 54-inch piles and provided allowable pile compressive capacities, allowable pile tension capacity, and lateral subgrade modulus values to be utilized for initial analysis. TSF also provided discussion of subsurface conditions and recommendations regarding pipe pile installation and a test pile program.

Refineria Del Pacifico-PDVSA-Manta, Ecuador
Performed a geotechnical engineering study for the new oil refinery in Manta, Pacific Coast of Ecuador. The project includes a 100 meter long pier, and 3 single buoy moorings to load and unload from oil-tankers. Completed 21 SPT borings/cores at depths ranging from 3 meters to 22 meters of water using a combination of jack-up barge and drilling platform (boat). The borings/cores were extended to 25 meters below mudline. The project involved rock coring (wire-line and conventional), Denison tube sampling, vibro-cores, Shelby tubes sampling.

Road Town Cruise Ship Pier Extension, Tortola, British Virgin Islands
Performed a geotechnical engineering study for the construction of cruise ship pier extension, which consisted of two new mooring dolphins, modifications to two existing mooring dolphins, and dredging of the bay about the pier to a depth of about 35 feet. The purpose of the geotechnical study was to evaluate the subsurface conditions at the site and to provide foundation recommendations for the pier. Proposed pier design consisted of concrete structures founded on steel pipe piles driven to rock. The scope of the geotechnical study included subsurface exploration, field-testing, engineering analysis and recommendations for pile foundation. Subsurface exploration and field testing consisted of Standard Penetration Tests (SPT) borings and split spoon samples. Based on the results of the field and laboratory testing completed for this project, TSF confirmed that the subsoils for the proposed pier were suitable for the support of the proposed structure on a pile foundation system. TSF performed pile capacity analysis for 30, 48, and 50-inch piles and provided allowable pile compressive capacities, allowable pile tension capacity, and lateral subgrade modulus values to be utilized for initial analysis. TSF also provided discussion of subsurface conditions and recommendations regarding pipe pile installation and a test pile program.

Dubois Park – Modification and Expansion, Jupiter, Florida
Performed geotechnical engineering study for the construction of sheet pile bulkhead, pile supported over-water dock and waterfront access structures, and breakwater structures. Provided geotechnical recommendations for deep foundation design and construction as well as allowable pile capacities. Also provided soil parameters for bulkhead design. Completed on time and within budget in 2009.

Slip 3 - Toe Wall, Port Everglades, Florida
Performed a geotechnical engineering study for the project which consisted of analyzing the adequacy of the existing toe wall along Slip 3. Field work included 3 Standard Penetration Test (SPT) boring. Provided subsurface information as well as soil parameters to be utilized for preliminary toe wall analysis. Completed on time and within budget in 2009.

SR A1A/Ocean Drive-Shoreline Stabilization for FDOT District IV, St. Lucie County, Florida
Performed geotechnical engineering study for the possible use of sheet pile to stabilize some sections of the shoreline along SR A1A/Ocean Drive from MP 3.3 to MP 5.9. Provided soil parameters be considered in determining earth pressures for proposed sheet pile wall and other geotechnical recommendations. Completed on time and within budget in 2011.

Dania Beach Marina, Dania Beach, Florida
Performed geotechnical engineering study for the construction of 1200 feet of new bulkhead and a dockmaster facility. Provided soil parameters for bulkhead design and geotechnical recommendations. Completed on time and within budget in 2011.

Dock Reconstruction at Palm Cove Marina, Palm City, Florida
Performed geotechnical study which included subsurface exploration, analysis of deep foundation system and geotechnical recommendations for the design about 838 linear feet of dock in Palm Cove Marina located in Palm City, Florida. The existing dock was damaged during a hurricane and was to be demolished to accommodate the new dock. The slips were to be about 35 to 50 feet in length. Completed on time and within budget.

Grove Isle Seawall Repair, Biscayne Bay, Florida
Performed a geotechnical engineering study for the seawall repair project for the southern portion of the seawall. Field work included Standard Penetration Test (SPT) borings. Provided geotechnical discussion of subsurface and groundwater conditions. Also provided soil parameters for the foundation design for new steel sheet piles. Completed on time and within budget in 2012.

Structural Remediation of Seawall at Sundance Marina, Jensen Beach, Florida
Performed geotechnical study which included subsurface exploration and recommendations for the structural improvement of seawall below two existing structures (motor storage and boat storage buildings). Pressure grouting was considered to improve the soils along the sea wall and below the structures. Completed on time and within budget.

CR 707/Indian River Drive Slope Stabilization, St. Lucie County, Florida
Performed a geotechnical engineering study which included a slope stability analysis for the existing embankment along CR-707/Indian River Drive for the Florida Department of Transportation, District 4. The purpose of the study was to analyze the

slope stability of the embankment along CR 707/Indian River Drive which was repaired after Hurricanes Jeanne and Francis in 2004. Field work included Standard Penetration Test (SPT) borings. Slope stability analysis of the slope was performed using the computer program "STABLPRO" from ENSOFT, INC. Soil parameters were utilized for the soil types encountered and the slope stability analysis yielded that the estimated safety factor for the most critical failure surface exceeded the minimum requirement. Completed on time and within budget.

Bulkhead/Sheetpile - Central Broward Water Control District, Fort Lauderdale, Florida
Performed a geotechnical engineering study for bulkhead repair work in Fort Lauderdale, Florida. The purpose of this study was to explore the subsurface conditions at the site to provide soil parameters for the design of the proposed sheet pile/bulkhead. Field work included Standard Penetration Test (SPT) borings. TSF provided a geotechnical report including discussion of subsurface conditions and design soil parameters. The project was completed on-time and within budget in 2008.

Canal Excavation-Central Broward Water Control District, Broward County, Florida
Performed a geotechnical engineering study for the canal excavation for Central Broward Water Control District in Broward County, Florida. The purpose of this study was to explore the subsurface conditions at the site to enable an evaluation of acceptable construction and site development considerations. Field work included Standard Penetration Test (SPT) borings. TSF provided a geotechnical report including discussion of subsurface conditions and groundwater information as well as geotechnical recommendations for excavations. The project was completed on-time and within budget in 2009.

RAJ KRISHNASAMY, P.E.

President, Principal Geotechnical Engineer

27 Years Professional Experience

EDUCATION

MS in Geotechnical Engineering, University of Memphis 1995

BS in Civil Engineering, Christian Brothers University 1987

Diploma/1984/ Electronic Engineering, Malaysian Air Force Institute

PROFESSIONAL ORGANIZATION AND REGISTRATION

Professional Engineer:

Florida, 53567

Certified OSHA Supervisor

Certified Environmental Consultant

PROFESSIONAL EXPERIENCE

As President and Principal Engineer for Tierra South Florida, Inc., Mr. Krishnasamy oversees the geotechnical engineering, construction materials testing, and inspection services operations. Mr. Krishnasamy was the Project Manager for a $1.2 billion multimedia super corridor project that included universities, commercial buildings, and residential roadways. He was also Principal Geotechnical Engineer for a $780 million elevated highway, where he established Rock Founding Rationale for deep foundation systems. He was also Principal Geotechnical Engineer for a $450 million highway that included land reclamation and soil stabilization. Mr. Krishnasamy has been involved in hundreds of projects of diversified complexity consisting of residential, commercial, educational, and wastewater treatment facilities, sports arenas, landfills, airports, roadways and land reclamation.

KEY PROJECT EXPERIENCE

Dania Cutoff Canal Deepening, Port Everglades, FL Performed a limited pre-dredge soil sampling and analysis for the Dania Cutoff Canal Deepening Project in Port Everglades-Broward County, Florida. Provided a Pre-Dredge Soil Sampling and Analysis Report summarizing the findings.

Bulkhead Reconstruction and Slip Dredging at Slip No. 3, Port of Palm Beach, FL Performed geotechnical study which included subsurface exploration and provided recommendations for slip dredging and bulkhead reconstruction.

Bulkhead at Container Terminal South, Port Everglades, FL Performed a geotechnical engineering study for the replacement of about 250 feet of bulkhead. The canal at the time of the study was about 12 feet deep, and an additional 3 to 4 feet was expected to be dredged. Field work included Standard Penetration Test (SPT) borings. Provided soil parameters for bulkhead design and geotechnical recommendations. Also preformed driven pile axial capacity analysis for 14-inch steel pipe pile using FB-DEEP and provided results with discussion. Completed on time and within budget in 2012.

Toe Wall Protection, Port Everglades, FL Performed geotechnical study included subsurface exploration and provided geotechnical recommendations for the design of toe wall improvement for Berths 1 through 33 at Port Everglades.

Terminal 4 Improvements, Port Everglades, FL Performed a geotechnical engineering study for the improvements to Terminal 4. Improvements included 1) interior remodeling, 2) construction of internal roadway and parking lots, 3) installation of two loading bridges dockside, 4) installation of canopies at drop-off areas around Terminal 4, and 5) extending slip #2 by dredging. Additionally, 16-inch-diameter or Auger Cast-in Place (ACIP) piles were being considered to support the bridge structures, and the existing grades in parking areas were to be raised 2 to 4 feet. TSF's field work consisted of 3 Standard Penetration Test (SPT) borings, 10 power augers, and 2 Borehole Permeability (BHP) tests. Provided recommendations regarding site preparation, trench excavations, trench backfill, foundation design for buildings, foundation design alternatives for canopies (shallow/mat foundations vs. deep foundation/ACIP pile design), passenger loading bridge foundation including ACIP pile design criteria, cofferdam soil parameters, flexible pavement design for parking lot/driveway areas, and other construction considerations.

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KEY PROJECT EXPERIENCE, Con't.

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SR A1A/Ocean Drive-Shoreline Stabilization for FDOT District IV, St. Lucie County, FL Performed geotechnical engineering study for the possible use of sheet pile to stabilize some sections of the shoreline along SR A1A/Ocean Drive from MP 3.3 to MP 5.9. Provided soil parameters be considered in determining earth pressures for proposed sheet pile wall and other geotechnical recommendations.

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Bulkhead/Sheetpile-Central Broward Water Control District, Fort Lauderdale, FL Performed a geotechnical engineering study for bulkhead repair work in Fort Lauderdale, Florida. The purpose of this study was to explore the subsurface conditions at the site to provide soil parameters for the design of the proposed sheet pile/bulkhead. Field work included Standard Penetration Test (SPT) borings. TSF provided a geotechnical report including discussion of subsurface conditions and design soil parameters.

Canal Excavation-Central Broward Water Control District, Broward County, FL Performed a geotechnical engineering study for the canal excavation for Central Broward Water Control District in Broward County, Florida. The purpose of this study was to explore the subsurface conditions at the site to enable an evaluation of acceptable construction and site development considerations. Field work included Standard Penetration Test (SPT) borings. TSF provided a geotechnical report including discussion of subsurface conditions and groundwater information as well as geotechnical recommendations for excavations

F.R. ALEMAN & ASSOCIATES

As consulting transportation, construction and communication systems engineers and surveyors, F.R. Aleman conducts business primarily in the State of Florida. However, the firm has customers throughout the United States, Central and South America, including the Caribbean.

FRA has become well known for their specialty in the analysis, design, development and implementation of advanced traffic management, intelligent transportation and communication systems of all types. FRA is a high-tech firm with considerable investments in automation research, hardware/software development and computerization. This organization brings a systems management approach to engineering solutions. FRA's engineering, management expertise and experience provide the ability to design, develop and manage total systems with varied requirements from the formulation stage through the operational, support and evaluation phases.

In order to supplement and expand FRA's then existing survey services, FRA acquired an 18 year old survey and mapping firm in 2002, Fernando Z. Gatell, P.L.S., Inc. (FZG). FZG is now known as FRA, all of FZG's staff remained and have since further expanded the firm's combined survey resources by adding even more state-of-the-art equipment and survey personnel. FRA's survey experience includes both prime and subconsultant roles on numerous District wide Survey and Mapping contracts, as well as project specific design and construction contracts.

FERNANDO Z. GATELL, PSM

Director of Survey & Mapping

EXPERTISE

Surveying
Mapping
Subsurface Utility Engineering (SUE)

EXPERIENCE

With FRA: 12 Years
With Others: 40 Years

EMPLOYMENT

Joined FRA 9/2002

EDUCATION

B.D.
Surveying
Camaguey School
Cuba
(1965)

B.S.
Ciego de Avila
Cuba
(1959)

Ignacio Agramonte
Univ., Cuba
(1958)

REGISTRATION

Professional Surveyor & Mapper
Florida No. LS-2821
(1975)

OFFICE LOCATION

Miami

Mr. Gatell is the Director of Surveying & Mapping for F.R. Aleman & Associates, Inc. He has over 50 years of experience which covers all of the facets of Surveying and Mapping, from complicated boundary disputes to Right-of-Way, engineering, design, environmental, GPS, construction and specialized surveys. He taught Legal Aspects of Surveying for many years at Miami Dade Community College and for over 15 years served as a member of an Advisory Group for Engineering and Surveying for Miami Dade Community College.

KEY PROJECT EXPERIENCE

SR 976/Bird RD from SW 57th AVE/Red RD to SW 87th AVE/Galloway RD, FDOT 6 (08/2011 – Present). Mr. Gatell served as the Principal-in-Charge and provided QA/QC for this contract; it includes preparing a Right-of-Way Map (Corridor Map) along a three mile stretch. This contract included the establishment of a control network, recovery of the historical baseline and recovering existing section corners and quarter section corners, re-establishing the corners not found and submitting the Certified Section Corners to the Department of Environmental Protection. This assignment involved the location of over 700 Public Corners, Property Corners and Monuments, to verify Right-of-Way lines. *Contact: Ms. Cristina Kinman-Albury, PSM (305) 470-5489.*

Districtwide Misc. Location Survey Consultant, FDOT 6 (2012 – Present). FRA serves as the Prime consultant for this contract; Mr. Gatell provides QA/QC. The scope of this project involved providing various types of survey services on a Task Work Order basis throughout Miami-Dade & Monroe County. *Contact: Mr. Charles "Ed" Clark, PSM (305) 470-5410*

DW Survey & Mapping Services Support, FDOT 4 (2012 – Present). FRA was recently awarded this contract as a Prime consultant. Mr. Gatell serves as the QA/QC Reviewer for this contract. The scope of this project will involve providing various types of survey services on a Task Work Order basis throughout Broward, Palm Beach, Martin, St. Lucie and Indian River Counties. *Contact: Mr. Bill Arata, PSM (No longer in D4)/ Mr. Paul Doll, PSM (954) 777-4579*

Districtwide Utility Location Services & D/W Underground Utility Services Contract, FDOT 4 (2000 – 2005; 2005 – 2011, 2 Consecutive Contracts). Mr. Gatell served as a Project Surveyor and provided survey and mapping services of existing surface and subsurface utilities to support the design of construction plans on numerous projects. *Contact: Mr. Ken Olson (954) 777-4563 / Mr. Bob Hughan Retired*

SR 607 (Emerson AVE) from SR 614 (Indrio RD) – Indian River County Line, FDOT 4 (2008). Mr. Gatell served as a Project Surveyor for this contract which involved a full design survey of 2.5 miles. . FRA provided as part of this scope: establishment of control network, recovery of historical baseline, full topographic and DTM from the center of the existing canal to the east right-of-way of SR 607. *Contact: Mr. Robert Rubio P.E., FDOT (954) 777-4160*

Land Surveying Services, Miami Dade County Public Schools (3/2004 – Ongoing, 3 Consecutive Contracts). FRA was awarded two consecutive contracts as a Prime consultant by the MDCPS board. Mr. Gatell served as the Project Manager under both contracts, he provided various surveying and mapping services. FRA performed nearly all types of surveys including: boundary, topographical, specific purpose, review of public records, title searches, elevation certificates, roof surveys and the preparation of documents for the recording of easements with utility companies and/or WASD. Other types of work provided were Ground Penetrating Radar (GPR) and subsurface utility location and designation. Over the course of the contract, FRA completed 88 Work Orders most of which were at different schools, many of which were required immediately and FRA's survey/utility crews began work within 24 hours of being issued the assignment. *Contact: Ms. Nancy Tobin No Longer with MDCPS / Mr. Albert Destrada* & Associates, Inc. (305) 995-2423

SUBCONSULTANT PROFESSIONAL LICENSES & INSURANCE CERTIFICATES

The following pages enclose professional licenses and insurance certificates for Tierra South Florida and F.R. Aleman & Associates.

State of Florida
Department of State

I certify from the records of this office that TIERRA SOUTH FLORIDA, INC. is a corporation organized under the laws of the State of Florida, filed on October 7, 2003, effective October 17, 2003.

The document number of this corporation is P03000110144.

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 3, 2014, and its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Third day of January, 2014

Ken Detzner

Secretary of State

Authentication ID: CC0325447345

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

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

State of Florida

Board of Professional Engineers

Attests that

Tierra South Florida, Inc.

Has satisfied the requirements of Section 471.023, Florida Statutes. In recognition thereof, the Board of Professional Engineers hereby authorizes this firm to offer engineering services in the State of Florida in accordance with Chapter 471, Florida Statutes, and the rules of the Board.

CERTIFICATE OF AUTHORIZATION NO. 28073

FEMC-CA –022809-108-I

Witness the Seal of the Board and the Signature of the Board's duly authorized Chair

this 13 day of APR , 20 08

CHAIR

State of Florida

Board of Professional Engineers

Attests that

Tierra South Florida, Inc.

is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2015
Audit No: 228201500974

Certificate of Authorization

CA Lic. No:
28073

State of Florida

Board of Professional Engineers

Attests that

Raj Krishnasamy, P.E.

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes

Expiration: 2/28/2015
Audit No: 228201504760

P.E. Lic. No:
53567

TIERSOU-01 CDIXON

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 8/29/2014

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

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

PRODUCER Ames & Gough 8300 Greensboro Drive Suite 980 McLean, VA 22102	CONTACT NAME: PHONE (A/C, No, Ext): (703) 827-2277 FAX (A/C, No): (703) 827-2279 E-MAIL ADDRESS:
	INSURER(S) AFFORDING COVERAGE — NAIC #
	INSURER A : Great Divide Insurance Company
INSURED Tierra South Florida, Inc. 2765 Vista Parkway, Suite 9 West Palm Beach, FL 33411	INSURER B : The Hartford INSURER C : Continental Casualty Company (CNA) A(XV) 20443 INSURER D : INSURER E : INSURER F :

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

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

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: POLICY X PRO-JECT LOC OTHER:			GLP2012565-10	09/01/2014	09/01/2015	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG EMPLOYEE BENE.	$ $ $ $ $ $ $	1,000,000 100,000 5,000 1,000,000 2,000,000 2,000,000 1,000,000
B	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS			42UENNA7429	09/01/2014	09/01/2015	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $	1,000,000
C	UMBRELLA LIAB X OCCUR X EXCESS LIAB CLAIMS-MADE DED X RETENTION $ 10,000			L6011650865	09/01/2014	09/01/2015	EACH OCCURRENCE AGGREGATE	$ $	5,000,000 5,000,000
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N/A		42WECR1264	09/01/2014	09/01/2015	X PER STATUTE OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $	500,000 500,000 500,000
C	Professional			AEH591879490	09/01/2014	09/01/2015	Per Claim		1,000,000
C	Liability			AEH591879490	09/01/2014	09/01/2015	Aggregate		2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
Auto Liability evidenced above includes coverage for:
2004 F550 VIN: 1FDAF57P84EB97300
2005 F650 VIN: 3FRNF65E55V215371

CERTIFICATE HOLDER	CANCELLATION
For Illustrative Purposes	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE

ACORD 25 (2014/01) The ACORD name and logo are registered marks of ACORD

State of Florida
Department of State

I certify from the records of this office that F.R. ALEMAN AND ASSOCIATES, INC. is a corporation organized under the laws of the State of Florida, filed on January 6, 1987.

The document number of this corporation is M44364.

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 April 22, 2014, and its status is active.

I further certify that said corporation has not filed Articles of Dissolution.

Given under my hand and the Great Seal of the State of Florida at Tallahassee, the Capital, this the Twenty-second day of April, 2014

Ken Detzner

Secretary of State

Authentication ID: CC3854895336

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

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

State of Florida

Board of Professional Engineers

Attests that

F.R. Aleman & Associates, Inc.

is authorized under the provisions of Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes.

Expiration: 2/28/2015
Audit No: 22820150263 7

Certificate of Authorization

CA Lic. No: 4658

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

License No.: **LS2821**
Expiration Date: February 28, 2015

Professional Surveyor and Mapper License

Under the provisions of Chapter 472, Florida Statutes

FERNANDO Z GATELL
7114 SW 92ND CT
MIAMI, FL 33173-2339

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

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

License No.: **LB6785**
Expiration Date: February 28, 2015

Professional Surveyor and Mapper Business License

Under the provisions of Chapter 472, Florida Statutes

F.R. ALEMAN AND ASSOCIATES INC
10305 NW 41ST ST STE 200
DORAL, FL 33178-2982

ADAM H. PUTNAM
COMMISSIONER OF AGRICULTURE

This is to certify that the professional surveyor and mapper whose name and address are shown above is licensed as required by Chapter 472, Florida Statutes.

ACORD™ CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 06/30/2014

PRODUCER 4
ANDERSON & JACOBY INSURANCE CO
7855 SW 104TH STREET
SUITE #100
MIAMI, FL 33156

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
F R ALEMAN & ASSOCIATES INC.
10305 NW 41ST STREET
STE#200
MIAMI, FL 33178
FRAL00

INSURERS AFFORDING COVERAGE	NAIC #
INSURER A: NATIONWIDE INS CO OF AMERICA	25453
INSURER B: HUDSON INSURANCE. CO.	25054
INSURER C:	
INSURER D:	
INSURER E:	

COVERAGES

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. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
A		GENERAL LIABILITY COMMERCIAL GENERAL LIABILITY CLAIMS MADE [X] OCCUR [X] GEN'L AGGREGATE LIMIT APPLIES PER: POLICY [ ] PRO-JECT [ ] LOC	ACP3006461755	12/31/2013	12/31/2014	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ 1000000 $ 300000 $ 50000 $ 1000000 $ 2000000 $ 2000000
		AUTOMOBILE LIABILITY ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS HIRED AUTOS NON-OWNED AUTOS				COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $
		GARAGE LIABILITY ANY AUTO				AUTO ONLY - EA ACCIDENT OTHER THAN AUTO ONLY: EA ACC AGG	$ $ $
A		EXCESS/UMBRELLA LIABILITY [X] OCCUR [ ] CLAIMS MADE DEDUCTIBLE [X] RETENTION $0.	ACP3006461755-1	12/31/2013	12/31/2014	EACH OCCURRENCE AGGREGATE	$ 4000000 $ 4000000
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? If yes, describe under SPECIAL PROVISIONS below				WC STATU-TORY LIMITS [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $
B		OTHER PROFESSIONAL LIABILIT	AE-823566	04/01/2014	04/01/2015	EACH CLAIM AGGREGATE	2,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

THE CERTIFICATE HOLDER IS LISTED AS ADDITIONAL INSURED WITH REGARD TO GENERAL LIABILITY

CERTIFICATE HOLDER

CITY OF PEMBROKE PINES
10100 PINES BLVD.
PEMBROKE PINES, FL 33026

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE REC

ACORD 25 (2001/08)

13. 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 anyrelative 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
_____	_____
_____	_____

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

Coastal Systems International, Inc. attests that no such relationships exist.

Authorized Representative

Signature: _____
Name: Timothy K. Blankenship
Title: Director

COASTAL SYSTEMS
INTERNATIONAL, INC.

Coastal Engineering, Waterfront & Marinas, Civil Engineering,
Regulatory Permitting, Site Investigations,
Marine Environmental, Construction & Destination Development

464 South Dixie Highway, Coral Gables, FL 33146

Tel: 305-661-3655 | Fax: 305-661-1914
www.coastalsystemsint.com
info@coastalsystemsint.com