# General Engineering Services

## City of Key West

*RFQ #22-006*

**CUMMINS | CEDERBERG**

**Coastal & Marine Engineering**

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CUMMINS | CEDERBERG
Coastal & Marine Engineering

December 2, 2022

City of Key West, City Clerk
1300 White Street
Key West, FL 33040

**RE: Requests for Qualifications #22-006 General Engineering Services**
**Category - Coastal Facilities**

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Dear selection committee members,
As a firm who focuses exclusively on coastal and marine projects, we understand the critical components of a project located in a sensitive natural environment exposed to dynamic coastal processes. Many of our projects involve seawalls, docks, marinas, living shorelines, erosion control, and beach nourishment and we incorporate coastal resiliency into all of our designs.

The firm was founded by Jason Cummins, PE, and Jannek Cederberg, PE in 2010. Over the course of 12 years Cummins Cederberg has successfully grown into a leading engineering firm for complex marine engineering projects throughout Florida and the Caribbean. Our firm is familiar with the City of Key West and its project needs through similar work throughout Monroe County.

At Cummins Cederberg, our design team recognizes that a vibrant and energetic waterfront serves as an important destination within the community and creates synergy with the surrounding areas. Cummins Cederberg's engineers, regulatory experts, and marine scientists bring unrivaled qualifications and experience working in marine and coastal environments and are recognized in the industry for their knowledge and proficiency. We are proud to have several former regulators on staff, who bring unmatched insight into the environmental regulatory permitting process.

***Our team works closely with our clients to clearly define the project purpose and need, quickly identify any challenges, and fully execute projects cost-effectively and on schedule. This submittal emphasizes a distinguished theme – no other firm can match out team's qualifications, strength, and exclusive focus on projects in the marine environment, specifically our portfolio of coastal facility and engineering projects in Southeast Florida.***

A fusion of talent with a demonstrated ability to complete challenging engineering projects utilizing creative and unique solutions, combined with our exceptional relationships with local, regional, state, and federal agencies, will provide the City of Key West with a team who can exceed expectations for coastal facility projects.

We appreciate the opportunity to submit our qualifications and stand ready to assist the City of Key West through construction of a successful project. Should you have any questions or require additional information, please do not hesitate to contact me at jcederberg@CumminsCederberg.com or 305-741-6155.

Sincerely,
CUMMINS CEDERBERG, INC.

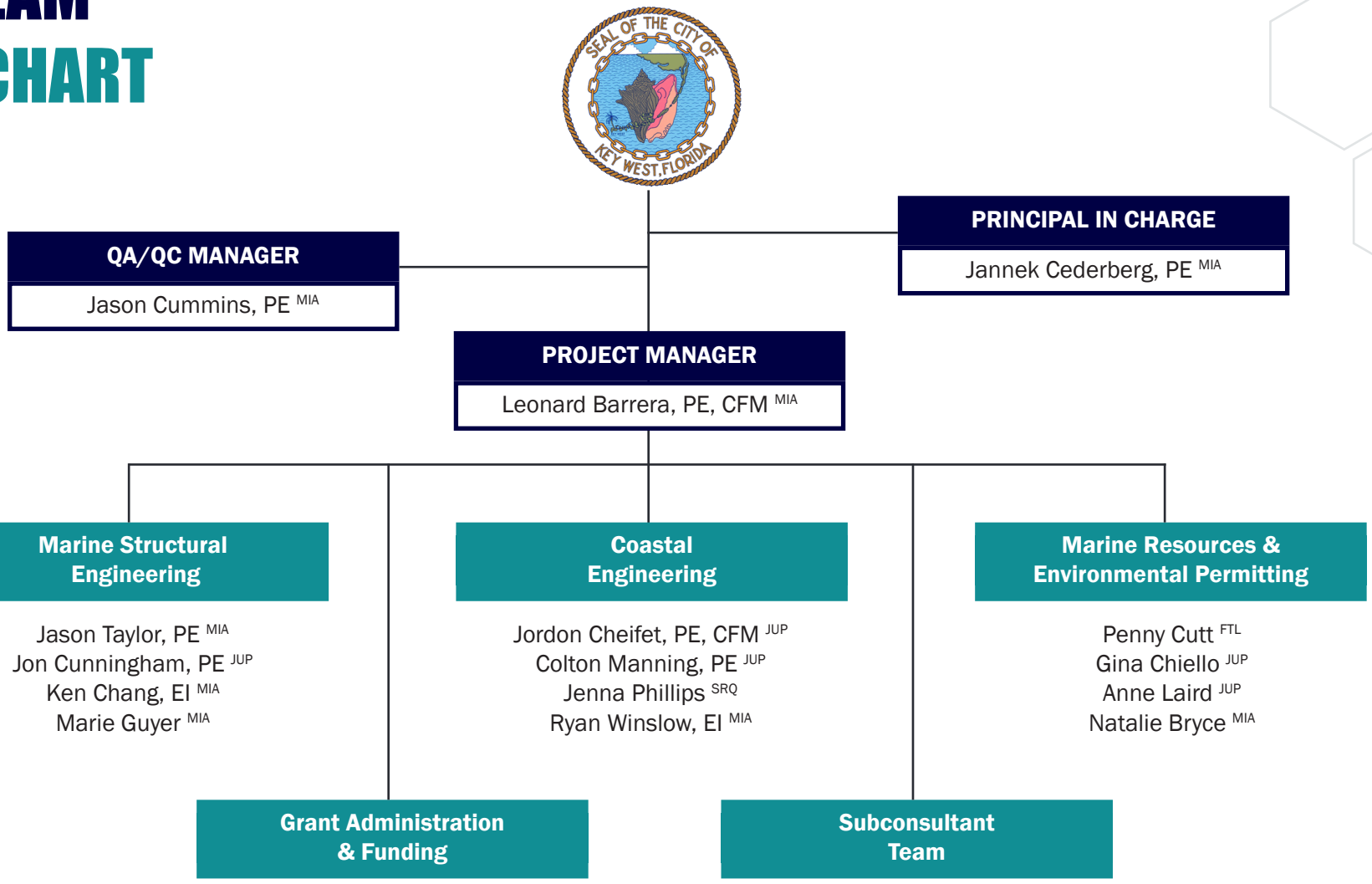
Jannek Cederberg, PE
Principal

Leonard Barrera, PE, CFM, ENV SP, WEDG
Project Manager

# 02. INFORMATION PAGE

| | |
|---|---|
| Name of Engineer (prime) | Cummins Cederberg, Inc. |
| Project Manager Contact Information | Leonard Barrera Allen, PE, CFM, ENV SP, WEDG<br>Senior Coastal Engineer<br><br>201 Alhambra Circle, Suite 601<br>Coral Gables, FL 33134<br><br>Ph: 305-741-6155 / F: 305-974-1969<br>lbarrera@CumminsCederberg.com |
| Principal-in-Charge Contact Information | Jannek Cederberg, PE<br>Principal<br><br>201 Alhambra Circle, Suite 601<br>Coral Gables, FL 33134<br><br>Ph: 305-741-6155 / F: 305-974-1969<br>jcederberg@CumminsCederberg.com |

# 03. TEAM
## ORG CHART




AAA Location of Key Personnel

MIA - Miami
FTL - Fort Lauderdale
JUP - Jupiter
SRQ - Sarasota
TAL - Tallahassee

# 04. COMPANY INFORMATION

Cummins Cederberg was founded in Miami by Jason Cummins, PE, and Jannek Cederberg, PE, 12 years ago, and has successfully become a leading engineering firm for complex coastal and marine engineering projects in Florida and the Caribbean. Since the beginning, Cummins Cederberg exclusive focused on coastal and marine projects such as the proposed project. What started with two coastal engineers has grown organically to a high-quality team of more than 40 professionals focusing exclusively on the coastal and marine environments. The firm is comprised of coastal engineers, marine structural engineers, marine biologists, regulatory and policy experts, marine scientists, and surveyors, with proven experience in all facets of coastal engineer, marine structural design, environmental planning, regulatory permitting, and construction management.

**42**
**Team Members**

**18**
**Coastal & Marine Engineers**

**12**
**Environmental Specialists**

Cummins Cederberg is repeatedly selected ahead of larger national engineering firms due to our unique and focused qualifications, as well as our personalized service. The firm's success is built on providing high quality work in a transparent manner and fostering long term relationships. The two founders, who will have key roles as part of this important project, are both based in the Coral Gables headquarters and have extensive experience in the coastal and marine fields from both private and public clients. They have been involved in more than 1,000 coastal and marine engineering projects throughout Florida and the Caribbean (some of the largest in the region) providing unmatched knowledge and experience.

As a testament of our commitment to integrity and quality, 86% of the firm's work is through repeat clients or referrals – an extraordinarily high number we are very proud of. As a local niche firm, we strive to provide superior service and "go the extra mile" for our clients.

## What Sets Us Apart

*Expertise.*

First and foremost, we are experts in coastal and marine engineering. We leverage these technical skills and experience to deliver solutions for complex waterfront projects. Our team of professionals have been working in Florida and remote areas of The Caribbean for nearly two decades.

Our experience in remote areas has afforded us an unparalleled understanding of coastal processes and extreme conditions. We have worked on numerous park projects in Southeast Florida, so we operational and functional requirements as well as importance of life cycle cost.

Over half of our staff hold advanced degrees and certifications such as ***LEED AP, Envision Sustainability Professionals, Certified Floodplain Managers, and Waterfront Edge Design Associates***.

### Why the Cummins Cederberg Team

*1. Unrivaled waterfront design experience*

*2. Unmatched regulatory expertise*

*3.Extensive experience in Monroe County*

*4. Exclusively focused on projects in the coastal and marine environment*

# Subconsultants

Cummins Cederberg will serve as prime consultant for the project with our trusted subconsultants – all with previous experience working with Cummins Cederberg. Cummins Cederberg will lead the overall project management and team communication as well as coastal structural designs, engineering analyses, above and below water inspections, environmental fieldwork, regulatory permitting, and construction administration.

Founded in 1986, **Chen Moore and Associates** (CMA) specializes in civil engineering, water resources, water and sewer, landscape architecture, electrical engineering, transportation, planning and irrigation, environmental, and construction administrative services. The firm commits to providing responsive quality services while meeting the schedules and specific project needs of our clients. The firm has its headquarters in Fort Lauderdale, Florida. CMA has offices throughout Florida, including regional offices in Miami, West Palm Beach, Orlando (Maitland), and Jacksonville. CMA has project Florida offices in Sarasota, Gainesville, Tampa, and in Atlanta, GA.

CMA's key services groups include Civil Engineering (water/sewer, roadway/highway, stormwater, general civil), Electrical Engineering, Landscape Architecture & Planning, and Construction Administration. For the purpose of this contract, CMA will be providing as needed services for civil engineering services applicable to waterfront projects.

***Cummins Cederberg and CMA have a longstanding working relationship that dates back to some of the firms first projects.***

**NV5** is a Florida-based technical engineering and consulting firm. NV5 was founded in 1949 and their headquarters are located in Hollywood, Florida. NV5 will lead the geotechnical engineering and has extensive experience with the design of foundation systems for high rise and complex structures in South Florida.

***Not only does NV5 have experience in Monroe County, but they regularly team with Cummins Cederberg on coastal engineering projects.***

**Craig A. Smith & Associates** (CAS), is a South Florida based engineering firm established in 1980. Since then, the firm has expanded to a full service civil engineering firm, but stays ties to its roots specializing in municipal surveying.

CAS will lead the surveying services for the project. They utilize the most modern electronic measurement equipment and have radio dispatched vehicles to provide immediate and accurate communication.

***Not only does CAS have experience in Monroe County, but they regularly team with Cummins Cederberg on coastal engineering projects.***

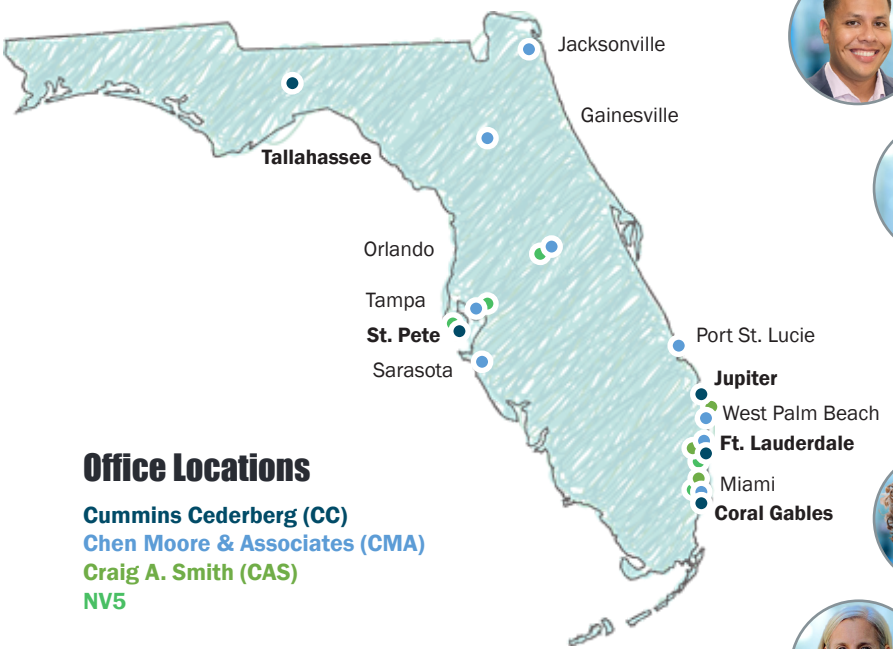
# 05. METHODOLOGY & APPROACH

The Cummins Cederberg team is comprised of coastal engineers, marine structural engineers, marine biologists, regulatory and policy experts, marine scientists, oceanographers, geologists and construction managers with experience in all facets of coastal engineering, environmental planning, and the regulatory framework. We are supported by subconsultants, all with longstanding working relationships with each other and experience on coastal facilities.

This contract will be managed from the Cummins Cederberg Coral Gables office led by project manager, Leonard Barrera. This is a full service office and includes engineering, construction management, marine resource, and environmental permitting staff. Cummins Cederberg has five total offices throughout Florida who will also support the contract as needed.

Our in house project organization utilizes a layered project management team to breakdown critical tasks and communication chains in order to provide a high-level of detail to essential project metrics – budget, schedule, and quality. Our team is prepared to assist the City of Key West in delivering a successful project that complies with all technical standards, while maintaining environmental regulatory agency requirements. The Cummins Cederberg team will be an extension of the City's staff and is committed to assisting in all aspects of project management from initial kickoff meetings to project closeout.  All City of Key West coastal facilities and coastal engineering projects methodology and approach process will focus on three key fundamentals:

1. **Communication & Protocols**
   *Internal and external*
2. **Schedule Monitoring & Controls**
   *Schedule, Budget, QA/QC*
3. **Project Management**
   *Design, permitting, CA, closeout*




**Office Locations**

**Cummins Cederberg (CC)**
**Chen Moore & Associates (CMA)**
**Craig A. Smith (CAS)**
**NV5**

Leonard Barrera, PE, CFM, ENV SP, WEDG
Project Manager & Sr. Coastal Engineer
*CC - Coral Gables Office*

Jannek Cederberg, PE
Principal & Sr. Coastal Engineer
*CC - Coral Gables Office*

Jason Cummins, PE
QA/QC Manager
*CC - Coral Gables Office*

Penny Cutt
Lead Marine Sciences & Permitting
*CC - Ft. Lauderdale Office*

Danielle Irwin, CFM, PWS, WEDG, LEED AP
Lead Grant & Funding Specialist
*CC - Tallahassee Office*

## 1 Communication & Protocols

In our experience, it is not only the knowledge of the team members that drive the success of a project, but the effectiveness of communication amongst the team and stakeholders. Communication and collaboration are a core of our focus and success. Our team is equipped with the latest technologies to host calls/meetings and send essential project data whether in the office or field including Microsoft Teams, Zoom, Outlook, and cell phones. For cloud-based data transfer we utilize Dropbox and WeShare. We routinely have our IT team keep our staff trained on latest technologies which leads to efficient storage, transmittal and updates to pertinent project documents – drawings, calculations, and reports.

### *Internal Communication*

We utilize our internal tiered management (as depicted in our Organization Chart), to set project roles, establish expectations, and define communication flow for the project. To ensure consistency in project coverage and overlap of responsibilities, our team meets weekly to discuss project priorities, troubleshoot open project issues, and align focus for critical schedule items. We will flag high-priority or critical path items for mid-day and end-of-day check-ins amongst the team to confirm no impact to project schedule, budget, or quality.

### *External Communication*

With every new project, as part of the team assignment and communication responsibilities, we identify the key project stakeholders who will influence the success of the project. Key team members of the client, design subconsultants, and others are identified and introduced to the Cummins Cederberg team to establish initial connections. Once the project has been started, Leonard will handle high-level communications to maintain project goals and ensure milestone deliverables. He will also handle daily communications with key design members and installation crews to have consistent visibility and feedback on project priorities.

Cummins Cederberg will keep the entire project team connected with conference calls, weekly coordination meetings, and distributing site walkthrough reports.

## 2 Schedule Monitoring & Controls

The project schedule is the lifeline of the project and connects all parties, from stakeholders to the installation crews. Cummins Cederberg will prioritize the following efforts to monitor and control the project schedule:

- During the design and permitting phase, our team will streamline critical path design task with our internal team, subconsultants. Further, we will reach out to reviewers from regulatory agencies to optimize permit application processing
- During pre-mobilization phase, review construction documents to identify long-lead items and critical path sequence to ensure contractor has a strategy to optimize schedule
- Prepare a *Master Project Schedule* in Microsoft Project for team use and review
- Break-out and utilize bi-weekly look-ahead schedule to prioritize critical path items
- Schedule will be a weekly discussion priority amongst internal and external team chains during meetings

### *Budget Monitoring and Controls*

As a key metric and resource in any project, we understand the significance of having a plan to monitor and control project budgets. Cummins Cederberg will carry out the following measures to optimize project funds and avoid unforeseen cost impacts:

- Preliminary design/ pre-construction reviews of scope to confirm constructability. This is critical to avoid change orders during construction

- Coordinate with subconsultants and entire design team to determine if value engineering options exist
- Support with bidding to validate competitive pricing and optimized scope
- Perform detailed scope and contract reviews for vendors to ensure no scope gaps to limit cost claims

### *Quality Monitoring and Controls*

Our quality management philosophy is focused on essential elements such as customer satisfaction, management responsibility, continuous improvement, and prevention (as opposed to correction). We believe Project Management and Quality Management should complement each other as they work together. The following basic principles guide our approach to quality management of our project deliverables throughout the project lifecycle:

**Engineering QA/QC**

As a top priority for Cummins Cederberg, quality drives our overall project management approach. Jason Cummins, PE, will serve as QA/QC Manager and will see each team member follows proven quality protocols. He will coordinate overall QA/QC, review project QA/QC plans, and review and verify satisfactory QA/QC procedures.

**Permitting QA/QC**

With several former regulators on staff who bring unmatched insight into the environmental regulatory permitting process, including senior staff from the FDEP, SFWMD, and USACE, we have an unmatched understanding of the local, state, and federal rules and regulations and their application to complex coastal projects. Permit application packages and responses to Requests for Additional Information prepared by our highly qualified biologists, engineers, and environmental scientists are reviewed by senior managers prior to submittal to the agencies to ensure they clearly address the rules and regulations, to include avoidance, minimization, and compensation of any impacts to aquatic functions and values. All documents are carefully checked to ensure all requested information is provided and all revisions to drawings have been addressed, with the goal of avoiding issuance of subsequent Requests for Additional Information.

**Construction QA/QC - Risk Management**

With our extensive background in both engineering and construction operations, we have been exposed to varying levels of workmanship, and have resolved many construction quality issues. Below outlines our approach to project construction costs, monitoring, and controls using our in-house construction management team:

- Identify installation variances and proactive methods of rework to avoid delays
- Frequent site meetings and walkthrough inspections to ensure expectations are met
- Material testing and inspection coordination with design professionals and subconsultants
- Maintain quality control logs for any deficiencies and pursue corrective work action

## 3 Project Management Execution by Phase

Our team is equipped with several professional engineers who have simultaneously performed design and construction management on our projects, which provides additional insight into constructibility. This unique blend of engineering-construction experience allows our staff to provide quality control and practical input on specifications, including required submittals, milestones, and documentation requirements. To meet project objectives, we have identified key stages of a project's lifecyclye and essential tasks within them

### *Design & Permitting Phase*

Once a notice to proceed is issued, Cummins Cederberg will initiate the design and permitting efforts

to kick-off the project. Our anticipated efforts will include:

1. Project Scope Review and Design
2. Permit Applications and Processing
3. Procurement and Post-Award

**1. Project Scope Review and Design**

The first step will include early communications with City to gain a comprehensive understanding of the scope of the project. We will work with City to identify the project needs and involve our subconsultants early to outline critical design sequence and strategy to expedite permit application submissions to environmental permitting agencies.

Cummins Cederberg will host and execute Pre-design coordination meetings, which will be documented with meeting minutes to be distributed to the project team.

**2. Permit Applications and Processing**

As a result of securing numerous permits for projects in Florida's marine environment by staff who worked directly for the FDEP, SFWMD, and USACE, Cummins Cederberg is very familiar with the regulatory processes, staff, and procedures, including the FKNMS.

Prior to submitting permit applications, we will conduct pre-application meetings to better understand initial agency concerns. We will then compile comprehensive permit application packages to proactively address questions the agencies raised during the pre-application meetings and are likely to have when reviewing the application packages.

Once permit applications have been submitted and requests for additional information have been received, Cummins Cederberg will host a multi-agency webinar to streamline project review and address any conflicting comments from regulators. We collaborate with environmental and engineering team members throughout the permitting process to ensure that engineering designs address the ecological environment, and the ecological impacts are avoided and minimized to the extent practicable.

**3. Procurement and Post-Award Negotiations**

Our team is prepared to support the City with the project bidding and contractor selection process. Our involvement typically includes developing a comprehensive bid package, participation in pre-bid meetings, review of Contractor qualifications, and preparation of a recommendation letter of the lowest qualified bidder. Cummins Cederberg is prepared to assist in contract negotiations to include draft contract reviews, organizing the scope of work and unit rates, confirming latest project documents to be attached via contract exhibits.

***Construction Phase***

Once the project procurement and contractor negotiations have been completed, Cummins Cederberg will continue to be involved to guide and support the City during the active construction. Our anticipated efforts will include:

1. Pre-mobilization Meetings and Coordination
2. Project Management/Construction Oversight and Inspections
3. Project Documentation – RFI's, Submittals, and Pay Applications

**1. Pre-Mobilization Meetings and Coordination**

Prior to contractor mobilization, Cummins Cederberg will coordinate a pre-construction meeting to meet with essential contractor personnel to discuss work sequence and logistics. The objective is

to establish a chain of communication and identify team member roles/responsibilities to optimize workflow and troubleshooting of production issues.

**2. Construction Site Walkthroughs and Observation Reports**

Once construction commences, Cummins Cederberg will perform site walkthroughs to ensure the project is being constructed in compliance with the contract documents. We will prepare and distribute Field Observation Reports including photos, written observations, and any relevant figures to document the observations recorded during the site visit(s). Further, we will immediately communicate and follow-up on any critical observations noted that could impact the project schedule and/or budget.

**3. Project Documentation – RFI's, Submittals, and Pay Applications**

Cummins Cederberg will review RFIs and submittals from the contractor and coordinate any technical reviews/inputs with our subconsultants and City project staff. We will provide prompt technical clarification to the contractor on aspects or details of the construction documents to ensure the project is built to satisfy the intent of the design and project permits, while minimizing the potential for project schedule and budget overruns while the contractor waits for further direction. We will also review submittals from the contractor to verify the materials, sequence, methods, equipment, and plans are consistent with the approved design and permit conditions. Cummins Cederberg will also review pay applications from the contractor to confirm the requisitions reflect the percentage complete onsite. Part of this review will be to confirm the billed work has been formally observed/inspected and accepted by the City prior to approving payment release.

***Project Close-Out Phase***

Upon the milestone of substantial completion, Cummins Cederberg will complete the required walkthroughs to initiate a punch list with City representatives and the Contractor to ensure work is completed to the satisfaction of the City and in compliance with contract documents, as well as regulatory agencies. Cummins Cederberg will also assemble the required documentation, as-built surveys, installation and inspection logs, and final certification letters to prepare the final project report for submittal to the regulatory agencies to close out the permits.

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Coastal & Marine Engineering

# LEONARD BARRERA, PE, CFM, WEDG, ENV SP

**Project Manager**

**YEARS OF EXPERIENCE**
- 8

**EDUCATION**
- MSc Ocean Engineering, University of Miami
- BSc Civil Engineering, University of Miami

**LICENSES**
- Florida PE No. 90872
- Puerto Rico PE No. 28385

**CERTIFICATIONS**
- Waterfront Edge Design Guidelines Associate
- Envision Sustainability Professional
- Federal Aviation Administration Remote Pilot
- Certified Flood Plain Manager

**PROFESSIONAL AFFILIATIONS**
- American Society of Civil Engineers
- Coastal, Oceans, Ports, and Rivers Institute (COPRI), ASCE – South Florida Co-Chair
- Society of Hispanic Professional Engineers
- Urban Land Institute SE Florida/Caribbean

## RELEVANT PROJECT EXPERIENCE

**Bahia Honda State Park Beach Renourishment,** *Big Pine, Florida.* Leading the coastal engineering analyses, topographic and bathymetric LiDAR data compilation, Aerial Imagery collection, sea level rise analyses to support the design and permitting of beach nourishment to a critical eroded segment in the Bahia Honda State Park. Conducted an analysis of the local wind and wave conditions to evaluate sediment transport trends and potential need for coastal structures to conduct the beach nourishment project. A sensitivity analysis to the site relative to sea level rise is conducted to determine the impact of future water level conditions to the beach. The compilation and post-processing of topographic and bathymetric data was conducted to evaluate existing conditions in the nearshore region of the beach.

**Higgs Beach Sand Replenishment,** *City of Key West, Florida.* Conducted an equilibrium toe-of-fill (ETOF) analysis to estimate the seaward location of the sand placement and profile adjustment based on the profile translation method. Based on the proposed fill conditions, a representative equilibrium profile was established for three profiles, based on an equilibrium of the proposed beach fill template and seaward translation of the native beach profile. This information was summarized into a report, along with recommendations for design adjustments.

**Dagney Johnson Botanical State Park Valois Canal Plug Repair,** *Key Largo, Florida.* Hydraulic analyses, lateral earth pressure analyses and analysis of storm conditions to support the design and permitting of a repair to a canal that has been breached due to erosion resulting from storms. The hydraulic analyses were conducted to size the proposed rocks relative to extreme events, including the determination of rock size and weight requirements, slope, and toe protection. Wave heights and storm surge were determined from a 25-year storm event. Lateral earth pressure analyses were conducted on a proposed wall fronting the rock to seal the canal.

**Sheraton Key West FEMA Coastal Vulnerability Study,** *Key West, Florida.* Performed a coastal vulnerability study and analysis with respect to the feasibility of a FEMA Letter of Map Revision (LOMR) which would revise the flood zones within the property of Sheraton Key West. Based on a review of the site conditions and 100-year storm surge level, it appeared feasible to modify the flood insurance rate map which would reduce construction and term insurance costs. Cummins Cederberg prepared and submitted the LOMR which was approved and the proposed revision to the existing flood insurance rate map was adopted.

**Bentley Bay Marina,** *Miami Beach, Florida, 2016*. Structural design of 16-slip reinforced concrete marina located in Miami Beach. The marina consisted of reinforced concrete beams, pile caps, and fiberglass grating. The structural design was optimized to reduce the number of materials required while maintaining an aesthetically pleasing marina.

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Coastal & Marine Engineering

# JANNEK CEDERBERG, PE
**Principal in Charge**

**YEARS OF EXPERIENCE**
- 20

**EDUCATION**
- MSc Coastal Engineering, Technical University of Denmark

**LICENSES**
- Florida PE No. 69839

**PROFESSIONAL AFFILIATIONS**
- Permanent International Association of Navigation Congress
- Member of PIANC Working group Design and Operational Guidelines for "Superyacht Facilities"
- Danish Society of Hydraulic Engineering
- Florida Association of Environmental Professionals
- Port Everglades Association
- Florida Engineering Society Miami Chapter
- Florida Bar's Environmental and Law Use Law Section
- Biscayne Watershed Management Advisory Board

## RELEVANT PROJECT EXPERIENCE

**Adaptive Redesign of Jose Marti Park,** *City of Miami, Florida.* Serving as a model for resilient waterfront parks that can adapt to current and future flood rises associated with climate change and sea level rise, this project explores ways to minimize tidal flood impacts and enhance waterfront access to residents. Jannek led the inundation modeling, and waterfront engineering design, while the Cummins Cederberg team is also leading the environmental permitting, coordination with FIND, and grant management.

**Crandon Park Marina Sedimentation Study,** *Key Biscayne, Florida.* Senior Project Manager leading tidal hydrodynamic modeling, wave, and sediment transport analyses to determine source and magnitude of marina sedimentation problem. Field investigations included bathymetric surveying, tide and current measurements, marine resource survey, and sediment sampling. Alternative assessments of potential coastal structures were explored to prevent sedimentation and need for periodic dredging.

**City of Miami Beach Living Shoreline Assessment,** *Miami Beach, Florida.* Performed high level analysis and scored 118 waterfront sites in Miami Beach to convert from seawall to living shoreline. Worked with the City to select the three most optimal sites for living shorelines based on all collected data, and developed conceptual cross sections and plan views for these three sites.

**Bahia Honda Road Improvements,** *Big Pine Key, Florida.* Coastal engineering consulting services for resilient road improvements at Bahia Honda State Park. Improvements include raising the elevation of the unpaved road to mitigate the impacts of sea level rise and reduce the frequency of flooding events on the existing 0.2-mile road to employee housing on the Gulf side of Big Pine Key.

**Pennekamp Dock Replacement,** *Key Largo, Florida.* Marine engineering and environmental consulting services for partial dock replacement and boat ramp repairs at John Pennekamp Coral Reef State Park. The improvements consist of replacement of the dock structure fronting the Pennekamp Dive Shop and repairs to the boat ramp and associated staging docks. The new dock structure will include replacement of approximately 2,600 sq. ft. of wood dock framing and associated timber piles. The improvements to the boat ramp and docks will consist of repairs to the ramp surface and isolated framing repairs to the staging socks, as well as concrete spall and erosion repair to the upper ribbed portion of the boat ramp.

**Florida Bay/Gulf of Mexico Tidal Connections,** *Long Point Key, Florida.* Engineering and environmental consulting services for the tidal connection's restoration project on either side of Long Point Key. These historical tidal connections were filled during the construction of Flagler's railroad and are located on FDEP and FDOT property.

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Coastal & Marine Engineering

# JASON CUMMINS, PE
**Principal, QA/QC**

**YEARS OF EXPERIENCE**
- 15

**EDUCATION**
- MSc Coastal and Oceanographic Engineering, University of Florida
- BSc Civil Engineering, University of Florida

**LICENSES**
- Florida PE No. 71538

**Certifications**
- Certified Diver
- FHWA A-NHI 130091 Underwater Bridge Inspection – National Highway Institute and Association of Diving Contractors

**PROFESSIONAL AFFILIATIONS**
- Urban Land Institute, SE Florida/Caribbean, Member
- American Society of Civil Engineers
- American Institute of Architects
- South Florida Association of Environmental Professionals

## RELEVANT PROJECT EXPERIENCE

**Bahia Honda Road Improvements,** *Big Pine Key, Florida.* Coastal engineering consulting services for resilient road improvements at Bahia Honda State Park. Improvements include raising the elevation of the unpaved road to mitigate the impacts of sea level rise and reduce the frequency of flooding events on the existing 0.2-mile road to employee housing on the Gulf side of Big Pine Key.

**Pennekamp Dock Replacement,** *Key Largo, Florida.* Marine engineering for partial dock replacement and boat ramp repairs at John Pennekamp Coral Reef State Park. The new dock structure will include replacement of approximately 2,600 sq. ft. of wood dock framing and associated timber piles. The improvements to the boat ramp and docks will consist of repairs to the ramp surface and isolated framing repairs to the staging socks, and concrete spall and erosion repair to the upper ribbed portion of the boat ramp.

**Fort Zachary Taylor State Park,** *Key West, Florida.* Above and below water inspection of breakwaters, terminal groin, as well as topographic survey to accurately identify rock displacement and settlement. Coastal engineering design and environmental permitting for truck haul beach fill project.

**Indian Key Observation Tower & Dock,** *Indian Key, Florida.* Structural engineering of the existing tower and recommendations for repair, as well as above and below water inspection of the dock piles to determine general conditional and potential for reuse.

**Storm Surge Protection Wall & Wetland Restoration at Vizcaya Museum & Gardens,** *Miami, Florida.* Site plan for storm surge protection wall, environmental wetland restoration and public space. Grant application, regulatory permitting, and engineering design for marine works. Storm surge wall was designed with reinforced concrete able to withstand storm surge and high wave loads associated with tropical storm event.

**I-395 Baywalk & Pedestrian Bridge,** *Miami, Florida..* Technical Lead and Senior Coastal Engineer overseeing coastal engineering analysis for the design of the I-395 Pedestrian Baywalk Bridge project, which will provide connectivity to bicycles and pedestrians from the Maurice Ferre Park, through the Perez Art Museum Miami and Frost Museum, to NE/NW 14th Street along the Biscayne Bay waterfront. Jenna established design criteria used to develop a basis for conceptual design alternatives. Assisted in preparation of public outreach, facilitated stakeholder meetings with City commissioner, property owners, and community members.

**Village of Key Biscayne Beach Nourishment,** *Key Biscayne, Florida.* Coastal engineering and environmental permitting for 120,000 cubic yard beach fill and dune restoration project. Beach profile and hydrographic surveys conducted, along with sand source search, jet probes, vibracores, and sediment compatibility analysis. Coordination of dune vegetation planting and exotic removal plan.

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# JORDON CHEIFET, PE, CFM

**Senior Coastal Engineer**

**YEARS OF EXPERIENCE**
- 15

**EDUCATION**
- MSc Ocean and Resources Engineering, University of Hawaii
- BSc Civil Engineering, Pennsylvania State University

**LICENSES**
- Florida PE No. 72876

**CERTIFICATIONS**
- Certified Floodplain Manager
- Certified Video Ray ROV Operator
- Surface Supplied Air Underwater Inspection Certification
- Advanced/Rescue/Nitrox SCUBA

**PROFESSIONAL AFFILIATIONS**
- Association of State Floodplain Managers, Member
- Florida Floodplain Managers Association, Member

## RELEVANT PROJECT EXPERIENCE

**Coco Plum Beach Nourishment,** *City of Marathon, Florida.* Coastal engineering services for a beach restoration project along approximately 1,500 feet of shoreline eroded from Hurricane Irma. Project included beach template design, development of technical specifications, and sediment characterization. Obtained FDEP CCCL permit while coordinating with City staff and local sand mines.

**Kristi House Shoreline Stabilization,** *Miami, Florida.* Provided structural/coastal engineering design for 525 feet of shoreline stabilization along an eroded portion of Wagner Creek. The project included a steel sheet pile bulkhead and armor stones with transition grading to the existing upland parking lot. Services performed included scour analyses, wave load analyses, and structure design. The project is currently in environmental permitting with construction expected to commence in 2021.

**Riverside Village Shoreline Improvements,** *Jensen Beach, Florida.* Provided structural/coastal engineering design for 480 feet of shoreline stabilization along an eroding shoreline. Project included rock revetment, kayak ramp, bulkhead, overwater viewing platform, and landscape restoration. Services performed included wave load analyses, scour analyses, structural design of composite bulkhead and timber viewing platform, and construction administration. Construction is currently underway.

**Riverside Towers Bulkhead Replacement,** *Pompano Beach, Florida.* Provided structural/coastal engineering design for 250 feet of new bulkhead along a failed section of shoreline. Project included a concrete pile-panel wall fronting an existing upland pool. Services performed included scour analyses, wave load analyses, structural design, and construction administration.

**The Reefline Recreational Reef,** *Miami Beach, Florida.* Provided coastal engineering services for a series of concrete artificial reef units as part of an art installation in the Atlantic Ocean. Project included physical, numerical, and desktop modeling of individual units for stability during extreme and normal conditions relative to waves, currents, and sediment transport. Project is scheduled to begin construction Summer 2023.

**Ocean Campus Groin & Wharf Design,** *Dania Beach, Florida.* Development of conceptual plans related to relocating the groin and fortifying the wharf and seawall to accommodate a USACE dredging project at the NSU Oceanographic Center. Project included evaluation of existing geotechnical data, navigational feasibility, cost estimating, and wave climate analysis. Coordination with U.S. Navy and U.S. Coast Guard to discuss concepts and feasibility.

**Sailfish Marina Condition Assessment,** *Palm Beach Shores, Florida.* Performed a marine engineering inspection to compare as-built conditions to the approved construction drawings for a new dock, which may not have been constructed following the approved design drawings. A final report included an assessment of the existing marine structures and a comparison summary with the approved plans, and recommendations for rehabilitation.

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# JASON TAYLOR, PE

**Senior Marine Structural Engineer**

**YEARS OF EXPERIENCE**
- 25

**EDUCATION**
- MSc Structural Engineering, Stanford University
- BSc Civil Engineering, Stanford University

**LICENSES**
- Florida PE No. 60277

**CERTIFICATIONS**
- Special Inspector
- Certified Diver
- Advanced open water scuba

**PROFESSIONAL AFFILIATIONS**
- American Institute of Steel Construction
- American Concrete Institute

## RELEVANT PROJECT EXPERIENCE

**Landings of Largo Marina,** *Key Largo, Florida.* Replacement of docks and repairs to shoreline stabilization and boat ramp for 6,200 SF footprint. Managed construction administration to oversee progress in proposed designs.

**Ocean Breeze RV Park,** *Marathon, Florida*. Structural design of steel sheet pile bulkhead and timber dock structures to replace existing structures which experienced damaging impacts of Hurricane Irma in 2017.

**Sea Breeze RV Park,** *Islamorada, Florida*. Project consisted of engineering design of marina basin and channel dredging, and structural design of bulkheads, shoreline stabilization and marina components that experienced damaging impacts of Hurricane Irma in 2017. Responsible for structural design of steel sheet pile bulkheads,, and timber dock structures for the associated marina basins.

**San Pablo Seawall,** *Marathon, Florida.* Above and below water inspection, as well as design of new seawall along three adjacent properties.

**Seahaven Superyacht Marina,** *Dania Beach, Florida.* Marina design and construction administration services for approximately 1,200 feet of new bulkhead for a deep-water yacht basin located in the Dania Cut-Off Canal. Part of the canal was excavated to create a new marina basin connected to the canal for this 40-slip superyacht marina. Bulkhead consists of steel sheet piling with concrete batter piles and reinforced concrete capping beams. Design criteria for a floating dock was also prepared including anticipate mooring loads. Construction administration services included review of contractor payment, site observations with reports, pile driving logs, materials testing, final inspection, environmental permit close out services, and underwater inspections.

**Sunset Harbour Yacht Club,** *Miami Beach, Florida*. Repairs of concrete slabs, caps and piles for 125 slip yacht marinas. Environmental permit applications were prepared and processed with the Miami Dade County Regulatory and Economical Resources Department, Florida Department of Environmental Protection and US Army Corps of Engineers. Detailed repair drawings were prepared with specific criteria to minimize impacts to adjacent structures, including the removal and replacement of severely deteriorated deck slabs. Construction administration services were provided to review in accordance with construction documents and environmental permits.

**Bentley Bay Marina,** *Miami, Florida*. Cummins Cederberg designed a new marina utilizing concrete piles, cap and beams with grated decking, as required to allow for adequate light penetration to reach the submerged bottom supporting seagrass habitat. Design services also included material selection and coordination of utilities. Jason performed construction administration including bidding, inspections, field reports and permit close-out.
cantilevered concrete retaining wall.

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# JENNA PHILLIPS, EI
**Senior Coastal Engineer**

**YEARS OF EXPERIENCE**
- 16

**EDUCATION**
- MSc Ocean Engineering, Florida Institute of Technology
- BSc Ocean Engineering, Florida Institute of Technology

**LICENSES**
- Engineer Intern
- Open Water Certified Diver - National Association of Underwater Instructors (NAUI)

**PROFESSIONAL AFFILIATIONS**
- Coastal, Oceans, Ports, and Rivers Institute (COPRI), ASCE – Policy Committee Chair
- American Society of Civil Engineers – Energy, Environment, and Water Policy Committee Member
- American Shore & Beach Preservation Association – Science & Technology Committee Member
- Western Dredging Association (WEDA)
- WEDA, Education Commission
- Propeller Club, Port Manatee
- Sarasota County Coastal Advisory Committee (2019-present)

## RELEVANT PROJECT EXPERIENCE

**I-395 Baywalk Pedestrian Bridge,** *Miami, Florida.* Technical Lead and Senior Coastal Engineer overseeing coastal engineering analysis for the design of the I-395 Pedestrian Baywalk Bridge project, which will provide connectivity to bicycles and pedestrians from the Maurice Ferre Park, through the Perez Art Museum Miami and Frost Museum, to NE/NW 14th Street along the Biscayne Bay waterfront. Jenna established design criteria used to develop a basis for conceptual design alternatives. Assisted in preparation of public outreach, facilitated stakeholder meetings with City commissioner, property owners, and community members.

**Biscayne Point Dredging,** *Miami Beach, Florida.* Senior Coastal Engineer responsible for dredge design template for improved navigation within an existing residential canal. Coordinated with federal, stated, and local regulatory agencies to develop mitigation requirements, identify potential dredge material management options, provided technical review, and oversight of geotechnical investigation.

**Las Olas Marina Redevelopment,** *Ft. Lauderdale, Florida.* Senior Coastal Engineer responsible for the dredge design associated with the expansion of the existing Las Olas Marina. The project involves reclamation of previously filled tidal waters, renovating the marina layout to accommodate mega yacht vessels, and new dredging.

**Commodore Point Bulkhead and Dry Dock Project,** *Jacksonville, Florida.* Project Manager for the replacement of 2,600 LF of bulkhead along the waterfront, mooring bollards, fendering elements, and apron improvements, as well as localized dredging and mooring dolphins to accommodate a floating dry dock. These tasks are associated with redevelopment plans for Commodores Point which will allow Fincantieri Marine Repair to lift a 13,000-ton vessel out of the water compared to the current 2,700 capacity in place.

**Lake Worth Inlet Flood Shoal Dredging,** *Riviera Beach, Florida.* Provided technical advise and QA/QC for the for the Lake Worth Inlet Flood Shoal Dredging project. The project involves a dredge design for a portion of the eastern perimeter of the shoal and a center cut through the shoal located adjacent to the Port of Palm Beach, Peanut Island Park, and the Lake Worth Inlet.

**Bal Harbour Village Coastal Management,** *Bal Harbour Village, Florida.* Senior Coastal Engineer responsible for submitting an FDEP Resilient Florida grant application and work plan development as part of Cummins Cederberg's ongoing coastal management program. Served as technical QA/QC in development of the community critical asset inventory development and refinement, which served as a basis for subsequent community vulnerability assessment.

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# JON CUNNINGHAM, PE
**Marine Structural Engineer**

**YEARS OF EXPERIENCE**
- 4

**EDUCATION**
- BSc, Civil Engineering, Pennsylvania State University

**LICENSES**
- Florida PE No. 92073
- Advanced Open Water Scuba

**PROFESSIONAL AFFILIATIONS**
- American Society of Civil Engineers (ASCE)
- Florida Association of Environmental Professionals (FAEP)

## RELEVANT PROJECT EXPERIENCE

**Ocean Breeze RV Park,** *Marathon, Florida*. Structural design of steel sheet pile bulkhead and timber dock structures to replace existing structures which experienced damaging impacts of Hurricane Irma in 2017.

**Sea Breeze RV Park,** *Islamorada, Florida*. Project consisted of engineering design of marina basin and channel dredging, and structural design of bulkheads, shoreline stabilization and marina components that experienced damaging impacts of Hurricane Irma in 2017. Responsible for structural design of steel sheet pile bulkheads,, and timber dock structures for the associated marina basins.

**Little Palm Island,** *Little Torch Key, Florida*. Project consisted of engineering design of dredging and rehabilitation of the sunset dock that experienced damaging impacts of Hurricane Irma in 2017. Responsible for above- and below-water inspection and condition assessment of the existing timber dock structure, and structural design of 4,000 (+/-) square feet fixed timber dock, 500 (+/-) floating dock and associated mooring piles to service up to 120-foot vessels.

**River Landing Seawall and Mooring,** *Miami, Florida*. The City of Miami proposed Public Riverwalk is being developed along the shoreline of the River Landing property site. The current seawall needs to be extended, stabilize the upland development, and establish mooring along the shoreline. Cummins Cederberg is managing the design, permitting, and construction administration of the seawall extension, as well as the design and development of a marginal dock. Currently in the process of submitting permit applications and selecting a contractor.

**Colonial Club Seawall Repair and Replacement,** *Boynton Beach, Florida.* Initially performed above and below water inspection for a 1,500 LF seawall in need of repair. Designed the new seawall consisting of AZ hot-rolled steel sheet pile, pre-stressed concrete batter piles, and a steel reinforced cap. Construction administration services were also performed as well as a serving as Special Inspector for the marine structural components during construction.

**Mariner's Cove Association,** *Palm Beach County, Florida*. Above and underwater inspection and condition assessment of approximately 700 feet of docking with the freshwater basin and approximately 1,475 feet of docking and shoreline along the artificial canal West of the Intracoastal Waterway. The focus of the inspection was to identify cracking, spalling and other forms of deterioration of the concrete and timber elements as well as corrosion and deterioration of steel/aluminum connections and framing members of the travel lift separating the freshwater basin from the saltwater canal. The planning of the project includes implementing inspection findings to the design of timber dock structure replacement, aluminum sheet pile seawall replacement and concrete seawall repairs.

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# KEN CHANG, EI
**Marine Structural Engineer**

**YEARS OF EXPERIENCE**
- 4

**EDUCATION**
- BSc Civil Engineering, Florida International University

**CERTIFICATIONS**
- Engineering Intern, E.I. – No. 1100023002 (Florida)

**PROFESSIONAL AFFILIATIONS**
- American Society of Civil Engineers (ASCE)

## RELEVANT PROJECT EXPERIENCE

**Landings of Largo Marine Engineering and Environmental Consulting,** *Key Largo, Florida.* Landings of Largo is a 62-slip marina that was impacted by Hurricane Irma. Marina rehabilitation included replacement of the docks and repairs to the shoreline stabilization and boat ramp. Responsible for designing new docks of approximately 6,200 SF in the same footprint of existing. Designs include a timber framing and composite decking construction with new concrete piling. Coordinated with MEP Engineer to meet marina needs and requirements. New electrical pedestal designs are incorporated to serve the marina slips. Organized a calculation packet for the corresponding agencies. Manages construction administration to oversee progress in proposed design.

**Ocean Breeze RV Park,** *Marathon, Florida.* Assisted with construction administration services of the shoreline rehabilitation impacted by Hurricane Irma. Project consists of a seawall design and rock revetment shoreline to stabilize the upland area and replace the dock for slip accessibility. Site observations included sheet pile driving and anchor tie-rod installations prior to concrete cap pour.

**Abitare Condominium Marine Engineering and Dock Repair,** *Miami, Florida.* Designed replacement dock of approximately 2,270 SF in same footprint of existing prior to Hurricane Irma damage. The dock will be constructed with timber framing and decking boards. The dock replacement includes the design of 14 slips and davits used for boat mooring. Organized a calculation packet for the proposed design. Prepared construction plans to display existing, proposed, and section details of the project site.

**Coral Reef Yacht Club,** *Miami, Florida.* Assisted with the bathymetric surveying to provide data within the slip areas to determine the required maintenance dredging. Field data and elevations were collected using a calibrated survey rod to analyze vessel accessibility and easier maneuverability within the slips.

**Watson Boat Ramp Repairs,** *Miami, Florida*. Prepared plan drawings and calculations for the Watson Island boat ramp repairs in the same footprint of existing prior to Hurricane Irma. Repairs were completed with timber framing and grated decking.

**FiftySixSixty Condominium Marina,** *Miami, Florida.* Marina rehabilitation of 14-slip marina impacted by Hurricane Irma, consisting of the replacement of the docks, viewing platforms, and floating lifts. Ken re-designed new docks of approximately 400 LF along the property's shoreline. Designs include a timber framing and decking construction with new concrete piling. Slips design included lift designs for both boats and jet skis. Coordinated with MEP Engineer to meet marina needs and requirements. New electrical pedestal designs are incorporated to serve the marina slips. Organized a calculation packet for the proposed design. Prepared construction plans to display existing, proposed, and section details of the project site.

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# MARIE GUYER, ENV SP

**Marine Structural Engineer**

**YEARS OF EXPERIENCE**
- 3

**EDUCATION**
- BSc Civil Engineering
- University of Miami
- Studies Abroad: Charles University, Prague Czech Republic

**CERTIFICATIONS**
- SSI Open Water Diver
- Envision Sustainability Professional

**PROFESSIONAL AFFILIATIONS**
- Society of Women Engineers (SWE)
- American Society of Civil Engineers (ASCE)
- Engineers Without Borders
- Florida Water Environment Association (FWEA)

## RELEVANT PROJECT EXPERIENCE

**Bahia Honda Resilient Road Improvements,** *Big Pine Key, Florida*. The employee access road at Bahia Honda State Park was experiencing continual tidal flooding due to sea level rise. An elevated roadway was designed with Geoweb cells instead of a typical gravel road to help mitigate flooding. Using Geoweb cells improves permeability, allows for the use of local infill material to limit costs, extends the life span of the road, and supports heavy vehicles and RVs on the road.

**John Pennekamp Dock Improvements and Boat Ramp Repairs,** *Key Largo, Florida.* Project engineer for the design of dock improvements and boat ramp repairs at John Pennekamp Coral Reef State Park. The Park's dive shop docks were displaying damage from the frequency of dive boats hitting against the dock. The design goal to provide a more robust framing system to withstand dive boat impacts while creating an efficient and economical system. Select existing pilings were chosen to remain based on inspection data to ensure cost limitations were met. Cummins Cederberg has since been engaged for repair and replacement work the surrounding seawalls after the client was pleased with our work at the dive shop.

**Norseman 5th Street Marina,** *Miami, Florida.* Marie served as the project engineer involved in the engineering design and construction administration of a travel lift basin platform and bulkhead replacement along the Miami River. Cummins Cederberg was engaged to improve the system efficiency and was able to cantilever the bulkhead to allow for the client to improve the upland area without concern of underground tie-backs.

**Daytona Marina,** *Daytona, Florida*. Responsible for the design of a pile supported forklift platform and bulkhead along the inner marina basin. The bulkhead was designed using FRP sheets in lieu of traditional steel sheets. FPR sheets were used to improve the lifespan of the bulkhead and provide an attractive outer appearance.

**Fisher Island Ferry Terminal Inspections,** *Miami, Florida.* Performed above and below water inspections of for the mainland terminal ferry and bulkheads. The ferries at Fisher Island run at a continuous schedule, which for resident access cannot be interrupted and therefore the in-water inspection presented a challenge. The team worked in timed shifts of about 5-10 minutes to inspect the structures by swimming in to occupy the terminal and then out as the ferry would access. Marie also provided in-water support for the environment team to work through these conditions.

**Fisher Island Club Resident's Marina,** *Miami, Florida.* Project engineer for the residential marina seawall repairs, dredging, and coral relocation plans. Involves heavy coordination with the environmental permitting team as the marina contains large quantities of coral which must be relocated to another part of Fisher Island. The construction work is also phased to be active only during the summer months to allow for full use of the Marina during their busy winter season, this involves coordination with the client and the contractors completing the work.

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# RYAN WINSLOW, EI
**Coastal Engineer**

**YEARS OF EXPERIENCE**
- 3

**EDUCATION**
- ME Coastal and Oceanographic Engineering, University of Florida
- BSc Civil Engineering, University of Florida

**LICENSES**
- Engineer Intern (EI)

**PROFESSIONAL AFFILIATIONS**
- American Society of Civil Engineers

## RELEVANT PROJECT EXPERIENCE

**75190 Overseas Highway Flushing Analysis,** *Islamorada, Florida.* Flushing analysis of a residential marina basin off of Florida Bay. Ryan analyzed whether the water in the basin will naturally dilute potential pollutants to safe levels through tidal flushing. This study was conducted in order to comply with the regulatory requirements in the required timeframe. Ryan conducted the flushing calculations, wrote the report, and generated the figures.

**City of Miami Beach Living Shoreline Assessment,** *Miami Beach, Florida.* Performed high level analysis and scored 118 waterfront sites in Miami Beach to convert from seawall to living shoreline. Each site received a rating from 1-3 based on the analysis for the following; length, water depth, current seawall conditions, potential navigation impacts for boats, constructibility, wave exposure, and upland use. Completed a site visit and inspection of the top 10 sites to note on general conditions. After visiting the sites, reports were prepared to introduce the recommendations. Worked with the City to select the three most optimal sites for living shorelines based on all collected data, and developed conceptual cross-sections and plan views for these three sites.

**Apalachee Regional Vulnerability Assessment,** *Apalachee Region, FL.* Provided GIS data processing, and data compilation and transmittal. Funded through a Resilient Florida grant, the report illustrated and quantified the exposure and sensitivity of critical and regionally significant assets to tidal, SLR, and coastal storm surge flooding for 9 counties in the Apalachee region.

**Adaptive Redesign of Jose Marti Park,** *City of Miami, Florida.* Ryan created flood inundation modeling for 2020, 2040, and 2070 king tides based off existing and proposed conditions. Three storm surge scenarios were also considered for 2020, 2040, and 2070. Ryan used MIKE21 for the modeling and QGIS to analyze the results. Data verification of all the water level statistics was analyzed and compiled from a SFWMD tide gauge. Ryan processed the existing data to identify key recommendations, which led to a completed report, which included location maps, schematics, and flood pathway figures.

**Black Point Marina Sea Level Rise and Flood Mitigation Road Map,** *Homestead, Florida*. Project engineer responsible for sea level rise analysis of Black Point Marina. Created flood inundation models for 2020, 2040, 2070 king tides using MIKE21 modeling. These models were used to predict flooding at the site. Ryan used QGIS to analyze the inundation results and QC. He exported the animations produced by the modeling to show the complete cycle of each king tide. Models showed the topography of the site which helped address the possible impacts to the site.

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# PENNY CUTT
**Environmental Science & Permitting**

**YEARS OF EXPERIENCE**
- 26

**EDUCATION**
- BSc Agricultural Operations Management Specialization: Bioprocess Management University of Florida, 1992

**CERTIFICATIONS**
- Advanced open Water Scuba
- DAN (First Aid, CPR, AED & Oxygen)
- U.S. Power Squadron Safe Boat Operation Certification

**PROFESSIONAL AFFILIATIONS**
- Broward County Marine Advisory Committee, Appointed Member
- Pompano Beach Marine Advisory Board, Appointed Member, Vice-Chair
- Pompano Beach Zoning Board of Appeals, Appointed Member
- Friends of Our Florida Reefs, Board Director
- South Florida Association of Environmental Professionals (SFAEP), Senior Director
- Treasure Coast Florida Association of Environmental Professionals (TCCFAEP)

## RELEVANT PROJECT EXPERIENCE

**The Bay Park,** *Sarasota, Florida.* Project manager for the environmental field work and permitting components for the resilient revitalization of the public waterfront in downtown Sarasota. Leads the team who performs the annual monitoring of marine resources to characterize seagrasses, corals, and mixed habitats within the near shore, led the permitting of the mangrove trimming plan, led the permitting of the dredging in the canal, and the permitting for the kayak launch. Penny was also involved in assisting with the application for securing grant funds for future projects at the site.

**Tidal Flood Mitigation and Shoreline Protection,** *Hollywood, Florida.* The project consists of evaluating 22 areas, covering over 10,000 linear feet of shoreline, along the areas known as North and South Lake in the City of Hollywood. Each area will have specific solutions to address seasonal flooding challenges, which may entail the design and implementation of varied shoreline protection infrastructure such as of living shorelines, rock revetments, and bulkheads, to meet the requirements of the new Broward County ordinance. Penny is the project manager leading the environmental field work, marine resource surveys, permitting, and public outreach.

**Fisherman's Wharf/Pierce 1 Marina Redevelopment,** *St. Lucie County,* Florida. Project manager for the environmental team responsible for conducting a marine resource assessment including mapping of Johnsons seagrass of 1.75 acres of submerged lands within the basin of Fisherman's Wharf Marina and boat ramp as well as mapped mangroves along the southern shoreline.

**Las Olas Marina Redevelopment,** *Ft. Lauderdale, Florida.* Managing the environmental permitting process for the Las Olas Marina Redevelopment. Involves an expansion of the existing marina through reclamation of previously filled tidal waters, renovating the marina layout to accommodate megayacht vessels, and new dredging. Environmental permits are being processed through Broward County, the Florida Department of Environmental Protection, and the US Army Corps of Engineers. Additionally, an expanded sovereign submerged lands lease and a private easement are being secured to authorize the expanded marina footprint and areas needed for navigational ingress and
egress.

**Palm Beach Town Docks Replacement,** *Town of Palm Beach, Palm Beach, Florida.* Conducted two marine resource investigations of the submerged lands beneath and adjacent to the Town of Palm Beach Town Docks to include the expanded project footprint and proposed dredging area, in accordance with the National Marine Fisheries Service (NMFS) recommendations for sampling Halophila johnsonii and in conjunction with the permitting for the redesign of the docks and overwater structures. Managed and processed the environmental permit applications for an FDEP ERP, FDEP Lease modification and Public Easement, a Corps Individual Permit, and a Corps Consent to Easement in support of the Town of Palm Beach Town Docks project.*

**Services provided with prior firm*

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# GINA CHIELLO, WEDG
**Environmental Science & Permitting**

**YEARS OF EXPERIENCE**
- 14

**EDUCATION**
- Graduate Certificate, Geographic Information Systems, Florida Atlantic University
- BSc Marine Biology, University of West Florida

**CERTIFICATIONS**
- NAUI Rescue Diver; PADI Enriched Air Nitrox Diver (IAND/EANx)
- American Academy of
- Underwater Sciences
- Scientific Diver Certified, 2013
- FDEP Stormwater, Erosion and Sedimentation Control Inspector, 2019
- Waterfront Edge Design Guidelines Associate

**PROFESSIONAL AFFILIATIONS**
- AAUS Individual Member
- Florida Association of Environmental Professionals, Vice President, Treasure Coast Chapter
- Urban Land Institute SE Florida/Caribbean
- Environmental and Land Use Law Section of the Florida Bar
- Leadership Palm Beach County, Alumni

## RELEVANT PROJECT EXPERIENCE

**Higgs Beach Sand Replenishment – Reconnaissance & Pre-construction Survey,** *Key West, Florida.* Conducted a reconnaissance survey and subsequent pre-construction survey of the project area and immediate vicinity to map out and characterize nearshore benthic habitats, including seagrass and hardbottom communities, using belt-transect and point quadrat methodology, including Braun-Blanquet and BEAMR. A report and basemap were prepared to process environmental permits through FDEP and USACE. Coordinated with both the FDEP and FKNMS on the design of the survey and subsequent biological monitoring plan.

**Higgs Beach Sand Replenishment – Benthic Survey,** *Key West, Florida*. A marine resource survey was performed along approximately 570 linear feet of shoreline. The purpose of this survey was to document the general extent, species, and density of seagrasses and other potential marine resources of concern (e.g., corals), that may be growing on the submerged substrate within the proposed fill template. The findings of the marine resource survey were summarized in a Field Observation Report and provided to the relevant environmental permitting agencies to evaluate avoidance and minimization of impacts to marine resources.

**U.S. Coast Guard Sector Key West Benthic Survey,** *Key West, Florida*. Conducted initial marine resource assessment and an updated marine resource assessment of the existing submerged bottom, dock and bulkhead structures, in accordance with the NMFS recommendations for sampling Johnson's Seagrass, the Recommended Survey Protocol for Acropora spp., and the FKNMS Protocol for Benthic Surveys for Coral Resources in FKNMS, to document the extent, species, and density of corals, sponges, and seagrasses growing within the area, necessary to evaluate impacts related to the proposed marine improvements and assist with concept planning.

**Coco Plum Beach Erosion Study and Beach Design,** *Marathon, Florida.* Coastal engineering study of erosional hot spot and development of shoreline stabilization concepts to provide long term stability for the City of Marathon. Performed a marine resources survey and beach vegetation survey to identify potential impacts by project construction. A field observation report was prepared along with permitting feasibility.

**Roads Vulnerability Pilot Study Environmental Permitting,** *Monroe County, Florida.* Performed wetland delineation of mangrove habitat in support of permitting a pilot study to raise roads in Monroe County identified as vulnerable to sea level rise impacts. Consulted with FWS, obtained a 'No Permit Required' letter from the USACE and coordinated with the NPS relative to land ownership issues.

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# ANNE LAIRD

**Environmental Science & Permitting**

**YEARS OF EXPERIENCE**
- 24

**EDUCATION**
- MSc Marine Environmental Science, Nova Southeastern University
- BSc Biological Science, University of Tennessee

**CERTIFICATIONS**
- PADI Open Water
- SCI Advanced Diver
- NOAA Science Diver
- IANTD Enriched Air Nitrox Diver
- AAUS Compliant Scientific Diver
- Certified USCG Safe Boating and Seamanship Skills
- American Heart Association Heartsaver Fist Aid CPR AED
- AN Oxygen First Aid for Scuba Diving Injuries

**PROFESSIONAL AFFILIATIONS**
- American Academy of Underwater Sciences
- Florida Association of Environmental Professionals
- Women of WEDA (Western Dredging Association)
- Port Everglades Association

## RELEVANT PROJECT EXPERIENCE

**The Bay Park,** *Sarasota, Florida.* Project manager for the environmental field work and permitting components for the resilient revitalization of the public

**Higgs Beach Biological Monitoring,** *Key West, Florida*. Project involves conducting marine biological resource monitoring for the proposed Sand Replenishment Project at Higgs Beach, City of Key West. Currently conducting the pre-construction biological baseline survey in accordance with the Florida Department of Environmental Protection (FDEP)-approved Biological Monitoring Plan and additional monitoring requirements by the Florida Keys National Marine Sanctuary.

**Benthic Habitat Characterization Naval Air Station,** *Key West, Florida*. Lead scientist for seagrass habitat mapping within five maritime areas owned and operated by Naval Air Station Key West (NASKW). Surveys were conducted over approximately 135 acres of seabed. Video transects and quantitative sampling of submerged aquatic vegetations were conducted across each area and included a seagrass assessment using the commonly used Braun-Blanquet (B-B) technique.

**Port Everglades Jetty Rehabilitation,** *Fort Lauderdale, Florida*. Performed a benthic survey and developed a Coral Relocation Plan for the relocation of coral colonies from the jetty to a natural hardbottom community off Broward Co. Relocated corals from the jetty to a natural hardbottom ridge and performed baseline and post-construction monitoring. Worked with FWC, NOVA Southeastern and The Reef Institute to facilitate the removal and donation of several species of coral for conservation and research purposes. Provided Marine Mammal / Protected Species Observer Services

**Fisher Island Seawall and Mainland Ferry Terminal Surveys,** *Miami, Florida.* Surveyed seawalls and support pilings for the presence of coral and octocoral colonies.

**Lake Worth Lagoon Seagrass Mapping,** *Palm Beach County, Florida*. Performed the 2020 annual Lake Worth Lagoon (LWL) Fixed Transect Seagrass Monitoring Project along the ten fixed transects throughout the Lagoon in Palm Beach County.

**Bal Harbor Benthic Mapping and EFH Assessment,** *Haulover Inlet, Florida*. Conducted a benthic survey of natural resources of a proposed dredge area and surrounding borrow areas to map the extent, and characterize, benthic habitats present including seagrasses and other potential marine resources of concern (e.g. corals) using novel techniques due to high currents and extensive vessel traffic. Multiple species of seagrass, including the threatened Johnsons' seagrass (Halophila johnsonii) were identified and mapped. Drafted an Essential Fish Habitat Assessment as part of a NEPA-Compliant Environmental Assessment for the project.

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# NATALIE BRYCE

**Environmental Science & Permitting**

**YEARS OF EXPERIENCE**
- 3

**EDUCATION**
- MPS Coastal Zone Management, University of Miami
- BA Environmental Science and Policy, Marine Affairs, University of Miami

**CERTIFICATIONS**
- CPR first aid AED
- Emergency oxygen
- Open water scuba
- FDEP stormwater erosion and sedimentation control inspector

**PROFESSIONAL AFFILIATIONS**
- Florida Association of Environmental Professionals, South Florida Chapter

## RELEVANT PROJECT EXPERIENCE

**Higgs Beach Biological Monitoring,** *Key West, Florida.* Conducted the pre-construction and immediate post-construction biological baseline survey in accordance with the FDEP approved Biological Monitoring Plan and additional monitoring requirements by the Florida Keys National Marine Sanctuary. Project involves conducting marine biological resource monitoring for the sand replenishment project at Higgs Beach, City of Key West.

**Boca Chica Boat Ramp,** Key West, Florida. Marine resource and coastal vegetation survey, as well as preparation of environmental survey report for expansion of boat ramp and addition of fixed pier and floating dock.

**Water Quality Monitoring,** *Monroe County, Florida.* Performed water quality monitoring for canals and nearshore to monitor 65 sites over two years. This monitoring project was done to support the County while they changed from septic to central waste water. Natalie was responsible for performing field work, and prepared quarterly reports for FDEP which fell under a large-scale plan called *"Florida Keys Reasonable Assurance Document".*

**Boca Chica Naval Air Station Benthic Survey,** *Key West, Florida.* Conducted a benthic assessment and coral surveying in the area adjacent to a proposed boat ramp replacement at the Boca Chica Naval Air Station in accordance with the FKNMS Protocol for Benthic Surveys for Coral Resources. An environmental survey report was created to describe marine resources, site conditions, and to detail the sizes, health, and relocation potential of corals in proximity to the proposed construction area. An Environmental Survey Report was prepared.

**Key Biscayne Yacht Club Benthic Survey,** *Key Biscayne, Florida.* Conducted a benthic assessment and coral survey within the proposed nearshore construction area of the Key Biscayne Yacht Club. The objective of the survey was to identify the location, density, extent, and species of corals and seagrasses within the survey area.

**Fisher Island Resident Marina Seagrass Reconnaissance,** *Miami, Florida.* Conducted a qualitative marine resource survey to collect in-water information on seagrass within the Resident Marina at Fisher Island to assist with design planning and environmental permitting needs for the proposed marina renovations and riprap relocation. Identified density, species, and extents of seagrass within the survey area.

**Bal Harbour Flood Shoal Biological Monitoring and Resource Edge Mapping,** *Bal Harbor, Florida.* Conducted various environmental services for the USACE Beach Erosion Control and Hurricane Protection Project in Miami-Dade County, FL. Approved by USACE as a qualified scientific diver. Conducted post-construction benthic community biological monitoring and resource edge mapping surveys to determine potential impacts to benthic resources. Lead reporting writing and data analysis efforts for pre-construction and post-construction biological monitoring data.

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Coastal & Marine Engineering

# DANIELLE IRWIN, CFM, PWS, WEDG, LEED AP

**Regulatory Permitting, Grant Administration, & Funding Specialist**

**YEARS OF EXPERIENCE**
- 22

**EDUCATION**
- MSc Oceanography, Florida State University
- BA Environmental Studies, University of Southern California
- BSc Biology, University of Southern California

**CERTIFICATIONS**
- Certified Floodplain Manager
- Professional Wetland Scientist
- LEED Accredited Professional BD&C
- WEDG Associate

**PROFESSIONAL AFFILIATIONS**
- Florida Association of Environmental Professionals, Tallahassee Area Chapter
- Appointee, Leon County Water Resources Committee
- Society of Wetland Scientists
- Florida Floodplain Managers Association
- Association of State Floodplain Managers
- US Green Building Council

## RELEVANT PROJECT EXPERIENCE

**Dinner Key Marina Breakwaters Mitigation,** *City of Miami, Florida.* Resiliency and mitigation improvements to one of the largest public marinas on the east coast of the US. Originally created in the early 1900's, man-made spoil islands have provided protective services to upland areas but have worn over time and sustained considerable damage from Hurricane Irma in 2017. Scope includes restoration, increase in sea level rise resilience and storm protection, recreational enhancements, and consideration of potential additional funding opportunities.

**Apalachee Regional Vulnerability Assessment,** *Apalachee Region, Florida.* Provided QA/QC review of critical asset data inventory, data gap analysis, flood depth results by asset, coordination with clients and regional stakeholders for data collection efforts, and review the final deliverable report. Danielle also provided policy related input specific to application of Section 380.093 F.S. The report illustrated and quantified the exposure and sensitivity of critical and regionally significant assets to tidal, SLR, and coastal storm surge flooding for 9 counties in the Apalachee region.

**Bal Harbour Village Vulnerability Assessment,** *Bal Harbour Village, Florida.* Grant application and award of $169,700 to perform a village-wide vulnerability assessment compliant with s. 380.093, F.S. Scope includes the acquisition of background data, exposure and sensitivity analysis, peril of flood comprehensive plan updates, public outreach meetings, a Vulnerability Assessment Report, identification of critical asset focus areas, and a Coastal Resilience Adaptation Plan.

**Various Funding Opportunities,** *Florida.* Leading the firm's grant and cost-share funding tracking, project-funding fit analysis, grant applications, funding agency coordination, and grant award agreement and administration activities. Over $30 million has been awarded to date for resiliency and mitigation planning and implementation projects from the Florida Department of Economic Opportunity Community Development Block Grant (CDBG) Mitigation General Infrastructure program and from the Florida Department of Environmental Protection Resilient Florida program.

**Waterfront Adaptation at Jose Marti Park,** *Miami, Florida.* The adaptive redesign of this 13-acre, multi-use recreational space on the Miami River explores ways in which the park can minimize tidal flood impacts to the surrounding neighborhood, adapt to sea-level rise, and enhance waterfront access to residents. Danielle led the environmental permitting, and grant management.

**Tidal Flood Protection Ordinance,** *City of Hollywood, Florida.* Project manager responsible for review of the Broward County model ordinance for tidal flood barriers. The purpose of this review was ensure the new ordinance was adaptable to the current and future conditions of the City of Hollywood. After coordination with the City, two public hearings, and a presentation to the City the ordinance was accepted.

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Coastal & Marine Engineering

# KATIE BRITT WILLIAMS, WEDG, CFM

**Grant Administration & Funding Specialist**

**YEARS OF EXPERIENCE**

- 8

**EDUCATION**

- MSc Natural Resource Conservation, University of Florida
- BA Environmental Science & Policy, Florida State University

**CERTIFICATIONS**

- Certified Floodplain Manager
- WEDG Associate

**PROFESSIONAL AFFILIATIONS**

- UF IFAS Natural Resource Leadership Fellow, Class XVII
- Florida Floodplain Managers Association, Member
- Board Member of Tallahassee Area Environmental Professionals
- American Water Resource Association, Member
- City of Tallahassee Environmental Review Board

## RELEVANT PROJECT EXPERIENCE

**The Bay Park,** *Sarasota, Florida.* Led application development for FDEO CDBG-MIT General Infrastructure grant, with successful award of $10,418,271 to design, permit and construct a living shoreline, vegetated stepped floodwall, raise a portion of the park road, and restore the hydrology of Hog Creek. Led the application for FDEP REsilient Florida Gran which was awarded $1,250,000. Directly supports the Bay Park staff in grant administration and coordination with the City of Sarasota.

**Apalachee Regional Vulnerability Assessment,** *Apalachee Region, Florida.* Stakeholder outreach, managed the County and ARPC contact list, and coordinated with the ARPC for GIS data. Funded through a Resilient Florida grant, the report illustrated and quantified the exposure and sensitivity of critical and regionally significant assets to tidal, SLR, and coastal storm surge flooding for 9 counties.

**Tidal Flood Protection Ordinance,** *City of Hollywood, Florida.* Project management support for the Broward County Model ordinance for tidal flood barriers. The purpose of this review was to ensure the new ordinance was adaptable to the current and future conditions of the City of Hollywood. After coordination with the City, two public hearings, and a presentation to the City, the ordinance was accepted.

**Currie Park Redevelopment,** *City of West Pam Beach, Florida.* Coordinated grant application for Currie Park Redevelopment project and sea level rise adaptation project. Coordinated with the FDEO to receive a CDBG-mitigation grant through the US Department of Housing and Urban Development. Led the environmental assessment to meet federal grant requirements.

**County Shoreline Resiliency Planning,** *Palm Beach County, Florida.* Project management support to update County's local mitigation strategy (LMS). Updates to the strategy included updating the priority list to include sea level rise adaptation strategies for publicly owned seawalls. LMS applications were approved and added to the County's LMS.

## GRANT APPLICATION SUBMISSIONS

- Florida Department of Environmental Protection(FDEP) Resilient Florida (Planning and Implementation)
- FDEP Nonpoint Source Pollution Surface Water Quality Assistance Grant
- Environmental Protection Agency (EPA) through FDEP 319h Nonpoint Source Grant
- Southwest Florida Water Management District Cooperative Funding Initiative Grant
- St. Johns River Water Management Cooperative Funding Initiative
- Florida Fish and Wildlife Boating Infrastructure Grant Program
- Florida Department of Economic Opportunity CDBG Mitigation General Infrastructure Grant
- Florida Department of State Division of Historical Resources Special Category Grant
- EPA Sustainable Water Infrastructure Community Grant

# 07. FIRM QUALIFICATIONS

The Cummins Cederberg team includes Florida registered professional engineers, regulatory experts, and marine scientists with extensive experience in resiliency projects that include coastal engineering, marine structure inspection and design, public engagement, environmental permitting, ecological assessment, mitigation negotiation, and construction administration. Cummins Cederberg's exclusive focus is on the coastal and marine environment, with the bulk of our projects consisting of resilient waterfront structures and parks.

**Coastal Facilities Engineering.** The planning and design of waterfront projects involves several components in addition to typical construction of an upland structure. The harsh marine environment can result in increased deterioration and future maintenance issues if not properly considered during the design process. A marine structure is exposed to variable conditions, such as saltwater, storm waves, tidal currents, and potential sediment transport, as well as other potential dynamic loading conditions. Our engineers have designed resiliency projects throughout Florida and the Caribbean with experience ranging from living shorelines, enhanced breakwater islands, and increasing structures to comply with updated county ordinances.

In addition to our vast experience planning, permitting, and designing resilient waterfront engineering projects, Cummins Cederberg brings extensive experience conducting underwater inspections of marine structures. Proper maintenance of these structures can significantly extend their service life and reduce capital costs incurred by the City to replace these expensive structures. Cummins Cederberg is unique in Florida by bringing expertise in both coastal engineering and marine structural engineering. We are capable of fielding three OSHA-compliant dive teams to conduct underwater investigations of coastal structures. Our staff includes nine engineer-divers, five of which are registered Professional Engineers in Florida.

**Marine Science & Permitting Experience.** Cummins Cederberg has an in-house team of marine biologists and regulatory experts with unmatched expertise in local, state, and federal environmental permitting, marine resource surveys, artificial reef design and monitoring, NEPA documentation, Endangered Species Act Section 7 consultation, and Essential Fish Habitat Assessments. Our team includes a former FDEP Deputy Director and a former USACE Section Chief, as well as other former environmental regulatory agency staff, with intimate knowledge of the regulatory process and professional relationships with agency personnel. Our biologists work hand in hand with our engineers to ensure projects are completed on time and within budget to exceed your project goals, while protecting natural resources to the maximum extent practicable. Through detailed plans and hands-on communication with the regulatory agencies, Cummins Cederberg is experienced in expediting the permitting process and we are uniquely positioned to leverage our extensive understanding of the engineering and permitting aspects of the marine environment to avoid a lengthy, costly permitting process.

Our biologists have a firm grasp of the environmental and logistical coordination efforts needed to develop a project from conception through implementation. Cummins Cederberg understands the requirements necessary to conduct an environmental assessment and the importance of reviewing regulatory terms and conditions with the state and federal resource agencies, as well as local stakeholders and special interest groups. Permitting and design are often considered as separate entities. However, our experience is that design and permitting are so interconnected that the final permitted design often is the construction design. The Cummins Cederberg team has a proven history of implementing projects throughout Florida utilizing this mindset. By involving regulators and stakeholders from the pre-conception phase all the way through final construction, and working through environmental, property, or other concerns at the onset, we can move through the permitting process smoothly

The Cummins Cederberg team is proud of our excellent working relationships with the FDEP, USACE, FWS, FWC, Water Management, and NMFS agency staff. The former regulators on our team have a unique understanding of regulations and pride themselves in their ability to prepare comprehensive permit applications and responses to requests for

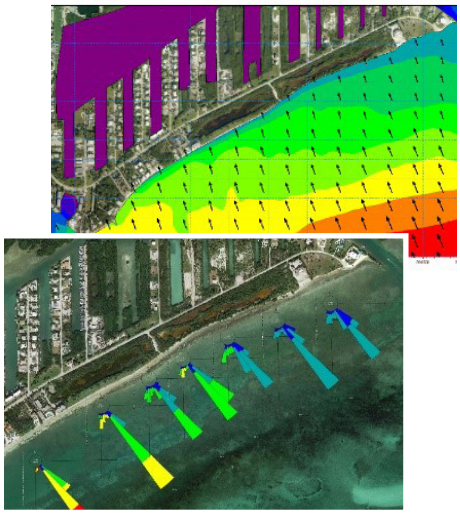
additional information (RAIs) that result in shorter permitting process durations and associated consulting costs. The environmental regulatory agency staff are tasked with enforcing their agency's rules, while working with applicants to arrive at a permittable project. In Florida, where protecting upland infrastructure is paramount, the nearshore ecological resources must also be protected. It is our job to provide the regulatory agencies with the information they need to verify and document a project's compliance with the guiding regulations so that agency staff can recommend issuance of a permit.

**Construction Administration.** Our construction management staff have experience on both the contractor and design side with project management and oversight of marina projects throughout Florida including contract terms, construction specifications, construction methodology and phasing, permit compliance, and construction administration. Having former marine contractors on staff results in substantial cost savings when it comes to constructability reviews and cost estimating. Our construction management process includes regular site visits and progress reporting to City staff. Our experience working on projects from field to finish ensures our marina designs consider all aspects of project development up front during the design phase, rather than further down the line.

Our teams collective experience on similar projects, as well as working together, is demonstrated on the following pages:

**Coco Plum Beach Erosion Study,** *Marathon, FL*

Cummins Cederberg was retained to conduct an erosion study, prepare a beach design involving coastal structures to provide long term stability, as well as conduct a benthic survey to quantity potential impacts to the nearshore seagrass habitat. As part of the erosion study, a detailed statistical analysis of offshore wave data was conducted along with a wave propagations study and an environmental feasibility study. Sediment transport and potential erosion are typically governed by the wave conditions.



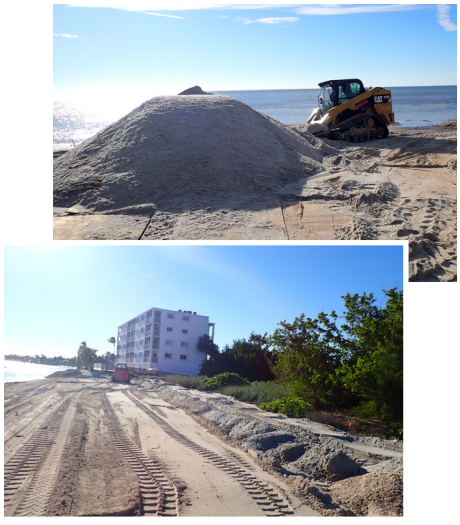
*Coco Plum Beach Modeling*

Utilizing the advanced MIKE21 wave model, the wave transformation from offshore to nearshore was analyzed. The detailed wave modelling allowed for detailed review and comparison of the wave climate along the beach as well as assessing sediment transport rates.

Based on the results of the wave modeling and sediment transport assessment the underlying coastal processes of the erosion trends were documented and utilized in the beach and coastal structure design process. The area triggering the beach erosion was identified and solutions for stabilizing this area, while still providing sandy beach access were developed. Understanding the underlying coastal processes allowed for an efficient design that works with the natural processes, thus reducing long term maintenance typically associated with projects working against nature.

**Coco Plum Beach Renourishment,** *Marathon, FL*

Cummins Cederberg was retained to permit and design a beach and dune restoration project using grant funding to restore Coco Plum Beach from damage sustained during Hurricane Irma. Utilizing the previous work completed by Cummins Cederberg as part of the Coco Plum Beach Erosion Study & Beach Renourishment, a beach and dune restoration was developed along approximately 1,500 linear feet of shoreline. The narrow, flat beach profiles required careful attention to design to manage elevation, aesthetics, construction access, and impacts to resources. Cummins Cederberg obtained a CCCL permit for the work from FDEP and performed construction administration.



*Coco Plum Beach Renourishment*

**Landings of Largo Marina,** *Key Largo, FL*

Performed engineering and environmental consulting services for the 61-slip marina improvements at Landings of Largo in Key Largo. The scope of work included the design, and permitting of replacement of docks and utilities, along with repairs to shoreline stabilization, and the boat ramp. Cummins Cederberg designed the replacement of the fixed docks using the same footprint as the previous docks. The docks are surrounded by extensive mangroves growth, which the design carefully considered to avoid impacts.

*Landings of Largo Marina*

**Sheraton FEMA Coastal Vulnerability Assessment,** *Key West, FL*

Cummins Cederberg performed a coastal vulnerability study and analysis with respect to the feasibility of a FEMA Letter of Map Revision (LOMR) which would revise the flood zones within the property of Sheraton Key West. The property is separated from the Atlantic Ocean by approximately 150 feet of beach and South Roosevelt Blvd. The property is in a FEMA high risk flood zone (VE-zone), which has significant impacts on the redevelopment (e.g. building code requirements, flood insurance premium). Based on a review of the site conditions and 100-year storm surge level, it appeared feasible to modify the flood insurance rate map which would reduce construction and term insurance costs. The LOMR was prepared, submitted, and approved. The proposed revision to the existing flood insurance rate map was adopted.

*John Pennekamp Coral Reef State Park*

**John Pennekamp Coral Reef State Park Dock & Boat Ramp Replacement,** *Key Largo, FL*

Cummins Cederberg is developing plans and processing permits for the replacement of docks, seawall, and boat ramp. Our subconsultants for this project, **NV5 and Craig A. Smith**, are also working on the project providing geotechnical and surveying services.

**Bahia Honda State Park Road Improvements & Park Residences Structural Assessment,** *Big Pine, FL*

Cummins Cederberg is designing and permitting roadway improvements for a section of the road within Bahia Honda State Park. Raising the elevation of the 0.2 mile unpaved road to mitigate impacts of sea level rise and reduce frequency of flooding events. In addition, structural assessments were performed for the modular homes (park residences) and three duplexes.

*Bahia Honda State Park*

**FDEP Valois Canal Plug Repair,** *Key Largo, FL*

Cummins Cederberg is currently coordinating with the FDEP to provide engineering and environmental consulting services for the Valois Canal Plug Repair proejct located in the Dagny Johnson Key Largo Hammock Botanical State Park. The project includes the repair/reconstruction and fortification of an existing earthen plug located at the waterward end of the Valois Canal, which has deteriorated is allowing for the exchange of tidal waters between the degraded waters of the canal and the adjacent outstanding Florida waters of the Florida Keys National Marine Sanctuary.

The first phase of this project is complete and included a benthic survey, boundary, and topographic survey; a geotechnical survey; engineering design documents. Our subconsultants for this project, **NV5 and Craig A. Smith**, are also working on the project providing geotechnical and surveying services.

*Valois Canal*

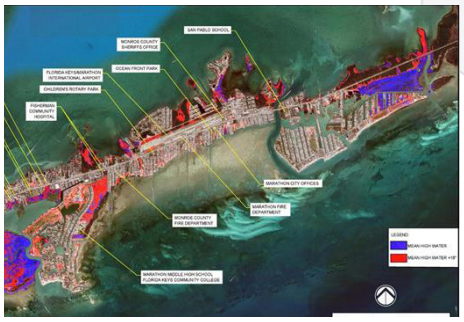
**Ocean Pointe FEMA Coastal Vulnerability Assessment,** *Tavernier, FL*

Cummins Cederberg performed a coastal vulnerability study and analysis with respect to the feasibility of a FEMA Letter of Map Revision (LOMR) which would revise the flood zones within the property of Ocean Pointe Condominiums. The property is separated from the Atlantic Ocean by a wide vegetation area, which provides increased protection during hurricanes. A FEMA LOMR was dependent on the wave attenuation effects of the existing vegetation seaward of the buildings. It was unclear if the vegetation coverage was sufficient in density and cross-sectional width, so a vegetation assessment and feasibility study was conducted for the FEMA LOMR. FEMA approved the LOMR and the modified flood hazard information for the community has been in effect.

*Ocean Pointe Condominium*

**Marathon Coastal Resiliency Assessment,** *City of Marathon, FL*

Cumming Cederberg developed flood inundation models based on various sea level rise projections for the entire City and evaluated the use of several resiliency and protection strategies. The flood inundation modeling was conducted utilizing the MIKE21 Hydrodynamic Model (HD) engineering software package. The MIKE21 HD numerical model simulates two dimensional water level variations and flows in response to a variety of forcing mechanisms in canals, lakes, estuaries, and coastal areas.



*City of Marathon Resiliency Assessment*

**Coco Plum Beach Adaptation Plan,** *City of Marathon, FL*

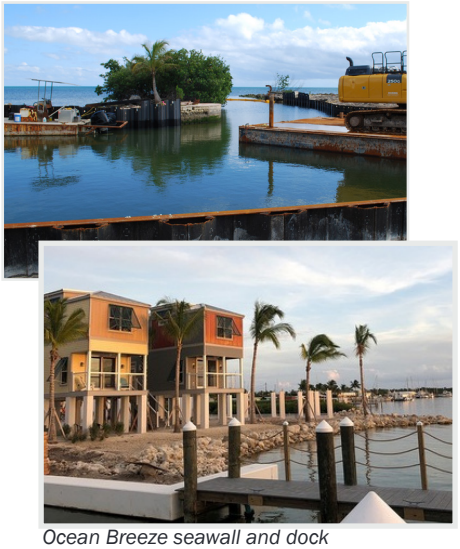
Cummins Cederberg completed a risk and vulnerability assessment throughout the Cocoplum Beach area. The the team identified mitigation and resiliency strategies tailored to each area and its existing infrastructure. Some of the suggested strategies included armoring, seawalls, breakwaters, bulkheads, beach nourishment, dune protection, raise infrastructure/roads, and flood proofing. After completing preliminary research, the areas were prioritized based on a list of credentials and the areas overall vulnerability.

*Coco Plum Beach Adaptation Plan Model*

**Ocean Breeze Shoreline Stabilization, Dredging, & Marina,** *Marathon, FL*

Performed marine structural engineering services, including the design of a new seawall, docks, and dredging, for a community in Marathon affected by the impacts of Hurricane Irma. Our team conducted extensive fieldwork including site inspection, bathymetric surveying, and sediment probes to document existing conditions.

Based on the sediment probes and location of marine resources, Cummins Cederberg prepared the dredge design. Due to the extent of damage the marina faced because of Hurricane Irma, Cummins Cederberg redesigned the marina footprint, as well as provided marine engineering services for the new bulkhead and shoreline stabilization. Construction administration services were also performed for the project to ensure the bulkheads, revetments and marine components were constructed per the contract drawings.



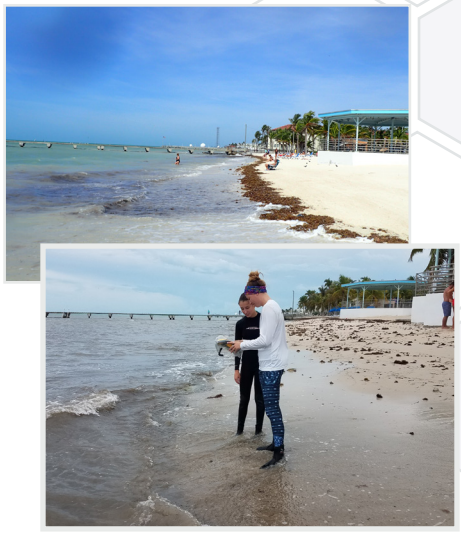
*Ocean Breeze seawall and dock*

**San Pablo Catholic Church Seawall,** *Marathon, FL*

This project site is located a few miles south of Curry Hammock Park along an existing waterway. Cummins Cederberg designed and permitted a new seawall to stabilize the shoreline along a proposed recreational area. An inspection of the existing seawall along with marine resource survey were performed to support the design and permit process. Construction administration services were also provided

**Higgs Beach Nourishment,** *Key West, FL*

Higgs Beach is one of the few beaches in Key West and is an important component for both storm protection and an amenity for residents and visitors, requiring periodic renourishment to offset sand loss. In 2018, as part of the planning efforts, Cummins Cederberg was retained to conduct several tasks. The scope included performing 1) a preliminary, qualitative benthic survey to document the general extent of marine resources (e.g., coral and seagrass) within the proposed fill template, 2) an equilibrated toe-of-fill (ETOF) analysis and 3) an estimation of the seaward location of the sand placement and profile adjustment, referred to as the ETOF, based on the profile translation method.

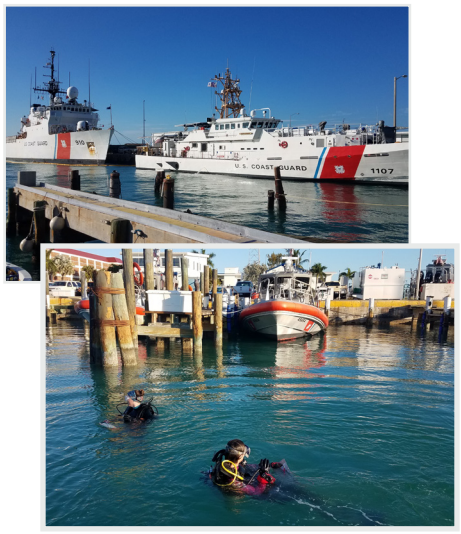


*Higgs Beach Nourishment*

Due to cross-shore sediment transport of beach fill, environmental agencies are concerned with potential impacts to nearshore marine resources. Utilizing the proposed construction template, Cummins Cederberg coastal engineers determined the ETOF, and using three profiles, established a representative equilibrium profile and seaward translation of the native beach profile. Biologist provided a base map of benthic resources, and along with the engineering analysis, the data was summarized into a report, along with recommendations for design adjustments.

**USCG Marine Resource Survey,** *Key West, FL*

Cummins Cederberg was contracted to conduct/ update a marine resource assessment of the existing submerged bottom, dock, and bulkhead structures, in accordance with the NMFS and the FKNMS protocol for Benthic Surveys for Coral Resources in FKNMS, to document the extent, species, and density of corals, seagrass and other benthic resources growing within the project footprint. This information will be provided to evaluate impacts related to the proposed marine improvements and assist with concept planning.



*USCG Sector Key West*

**Jungle Island Shoreline Stabilization,** *Miami, FL*

Cummins Cederberg designed a 1,008 linear foot rock revetment consisting of 1.5-foot diameter boulders. The revetment was design to avoid and minimize impacts to resources to the maximum extent practicable by keeping the waterward limits of the revetment above the MHWL and meandering around mangrove roots and trunks. Cummins Cederberg calculated the area of mangrove trimming and root impacts required to construct the rock revetment and was approved by the agencies. Cummins Cederberg secured environmental permits from the U.S. Army Corps of Engineers (USACE), Florida Department of Environmental Protection (FDEP), and Miami-Dade County Division of Environmental Resources Management (DERM).

As part of a subsequent phase, Cummins Cederberg designed a 120 linear foot gabion structure to stabilize the shoreline along the western end of the property. The gabion baskets were designed using polymeric-coated wire baskets to reduce corrosion and filled with small limestone boulders. The upland side of the gabions were covered with geotextile fabric and backfilled with beach-compatible sand to create a perched beach. Both projects were constructed and are performing as designed.

*Jungle Island Shoreline*

**Le Armonia Shoreline Stabilization,** *Palm Beach County, FL*

Cummins Cederberg designed a 300 linear foot rock revetment consisting of 1.5 to 2-foot diameter boulders. The revetment was designed to avoid and minimize impacts to resources to the maximum extent practicable by keeping the waterward

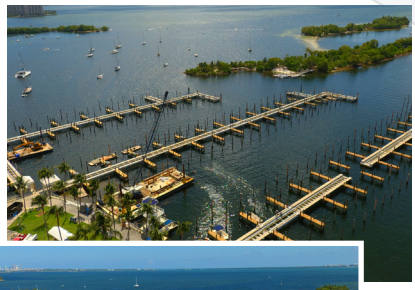
limits of the revetment above the MHWL. The revetment was designed to reduce erosion to the uplands and stabilize a pocket beach for water access. Both storm waves and vessel wakes along the Intracoastal Waterway were considered in the design. Cummins Cederberg conducted a marine resource survey to document seagrasses in the project area. Cummins Cederberg secured environmental permits for the revetment and is currently working to secure environmental permits from the U.S. Army Corps of Engineers (USACE) and Florida Department of Environmental Protection (FDEP) for the dock and boat lift. Cummins Cederberg is currently designing a timber dock and boat lift, and permitting a relocated Aid to Navigation (ATON) for the upland owner.

*Le Armonia Shoreline*

**Dinner Key Marina Repairs,** *Miami, FL*

Dinner Key Marina is Florida's largest marina with 587-wet slips. Following Hurricane Irma, the marina suffered significant damage, impacting 60% of the dockage. Cummins Cederberg was the lead marine engineer for this $22M design-build contract to restore the marina to operating condition with repair or replacement of fixed concrete and timber dock structures, a fire protection system, electrical service and lighting, sewage pump out, domestic water, and a communication/security system.

Responsibilities included engineering and construction drawing development, municipal permitting, and construction services including specialty inspections, product documentation management, and active construction support. A requirement from the City was to keep as much of the marina operational during construction. We achieved this through precise construction phasing and planning.

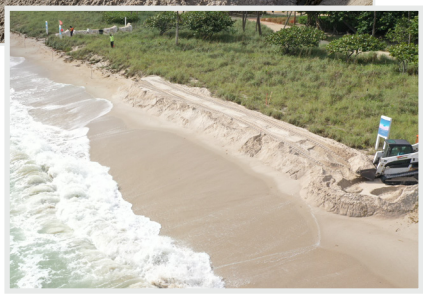


*Dinner Key Marina*

**Bal Harbour Dune Nourishment,** *Bal Habour Village, FL*

Cummins Cederberg designed and permitted an emergency beach nour¬ishment project to partially restore the beach for Bal Harbour Village until a larger project by the USACE could be implemented. The beach and dunes had experienced significant erosion following Hurri¬cane Irma and had been awarded a grant from FEMA for beach restoration. Cummins Cederberg assisted the Village in administering the FEMA grant. Our assistance included compiling and filing the quarterly reports, submit¬ting documentation of completed work, coordination with the grant manag¬er at FDEP, and facilitating a post-construction grant audit by FEMA. Cum¬mins Cederberg also assisted the Village in requesting a time extension under the assumption that the sand placement work would be completed by December 2020 due to turtle season construction restrictions.

Construction drawings were prepared for the sand placement and con¬struction methodology was coordinated with the contractor. Cummins Cederberg provided construction administration services for the Village to manage construction. Drone aerial photographs were collected during con¬struction to document progress efficiently.



*Bal Harbour Dune Nourishment*

**Hillsboro Club Dune Nourishment,** *Hillsboro Beach, FL*

Cummins Cederberg served as the Engineer of Record for the Hillsboro Club Dune Repair, providing emergency dune restoration and repair services, as well as geotechnical sand studies at the Hillsboro Club along the Atlantic Ocean in Broward County. Responsibilities included pre-construction sediment testing, preparation, and submittal of FDEP CCCL permit application packages, development of construction documents, and coordination with the Town of

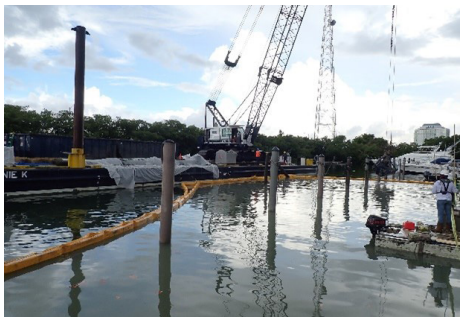
Hillsboro Beach for code compliance. The dune design was based on maximizing the volume of sand seaward of the project property.

As required by the FDEP, existing dune vegetation mapping was performed, a proposed vegetation planting plan developed, and planting design parameters were prepared. The planting plans included the identifying the location of existing native dune vegetation to be preserved, buried, or replanted, proposed dune vegetation plantings for stabilization and mitigation, and areas of invasive exotic plants for removal.

Sand samples from the existing dune system were obtained and tested to identify available sand sources for the renourishment project. Cummins Cederberg was able to perform the sand testing prior to the beginning of a nearby dredging project, which was occurring concurrently. Through this expedited, out-of-the-box process, we were able to evaluate if this alternative sand source could be used for the dune repair, making the project more economically feasible for the client.

*Hillsboro Club Dune Nourishment*

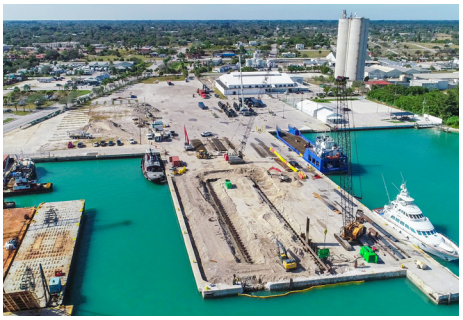
As part of a subsequent phase, Cummins Cederberg provided engineering and permitting services for 2 emergency dune nourishments and a timber boardwalk replacement over the dune. Storms caused the renourished dune to erode, resulting in collapse of the boardwalk. A helical foundation system was incorporated to account for future erosion. A CCCL permit to renourish approximately 1,000 linear feet of dune and beach berm was also obtained from FDEP. Cummins Cederberg also provided construction administration services including periodic site visits to observe construction of the emergency dune nourishments and boardwalk construction.



*Pelican Harbour Marina*

**Pelican Harbour Marina Dredging,** *Miami, FL*

Provided engineering and environmental services for the dredging of Pelican Harbor Marina. The team conducted bathymetric survey and sediment probes to understand water depths and thickness of sediment above harder rock layer. A benthic survey was completed to evaluate the potential for environmental impacts. Following the field data collected, Cummins Cederberg completed the dredge design, processed required permits, and provided construction administration services.

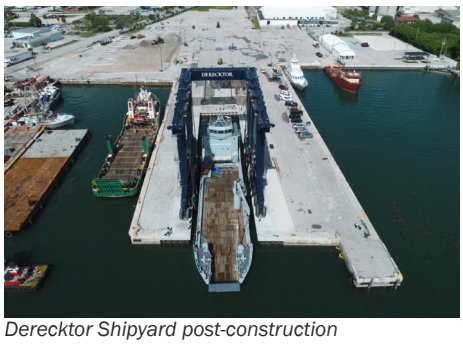


*Derecktor Shipyard during construction*

**Derecktor Shipyard Travel Lift Haul-Out Basin,** *Ft. Pierce, FL*

Led the engineering design and regulatory permitting for a new port of call in Ft. Pierce by Derecktor, an American ship building company. The team designed a haul-out basin for a 1,500-ton mobile lift inside of an existing pier.

Following field work, permitting, and design of the project, construction began with the excavation and infrastructure of the haul-out basin where the mobile boat hoist will operate. Designing the haul-out basin inside of an existing pier proved to be challenging due to existing foundations from a prior refrigeration building, adjacent bulkhead anchoring systems, and variable soil conditions. It required creativity from the Cummins Cederberg team as limited information was available on the bulkheads, the oldest of which is estimated at 100 years.



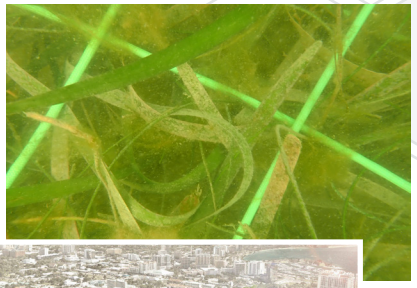
*Derecktor Shipyard post-construction*

**The Bay Waterfront Park,** *Sarastoa, FL*

The Bay Park is a multi-phase 53-acre waterfront park project that will enhance the natural shoreline while ensuring public access to Sarasota's Bayfront. Cummins Cederberg was retained to collect baseline data via a marine resource

survey, prepare an environmental impact analysis, and develop monitoring and coral relocation plans for the proposed Bay Park in Sarasota.

Marine biologists conducted a baseline survey in 2020, and continue to do so annually, by laying out transects and placing quadrats to collect line intercept data and Braun-Blanquet data to accurately characterize the benthic communities. Seagrass, coral, algae, and other benthic species were recorded within the project footprint. This information was utilized to determine how the proposed boardwalk will affect marine resources, and how impacts can be minimized through changes to the design or through relocation of corals. In addition to benthic resource surveying Cummins Cederberg has prepared and processed permit applications for the project, and assisted in the grant administration to acquire almost $15M of additional funding.



*the Bay Park*

**Currie Park Redevelopment,** *West Palm Beach, FL*

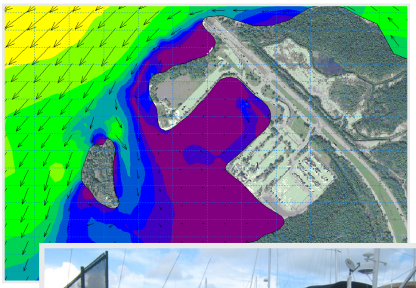
Cummins Cederberg together with **Chen Moore & Associates** are master planning and design the redevelopment of Currie Park along 2,500 feet of the Intercoastal Waterway. Marine and civil engineering designs are being completed for $30M redevelopment. The project area includes significant seagrass and mangroves thus designs were carefully planned to minimize impacts. The waterside of the park rock revetment, living shoreline, seawalls, boat ramp, kayak launches, new over water piers, and boardwalks.

*Currie Park*

**Crandon Park Marina Sedimentation Mitigation & Shoreline Stabilization,** *Miami, FL*

Crandon Marina is located along the northwest shoreline of Key Biscayne fronting Biscayne Bay and specifically adjacent to Bear Cut. Severe sedimentation occurs in the northwestern portion of the marina close to the entrance channel, preventing mooring in certain slips and consequently a loss in revenue. Cummins Cederberg was selected to determine the source and cause of the sedimentation as well as provide a solution.

Field investigations including surveying, marine resource mapping, sediment sampling, as well as tide and current measurements were performed. A wave analysis was subsequently conducted to understand wave characteristics during normal conditions for the subsequent sediment transport assessment, and extreme wave conditions for the design of coastal structures. A detailed numerical hydrodynamic model was developed to simulate the tidal flow within Biscayne Bay and specifically the tidal flow patterns at the project site. Based on the results of the wave and hydrodynamic analyses, the sediment transport at the site was assessed to understand the governing mechanism in transporting excessive material into the marina. A design to eliminate or reduce sedimentation was developed. A detailed numerical flow model will be required to determine water flow and culvert sizing.



*Crandon Marina*

**Seahaven Superyacht Marina,** *Dania Beach, FL*

Approximately 1,200 feet of new bulkhead was designed for the deep-water yacht basin, consisting of steel sheet piling with concrete batter piles and reinforced concrete capping beam. Design criteria for a floating dock was also prepared including mooring loads anticipated by vessel size and wind speed.

Construction administration services, including review of contractor payment, site observations with reports, pile driving logs, materials testing, final inspection,

and environmental permit close out services were also provided to ensure the completion of the project in accordance with all engineering specifications.


*Seahaven Superyacht Marina*

**Stranahan House Seawall Replacement,** *Fort Lauderdale, FL*
The Historic Stranahan House Museum is the home of former Fort Lauderdale pioneers and built in 1901. Cummins Cederberg was retained to assess the existing seawall and dock at the historic property and subsequently design a seawall replacement in its current location along the New River in downtown Fort Lauderdale.

The team began with an above and below water inspection to document the condition of the existing seawall and dock. Following inspection, it was recommended to replace the existing concrete seawall due to the deterioration and the condition it was in.


*Stranhan House Construction Process*

Cummins Cederberg designed all elements of the replacement of the existing seawall and prepared and processed the Broward County, FDEP, and USACE environmental permits for regulatory authorization. Plans were prepared in significant detail for construction. Construction Administration services were also provided including managing the bid solicitation process and conducting site inspections.

**Bentley Bay Marina,** *Miami, FL*
Bentley Bay is located just north of the MacArthur Causeway, within the Biscayne Bay Aquatic Preserve and adjacent to sovereign submerged lands. As such, the site is subject to environmental regulatory challenges where new marinas are typically not allowed to be constructed.


*Stranhan House Seawall*

Through research of submerged lands ownership and historical use at the site, as well as extensive negotiations with the regulatory agencies, environmental permits from USACE, FDEP, and Miami-Dade County DERM were secured for the new marina. In addition to the typical regulatory approvals, an FDEP Sovereign Submerged Lands (SSLL) lease and DERM Marina Operating Permit (MOP) were also secured.

Cummins Cederberg designed the marina utilizing concrete piles, cap, and beams with grated decking, as required to allow for adequate light penetration to reach the submerged bottom supporting seagrass habitat. Structural design of the docks relative to extreme conditions ad vessel loads was conducted. Design services also included material selection and coordination of utilities. Construction administration was performed including bidding, inspections, field reports and permit close-out.


*Bentley Bay Marina*

# 08. EXPERIENCE & REFERENCES



## Dune Nourishment
### Bal Harbour Village, Florida


Cummins Cederberg designed and permitted an emergency beach nourishment project to partially restore the beach for Bal Harbour Village until a larger project by the USACE could be implemented.

The beach and dunes had experienced significant erosion following Hurricane Irma and had been awarded a grant from FEMA for beach restoration. Cummins Cederberg assisted the Village in administering the FEMA grant. Our assistance included compiling and filing the quarterly reports, submitting documentation of completed work, coordination with the grant manager at FDEP, and facilitating a post-construction grant audit by FEMA. Cummins Cederberg also assisted the Village in requesting a time extension under the assumption that the sand placement work would be completed by December 2020 due to turtle season construction restrictions.

Construction drawings were prepared for the sand placement and construction methodology was coordinated with the contractor. Cummins Cederberg provided construction administration services for the Village to manage construction. Drone aerial photographs were collected during construction to document progress efficiently.

Cummins Cederberg provides ongoing support with the Village's coastal management program through a continuing services contract.

***Reference:***
***John Oldenburg***
***305-993-7463***

***Scope:***

- *FEMA grant coordination and application*
- *Beach design*
- *Construction Administrator*
- *Drone pre- and post-surveys*

***Implemented, administered, and closed-out FEMA post storm dune repair grant. Additionally secured $169,700 Resilient Florida planning grant for a vulnerability assessment***

# Dinner Key Marina Repairs
## Miami, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering

Dinner Key Marina is Florida's largest marina with 582 wet slips. Following Hurricane Irma, the marina suffered significant damage, impacting 60% of the dockage. Vessels were torn from their moorings and crashed into other vessels and the docks damaging all 9 piers.

Cummins Cederberg was selected as the lead marine engineer for this $22M design-build contract to restore the marina to operating condition with repair or replacement of fixed concrete and timber dock structures, a fire protection system, electrical service and lighting, sewage pump out, domestic water, and a communication /security system. Responsibilities include engineering and construction drawing development, municipal permitting, and construction services including specialty inspections, product documentation management, and active construction support.

A unique feature not in the original approach and value added by the design-build team in collaboration with the City was a crucial decision to raise the finger piers. This year's king tides showed record high water levels. The recently renovated piers experience no flooding, while the docks remaining to be renovated were under water.

***Reference:***
***Robert Fenton***
***305-416-1002***

***Scope:***

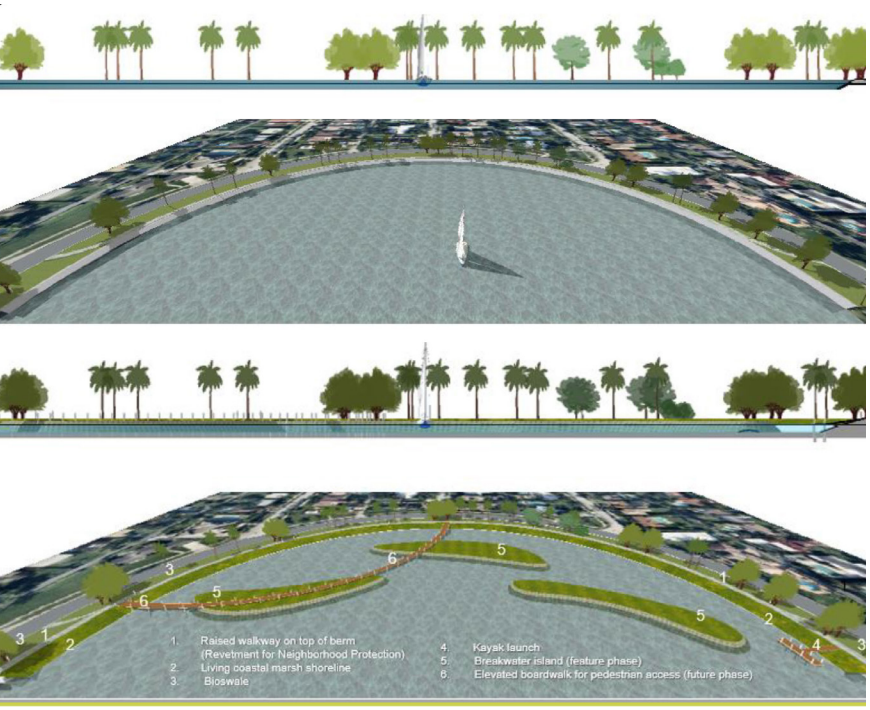
- *Marine engineering*
- *Construction drawing development*
- *Environmental permitting*
- *Specialty inspections*
- *Construction support*

***Under a separate contract acting as a Phase II to protect the City's investment in the marina, leading the design, permitting, and grant administration for a $7.9M FEMA funded mitigation project***

# Tidal Flood Mitigation & Shoreline Protection

## Hollywood, Florida

CUMMINS | CEDERBERG
Coastal & Marine Engineering




Cummins Cederberg is assisting the City with their Tidal Flooding Mitigation and Shoreline Protection project. The scope includes evaluation of 22 City owned shoreline segments along 10,000+ feet of shoreline within North Lake, South Lake, and the ICW. Conceptual designs have been prepared for each shoreline segment to provide site specific solutions to address tidal flooding. Concepts include living shorelines, rock revetments, and bulkheads and are consistent with the new City and County tidal flood barrier ordinances.

Our team of marine biologists completed a benthic resource survey of the submerged lands adjacent to the 22 project areas. The survey was conducted using SCUBA during the seagrass growing season and identified important protected resources. Resources observed included shoal grass, paddle grass, and Johnson's seagrass. This survey informed project design to ensure impacts to these important resources are avoided and minimized to the maximum extent practicable and will support environmental permit applications. Biologists also assessed the vegetation to identify protected and invasive species along the 22 project areas. Native vegetation will be protected, and exotic vegetation will be eradicated as part of project implementation.

Engineering inspections were conducted above and below water to assess the current condition of the 22 shoreline segments. These inspections informed design of tidal flood barriers that meet the City and County Codes and will be sufficient to protect the shorelines against sea level rise that is reasonably anticipated to occur during the design life of these structures. Tide gauges were deployed in North Lake, South Lake, and the Hollywood Marina to determine tidal prisms, lag time, and water level elevation differences between each lake and the

***Reference:***
***Jose Cortes***
***954-240-7996***

***Scope:***

- *Marine resource survey*
- *Coastal wetland surveys*
- *Above and below water inspections*
- *Structural engineering assessments*
- *Coastal engineering assessments*
- *Environmental permitting*
- *Grant administration and assistance*
- *Engineering design*
- *Construction administration*
- *Ordinance development*

***Secured $13.9M FDEP Resilient Florida funds matched by City's GO Bond***

ICW. This information was utilized for design of tidal flood barriers for the project sites. This project will enable the City to mitigate the severe flooding that occurs during king tides and sea level rise in the neighborhoods surrounding North and South Lakes.

Cummins Cederberg secured a $13.9M Resilient Florida Grant to supplement the City's GO Bond funding for project implementation. The conceptual designs were presented during a public meeting to solicit input and the designs have been reviewed with relevant departments within the City. Upon selection of project elements for each site, Cummins Cederberg will prepare permit drawings and applications to secure environmental regulatory permits for the proposed projects.

# County-wide Waterfront Park Adaptation Roadmap

## 7 Waterfront Parks, Florida

Matheson Hammock Park is located along the western shoreline of Biscayne Bay in Coral Gables. The Park is one of few publicly accessible waterfront areas in this region of Miami-Dade County. Most of the 630-acre park is relatively low lying, which results in flooding to some areas during high tide events. Flooding is a nuisance to visitors as areas become inaccessible. In addition to the negative impact on visitor experience, flooding has financial impacts, as revenue generating components are impacted operationally and physically.

Cummins Cederberg was engaged to develop a Sea Level Rise and Flood Mitigation Roadmap, relative to the park, with the primary objective to analyze the impacts of sea level rise on infrastructure and operations, as well as develop flood mitigation concepts for planning and budgeting purposes.

Existing survey data within the park and LiDAR data was compiled to prepare a topographic map for the park; assessed the condition of existing infrastructure to understand conditions, remaining service life and adaption feasibility relative to sea level rise; performed an assessment of the environmental conditions on site to generally understand and document current conditions, as it would relate to environmental permitting; conducted an engineering analysis to provide extreme tide water levels; developed flood mitigation concepts and preliminary cost estimates; coordinated stakeholder involvement; developed an implementation strategy and roadmap; and presented the results and findings into a report.

***Since 2018 when this project was initiated, Cummins Cedeberg has completed vulnerability assessments to all 7 of Miami-Dade County's major waterfront parks including Matheson Hammock Park, Crandon Park, Haulvoer Park, Virginia Key Park, Biscayne Shores & Gardens Park, Black Point Marina, and Homestead Bayfront Park.***

***Reference:***
***Angel Trujillo***
***305-755-7800***

***Scope:***

- *LiDAR survey data*
- *Flood mitigation planning*
- *Capital improvement planning*
- *Sea level rise planning*
- *Stakeholder engagement*

## ANTI-KICKBACK AFFIDAVIT

STATE OF FLORIDA

SS:

COUNTY OF MIAMI-DADE

I the undersigned hereby duly sworn, depose and say that no portion of the sum herein response will be paid to any employee of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

BY: _____
Jannek Cederberg, PE

sworn and prescribed before me this 2nd day of December, 2022

NOTARY PUBLIC, State of Florida

My commission expires: 10/30/2026

MONICA R. NUEVO
NOTARY PUBLIC
MY COMMISSION
EXPIRES 10-30-2026
STATE OF FLORIDA
COMMISSION NUMBER HH 327415

## NON-COLLUSION AFFIDAVIT

STATE OF FLORIDA )

: SS

COUNTY OF MIAMI-DADE )

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

By: _____
Jannek Cederberg, PE

Sworn and subscribed before me this

2nd day of December, 2022.

_____
NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 10/30/2026

MONICA R. NUEVO
NOTARY PUBLIC
MY COMMISSION EXPIRES 10-30-2026
STATE OF FLORIDA
COMMISSION NUMBER HH 327475

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

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

1. This sworn statement is submitted for Jannek Cederberg, President
(print individual's name and title)

by Cummins Cederberg, Inc.

(print name of entity submitting sworn statement)

whose business address is 201 Alhambra Circle, Suite 601, Coral Gables, FL 33134

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

272129033

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

2. I understand that a "public entity crime" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that "conviction" as defined in Paragraph 287.133(1)(g), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 01, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an "affiliate" as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

   a. A predecessor or successor of a person convicted of a public entity crime: or

   b. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime.

The term "affiliate" includes those officers, directors, executives, partners, shareholders, employees, members and agent who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment of income among persons when not for fair market value under an arm's length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

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

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

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

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

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

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH ONE (1) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT THIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.017, FLORIDA STATUTES, FOR THE CATEGORY TWO OF ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(SIGNATURE)

December 2, 2022

(DATE)

STATE OF Florida

COUNTY OF Miami-Dade

PERSONALLY APPEARED BEFORE ME, the undersigned authority Jannek Cederberg who, after first being sworn by me,
(name of individual)
affixed his/her signature in the space provided above on this 2nd day of December, 2022

NOTARY PUBLIC

My commission expires: 10/30/2026

MONICA R. NUEVO NOTARY PUBLIC MY COMMISSION EXPIRES 10-30-2026 STATE OF FLORIDA COMMISSION NUMBER HH 327475

## EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT

STATE OF Florida )

: SS

COUNTY OF Miami-Dade )

I, the undersigned hereby duly sworn, depose and say that the firm of Cummins Cederberg, Inc.

Jannek Cederberg, PE

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

By: _____

Sworn and subscribed before me this 2nd day of December 20 22.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 10/30/2026

MONICA R. NUEVO NOTARY PUBLIC MY COMMISSION EXPIRES 10-30-2026 STATE OF FLORIDA COMMISSION NUMBER HH 327475

## CONE OF SILENCE AFFIDAVIT

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

STATE OF Florida )
: SS
COUNTY OF Miami-Dade )

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

2nd day of December, 20 22.

By: _____
Jannek Cederberg, PE

_____
NOTARY PUBLLIC, State of Florida at Large

My Commission Expires: 10/30/2026

MONICA R. NUEVO
NOTARY PUBLIC
MY COMMISSION
EXPIRES 10-30-2026
STATE OF FLORIDA
COMMISSION NUMBER HH 327475

## CITY OF KEY WEST INDEMNIFICATION FORM

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

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

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

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

COMPANY SEAL


PROPOSER: Cummins Cederberg, Inc.

Address: 201 Alhambra Circle, Suite 601, Coral Gables, FL 33134

Signature

December 2, 2022
Date

Print Name: Jannek Cederberg

Title: President

NOTARY FOR THE PROPOSER

STATE OF Florida

COUNTY OF Miami-Dade

The foregoing instrument was acknowledged before me this 2nd day of December, 2022. By Jannek Cederberg, President of Cummins Cederberg, Inc. (Name of officer or agent, title of officer or agent) Name of corporation acknowledging)

or has produced_____as identification.

By: _____
Jannek Cederberg, PE

_____
Signature of Notary

MONICA R. NUEVO
NOTARY PUBLIC
MY COMMISSION
EXPIRES 10-30-2026
STATE OF FLORIDA
COMMISSION NUMBER HH 327475

_____

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

Supporting documents to: City of Key West Purchasing

_____

Title or Rank